WÜRTH ELEKTRONIK

Finished Magnetic Components

2020

Content

EMC Components

Toolbox

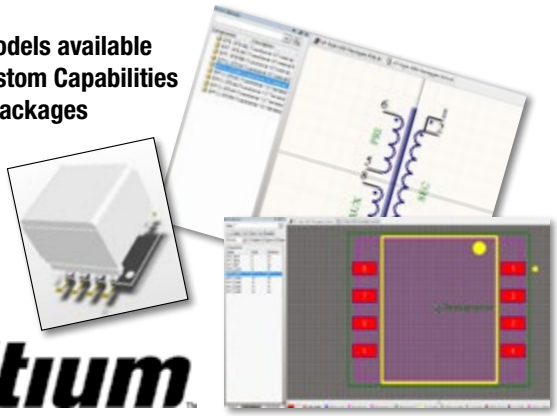
REDEXPERT

Würth Elektronik's online platform for simple component selection and performance simulation. Try **REDEXPERT** and calculate losses in real-time. Recent updates include the addition of a transformer selector tool and a new and improved layout. The Transformer Selector helps to determine the best transformer to fit the application needs.

www.we-online.com/redexpert

TOOLBOX
www.we-online.com/toolbox

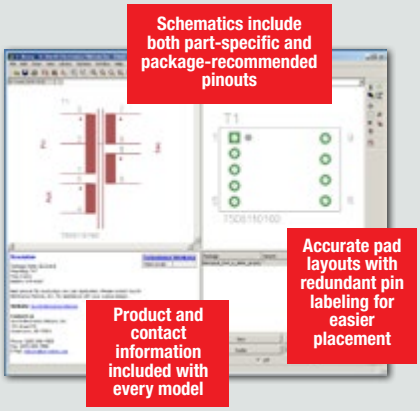
Altium Models available for all Custom Capabilities Catalog Packages



Altium

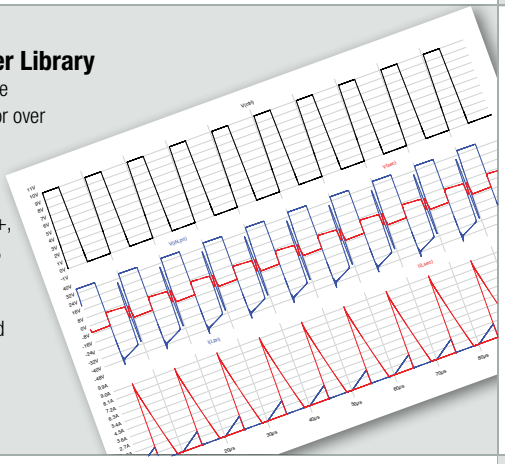
EAGLE Library

Würth Elektronik's Eagle Library allows Eagle users to concentrate on easier and earlier board design by using the component library, which offers pre-drawn pad layouts and pinouts for preferred, standard, and non-standard package styles.



LTspice Transformer Library

The library consists of three different LTspice models for over 600 power transformers, including designs for lighting and metering applications, PoE and PoE+, isolated DC/DC converters, flyback and offline transformers. All of these parts are currently featured on **www.we-online.com**



Gap Calculator

This tool is an easy way to quickly calculate the gap length once the desired AL value and the package are known. Along with the information on the gap length, this tool also provides a quick access to other useful information, like the minimum and maximum gap length, core and bobbin data and the page reference in the Custom Capabilities Catalog.

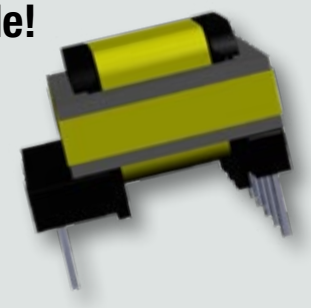
WE Are the Solution

Partnering with leading IC Manufacturers to provide a total solution for customers.

3D Models Available!

A clear shell is added to account for worst case dimensions.

Find the 3D models for each package on **www.we-online.com**.



Functional, Basic, and Reinforced Insulation

The effect of insulation requirements is significant enough to change the form factor, performance, cost, and of course, reliability of the transformer. In general terms, **functional insulation** is the easiest insulation to achieve. It allows for magnet wire to be in contact with other magnet wire and has no **creepage** or **clearance** requirements. The insulation strength is tested by a simple dielectric (hipot) test.

Both **basic** and **reinforced insulation** are common to parts subject to offline voltages (85-265V_{AC}). The primary difference between these two types of insulation and functional insulation is basic and reinforced require physical separation between windings, solder joints, and cores. These distances are known as creepage and clearance. There are a several methods to achieve distance requirements; multi-section bobbins, encapsulation, margin tape, and extruded insulated wire are the most common. One can imagine certain drawbacks to the special insulation: increased size, reduced coupling, lower efficiency, decreased manufacturing capacity, and limited pin configuration options.

The distance requirements and lead isolation are set by specific standards. Reinforced insulation is typically twice that of basic insulation. In some cases, special materials can be used to reduce the distance requirements. In other cases, lead-in routing rules can cause significant manual production processes, especially when pin configuration is fixed.

	Functional	Basic/ Reinforced
Size	+	-
Pinout flexibility	+	-
Efficiency	+	-
Coupling	+	-
Manufacturing capacity/ leadtime	+	-
Cost	+	-
Safety	-	+
Dielectric withstand	-	+

Definitions

Functional Insulation	Insulation necessary only for the functioning of the equipment
Basic Insulation	Insulation applied to hazardous live parts to provide basic protection against electric shock
Supplementary Insulation	Insulation used with basic insulation to provide a second level of protection
Double Insulation	Insulation comprising both basic insulation and supplementary insulation
Reinforced Insulation	Single insulation system providing a degree of protection against electric shock equivalent to double insulation
Creepage Distance	Shortest distance through air along the surface of an insulation material between two conductive parts
Clearance Distance	Shortest distance through air between two conductive parts
Working Voltage	Highest voltage to which the insulation or the component under consideration is, or can be, subjected when the equipment is operating under conditions of normal use

How Does Safety Affect Design?

Defining Safety Needs

How are safety needs defined?
The customer's end application typically defines which safety standard must be met. For instance, a design intended for use in LED lighting generally will not need to meet the same requirements as a design intended for use in medical equipment.

Next one needs to understand the working voltage of the end application. The working voltage is defined as the highest voltage to which the insulation or the component under consideration is, or can be, subjected when the equipment is operating under conditions of normal use. This voltage level will define the creepage distance, clearance distance, distance through solid insulation, and the dielectric withstand voltage for each particular design.

Creepage – The shortest path between two conductive parts measured along the surface of the insulation; the shortest path between the primary and secondary sides of the transformer is measured along the surface of the insulation.

Clearance – The shortest path between two conductive parts measured through air; the shortest path between the primary and secondary sides of the transformer is measured through air. Often clearance distance is less than creepage distance and can be the more critical distance.

Dielectric – The peak voltage that the insulation under consideration is required to withstand. In simple terms, an electrical strength test used to verify the insulation strength between two conductors.

Lastly, one needs to define the insulation type which must be met. The insulation type will also play a role in defining the creepage distance, clearance distance, distance through solid insulation, and the dielectric withstand voltage. There are three insulation types.

Functional Insulation – Functional insulation is just that, insulation required only for proper functioning of the transformer. This type of insulation is usually associated with DC/DC applications in which the end user is not exposed to hazardous voltages.

Basic Insulation – This is the most commonly misunderstood form of insulation. Basic insulation is not basic. There are creepage distances, clearance distances, distances through solid insulation, and dielectric withstand voltage requirements associated with this type of insulation. Typically there are requests for basic insulation when the end application has a means of providing additional isolation from the hazardous input voltage in case the basic insulation fails.

Double/Reinforced Insulation – This is the most common form of insulation used in offline applications. Reinforced insulation also has requirements for creepage distance, clearance distance, distance through solid insulation, and dielectric withstand voltage. The end user is completely isolated from hazardous input voltage by reinforced insulation without the need for additional isolation.

Transformer Size

How does safety impact size of the transformer?
The three main types of insulation - functional, basic, and reinforced - each impact the overall size of the transformer differently.

Functional Insulation – This type of insulation is typically met with magnetwire on both the primary and secondary sides of the transformer. Some standards require small creepage and clearance distances to be met in order to comply with the functional insulation requirements, but often times these distances can be waived if the transformer meets a specific dielectric withstand voltage. Normally, the dielectric withstand voltage can be met with standard magnetwire, and without the need for additional constructional isolation. The combination of the use of standard magnetwire, along with no specific creepage and clearance distances, allows functional insulated designs to be wound on standard sized bobbins. This type of insulation allows designers to achieve the highest power levels with a given core geometry.

Basic Insulation – Most basic insulation designs use special basic insulated wire. The special insulated wire has a single layer of extruded insulation which allows it to meet higher dielectric withstand voltages, as well as isolate the conductive part of the wire from other conductive components. Typically, this means the basic insulated wire is used on one side of the transformer in order to provide basic insulation to the other side of the transformer. As one can imagine, the additional extruded layer of insulation surrounding the conductor will increase the overall diameter of the wire (on average 20% larger than standard magnetwire, depending on wire size used). This larger diameter wire will consume additional build room and may even increase the layering for a particular wind.

The creepage and clearance distances required to meet basic insulation are generally in the 2-4mm range depending on the factors mentioned earlier. One method for meeting these distances is to use a standard bobbin with margin tape inside the coil. The margin tape consumes some of the winding area, but it helps to increase the distance from the solder joints of the special basic insulated wire back into the standard magnetwire inside the coil. The smaller winding area, in combination with the larger diameter basic insulated wire, can lead to the need for a larger transformer in order to fit the entire coil on a particular bobbin. This can mean the next core size larger will be necessary for a basic insulated design to meet the same power levels achieved with a functional insulation design.

Another method for meeting these distances is the use of an extended rail bobbin. Much like the margin tape, the extended rail helps to increase the creepage and clearance distances from the solder joints of the basic insulated wire to the standard magnetwire inside the coil. The plus side to extended rail bobbins is that the winding area is not consumed by margin tape. This allows higher power levels to be achieved on a package with an extended rail bobbin in comparison to a margin tape design. However, the extended rail bobbins will increase either the width or the height of the transformer, depending on whether a vertical or horizontal package is being used.

Reinforced Insulation – Much like basic insulation, reinforced insulation designs use a special reinforced insulated wire. This wire is comprised of three extruded layers. These additional layers only further increase the overall diameter of the wire (on average 60% larger than standard magnetwire, depending on wire size) in turn, consuming more build room than a basic insulated wire or standard magnetwire.

The specific creepage and clearance distances required for reinforced insulation designs are typically double that of basic insulation, in the 4-8mm range. The same design techniques used to meet basic

insulation can be used to meet reinforced insulation. Of course, when looking to use the margin tape method, a wider margin tape will be needed to meet these larger distances. The wider margin tape further reduces the amount of build room available for copper wire, thus further reducing the amount of power which can be achieved from a particular sized core.

Extended rail bobbins are the typical method used for reinforced insulation. Again, these bobbins will increase the width or height of the transformer, depending on whether a horizontal or vertical package is used. They allow the designer to use the entire winding area to achieve as much power as possible, but keep in mind there will still be a de-rated maximum power for a reinforced design compared to a basic or functional design, due to the larger diameter wire's safety insulation consuming more of the winding area.

Flying leads are an option to eliminate the need for the margin tape inside the coil. Like the extended rail bobbins, flying leads allow the designer to utilize the full winding area. This can be the difference between using the same core size as a functional insulated design or being forced to increase to the next larger package. The flying leads also eliminate the added width or height seen with the extended rail bobbins. Both of these factors can be very advantageous when size is a major concern for the design.

Transformer Cost

How does safety impact the cost of a transformer?

Wire Cost – Standard magnetwire, as used in functional insulated designs, is billed by the weight of the copper. The weight of copper in a 50W transformer is minimal and results in only a small fraction of the overall cost. On the other hand, special basic or reinforced insulated wire, is billed by the length of the wire used. The cost of an insulated wire is increased further when looking at using a litz-insulated wire for higher current or higher frequency applications. As one can imagine, it does not take many turns on a 50W transformer to reach over one meter of insulated wire. This is why the insulated wire is used on the lowest turn count winds in order to help minimize the cost.

Production Cost – Magnetwire can be wound onto a bobbin using multi-arbor automated equipment. This includes terminating the start and finish leads, winding the coil, and soldering. This may not be the case with the special insulated wires as the insulation can be easily damaged and may require a stripping process before termination. Consequently, this affects productivity, leading to an increase in cost.

Margin Tape – Margin tape can be used to meet the necessary creepage and clearance distances for basic and reinforced designs. Margin tape is needed for each magnetwire wind, which means an additional production process is added for each of the margin tape applications. This does not take into account the added cost of the tape itself, although tape cost is minimal.

Larger Components - Larger diameter basic insulated and reinforced insulated wires consume additional build room within the winding area. This means for a given power level the insulated wire designs may need to be placed onto a larger, more costly bobbin and core in comparison to the functional insulated designs.

Flying Leads – Flying leads eliminate the added size of the extended rail bobbins, as well as allow the designer to utilize the full winding area. This is quite advantageous to the designer, but it complicates the production processes, leading to additional manual labor, which quickly add to the overall cost. Also, the PCB assembly by the end customer becomes more complicated and expensive since the flying leads must be manually inserted into the board. This leads to a risk of polarity failures or cold solder joints. Finally, the packaging and logistics of flying lead parts are less efficient due to the extra size needed to accommodate the flying leads.

Performance

How does safety impact the performance of a transformer?

Safety impacts the performance through leakage inductance, coupling, and efficiency, as seen through magnetwire, insulated wire, and margin tape.

Magnetwire vs. Insulated Wire – Magnetwire provides the best coupling (cost) due to the proximity of the wires to one another. As the diameter of the insulation around the wire increases, the coupling decreases. Of course, poorer coupling will lead to higher leakage inductance and lower efficiency.

Margin Tape – The use of margin tape reduces the useable winding width, and in turn increasing leakage inductance. Margin tape can also result in additional layers per winding, increasing the mean length turn for a given winding and increasing the overall build of the coil. All of these factors also lead to increased leakage inductance.

Flying Leads and EMI – Imagine a pair of flying leads protruding from a given transformer or inductor. These flying leads are not shielded and are free to emit or absorb noise from the surrounding environment. This can lead to EMI issues that often times do not present an easy solution.

Heating/Efficiency – The use of special insulated wire can result in the need for a larger package due to the additional build room consumed by the insulated wire. This has nothing to do with saturation or the amount of power which can be handled by a given core size but is merely a mechanical restriction set by the wire. One way to avoid having to use a larger package is to simply reduce the size of the wire used for a given design in order to create additional build room. This leads to larger I^2R losses, higher temperature rise, and poorer efficiency.

To Learn More...

For more insight about the electronics industry, and to stay up-to-date with Würth Elektronik, visit the website or the blog, Electronics in Action, featuring the newest products and webinars.

Starting a Custom Design

With the help of the Würth Elektronik support team, find the best custom solution for almost any application. Würth Elektronik is solution oriented, and take all electrical, mechanical and safety requirements into account, as well as other situational preferences, when supporting customers to offer the best solution.

Inputs Needed:

Agency Requirements

Regulatory Agencies — IEC61558 ☐ — IEC60950 ☐ — UL1310 ☐

Insulation Requirements — Basic (special distance required) ☐ — Functional (operational only) ☐ — Other (list)

Reinforced (special distance required) ☐ — Basic (special distances required) ☐ _____

Reinforced (special distance required) ☐ _____

Dielectric Withstand Voltage (1 min)_____ Working Voltage_____

Application

IC Manufacturer _____ IC Number/Name_____ Markets_____

Specifications

Transformer Topology

Flyback ☐ → *Continuous* ☐ *Discontinuous* ☐ — Push/Pull ☐ — Forward ☐ *Boundary* ☐ — Isolated Buck ☐ — Other:_____

Input		**Bias/Aux**		**Bias/Aux**	
VDC (V max)	_____	VDC Out (V)	_____	VDC Out (V)	_____
VDC (V min)	_____	I Out (A)	_____	I Out (A)	_____
Switching Frequency (kHz)	_____	Primary ☐	_____	Primary ☐	_____
Duty Cycle Range (%)	_____	Secondary ☐	_____	Secondary ☐	_____
Secondary 1		**Secondary 2**		**Secondary 3**	
VDC Out (V)	_____	VDC Out (V)	_____	VDC Out (V)	_____
Diode Drop (V)	_____	Diode Drop (V)	_____	Diode Drop (V)	_____
I Out Max (A)	_____	I Out Max (A)	_____	I Out Max (A)	_____
I Out Min (A)	_____	I Out Min (A)	_____	I Out Min (A)	_____

Rank Design Priority(1-6) *1 being most important*

Reliability _____ Performance _____ Cost _____ Size (Height) _____

Size (PCB Area) _____ Speed of Samples _____

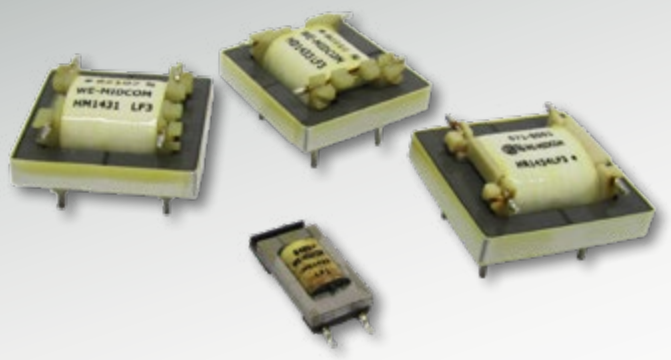
Custom Solutions Possible

- 1. Reference designs with standard solutions
- 2. Customized products with standard materials
- 3. Customized products with non standard materials
- 4. Customized products with tooled materials

Custom Solutions

Solution	Paper Design	Sample	Tool	Prototype	Production
1	0 Days	2 days to 1 week	N/A	4 to 6 weeks	12 to 14 weeks
2	2 to 3 days	1 to 2 weeks	N/A	4 to 6 weeks	12 to 14 weeks
3	3 to 4 days	2 to 4 weeks	N/A	4 to 6 weeks	12 to 14 weeks
4	5 to 7 days	Soft tool: 2 to 6 weeks	6 to 8 weeks	4 to 6 weeks	12 to 14 weeks

MID-AMT
Analog Modem Transformers



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- UL/IEC/EN 60950 compatible
- V.29-UL1950

Applications

- Analog modems

Electrical Properties

Order Code	L_1 (mH)	$N_{LINE} : N_{DEVICE}$	V_T (V_{AC})	Type of Insulation	LxWxH (mm)
750082107	250	1 : 1	1875	Supplementary	24 x 23 x 12.5
750082111	185	1 : 1	1875	Supplementary	24 x 23 x 12.5
7500718001	185	1 : 1	1250	Supplementary	24 x 23 x 12.5
7500718489	1500	1 : 1	1650	Supplementary	20.88 x 8.5 x 4.5

MID-DAA

V.90 Conexant SmartDAA™ Signal Transformers

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Small Size
- Flat Profile
- SMT
- V.90 performance
- Released for Conexant SmartDAA™ solution

Applications

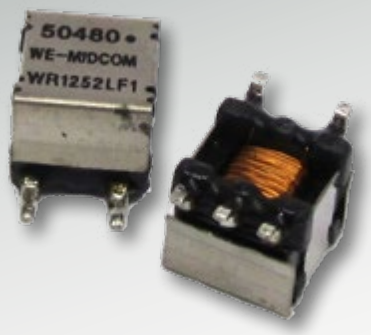
- Analog modems
- Point of sale
- Signal isolation

Electrical Properties

Order Code	L_1 (µH)	$N_{LINE} : N_{DEVICE}$	V_T (V_{AC})	Type of Insulation	LXWXH (mm)
750082154	30	1 : 1.67	3750	Supplementary	4.39 x 9.14 x 1.98
750082157	450	1 : 1	3750	Supplementary	4.39 x 9.14 x 2.54
750110007	30	1 : 1.67	3750	Supplementary	9.14 x 4.39 x 1.98

MID-ISDN

SMT T1/E1 PRI Transformers



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Small SMT package
- Separate transmit and receive devices for layout flexibility
- Low cross talk: excellent layout density
- Designed to meet ITU G. 703 ISDN-Primary rate recommendations
- Dielectric rating: 1500V_{AC}
- Operating temp: –40ºC to 85ºC

Applications

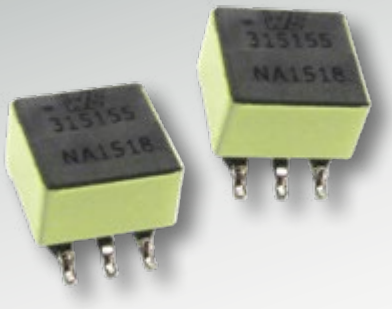
- ISDN
- Matched to IC manufacturers' transceivers

Electrical Properties

Order Code	L_1 (µH)	N_{LINE} : N_{DEVICE}	V_T (V_{AC})	Insulation
750050480	2	1 : 1	1500	Functional

MID-IDC

Industrial Data Communication Transformers



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Small size
- Self-shielding package
- High inductance for low magnetizing current
- Pick-and-placeable

Applications

- Factory automation and process control
- Building automation
- Portable instrumentation
- 4mA to 20mA loop powered systems
- Field transmitters and other sensors

Electrical Properties

Order Code	Package Size	L_1 (µH)	$N_{LINE} : N_{DEVICE}$	V_T (V_{AC})	LxWxH (mm)
750315155	EP5	400	1 : 1	1500	6.6 x 8.26 x 5.59

MID-PLC

Narrowband PLC Coupling Transformers

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Coupling transformers for narrowband power line communications
- Designed for Texas Instruments AFE030 / AFE031 / AFE032 or for STMicroelectronics STCOM / STCOMET / ST75xx PLC ICs
- Functional or reinforced insulation
- Powerline communications analog front-end
- Isolation voltage: up to 5000V_{AC}
- Lead free and RoHS compliant
- Operating temp: -40°C to 125°C

Applications

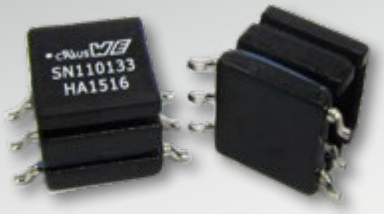
- PLC modems and data concentrator
- Smart metering, smart grids and IoT applications
- Smart energy management
- Street lighting control
- Home / building automation

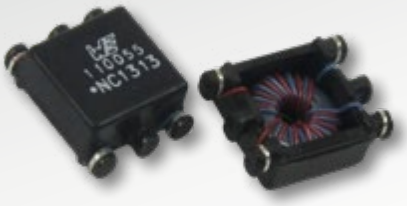
Electrical Properties

Order Code	Package Size	L_1 (µH)	V_T	N_{LINE}:	V_S (kV)	Type of Insulation	LxWxH (mm)
750510436	EE13/7/4	1100	4000	1.5 : 1	-	Reinforced	13.72 x 19.69 x 10.16
750510476	EE13/7/4	870	4000	1.307 : 1	-	Reinforced	13.72 x 19.80 x 10.16
750510505	EE13/7/4	870	4000	1 : 1	-	Reinforced	13.72 x 20.45 x 10.16
750510231	EP13	1000	2000	1 : 1	-	Functional	13.97 x 13.97 x 13.46
750510654	EP13	1000	2000	1 : 1.5	-	Functional	13.97 x 13.97 x 12.7
750510682	EP13	1000	2000	1 : 1	-	Functional	13.97 x 15.4 x 13.2
750510705	EP13	500	2000	1 : 1	-	Functional	13.97 x 15.4 x 13.2
750510730	EP13	1000	2000	1 : 1	-	Functional	13.97 x 15.4 x 13.2
750510719	EPW15	1000	3000	1 : 1	6	Reinforced	15.8 x 26.5 x 13.5

MID-PMA

Pulse Transformers for Metering Applications





CUSTOM SOLUTIONS POSSIBLE

Characteristics

- For use with energy metering ICs from Maxim Integrated 71M654x
- Provides isolation between remote sensor interface ICs (71M6xxx) and energy metering ICs (71M654x)
- High DC isolation
- Available in core materials resistant to exposure to a 1200mT rare earth magnet

Applications

- Smart grid
- E-metering
- Energy monitoring
- Analog isolation

Electrical Properties

Order Code	Package Size	L_1 (µH)	N_{LINE} : N_{DEVICE}	V_T (V)	L x W x H (mm)
750110055	TOR 4.8/2.3/1.3	70	1 : 1	5000	7.11 x 8.76 x 3.55
750110056	TOR 4.8/2.3/1.3	70	1.08 : 1	5000	7.11 x 8.76 x 3.68
750110133	TOR 4.3/2.8/2.3	100	1 : 1.08	5000	9.14 x 12.7 x 7.62
750110102	TOR 7.2/2.2/5.4	60	1.08 : 1	7000	11.68 x 19.18 x 11.18

MID-UDS

Ultrasonic Distance Sensor Transformers

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Small size
- Self-shielding package
- Pick-and-placeable

Applications

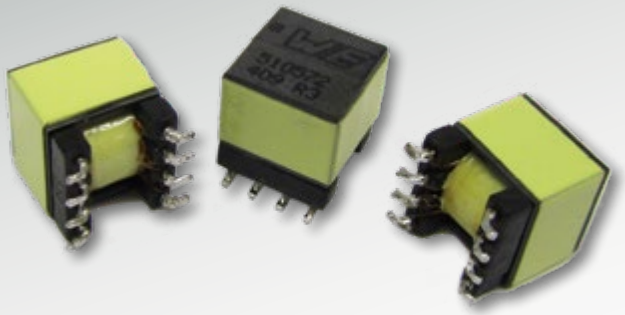
- Ultrasonic distance sensors

Electrical Properties

Order Code	Package Size	L_1 (µH)	V_T (V)	L x W x H (mm)
750316928	EP5	239	500	6.6 x 8.26 x 5.59
750317161	EP5	3000	500	6.6 x 8.26 x 5.59

MID-DSLBCM

xDSL and G.Fast Transformers for use with Broadcom Chipsets



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Specifically designed for Broadcom DSL chipsets
- Tested and approved by Broadcom
- IEC60950-1 compatible

Applications

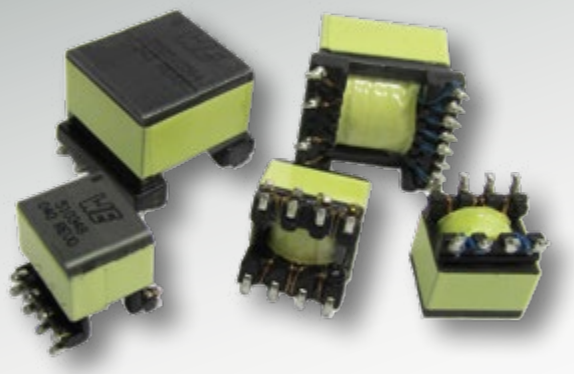
- ADSL/2/+
- VDSL/2
- G.Fast
- Access networks/Central Office (CO)
- Gateway/Customer Premise Equipment (CPE)

Electrical Properties

Order Code	Package Size	L_I (µH)	V_T (V_{AC})	IC Reference	xDSL Type	CO/CPE	Annex	U_S (kV)	Type of Insulation	LxWxH (mm)
750510713	EP5	10	1875	BCM659xx	G.FAST	CO	–	–	Functional	8.35 x 9.5 x 6.35
750510673	EP7	100	1875	BCM63138	G.FAST	CPE	–	–	Supplementary	9.78 x 9.14 x 10.54
750510674	EP7	100	1500	BCM63138	G.FAST	CPE	–	–	Supplementary	9.78 x 9.14 x 10.54
750510556	EPS7	10	1875	BCM63138, BCM659xx	G.FAST	CO & CPE	–	–	Supplementary	7.87 x 9.55 x 10.16
750510603	EPS7	10	1875	BCM659xx	G.FAST	CO	–	–	Functional	7.87 x 9.55 x 10.16
750052133	EP13	400	1875	BCM6301, BCM6333, BCM6338, BCM6348	ADSL2+	CPE	A, C	–	Supplementary	13.97 x 17.17 x 12.7
750510204	EP13	400	1875	BCM6368, BCM63168, BCM63268	VDSL2	CPE	A	–	Supplementary	13.97 x 16.31 x 12.7
750510364	EP13	100	1875	BCM6368, BCM63168, BCM3268	VDSL2	CPE	B	–	Supplementary	13.97 x 16.31 x 12.7
750510528	EP13	400	1875	BCM63138, BCM63148, BCM63168	VDSL2	CPE	A, J, M	–	Supplementary	13.46 x 17.75 x 12.7
750510529	EP13	100	1875	BCM63138, BCM63148, BCM63168, BCM63381, BCM6368	VDSL2	CPE	B, J	–	Supplementary	13.46 x 17.75 x 12.7
750510555	EP13	400	1875	BCM63381	VDSL2 17a	CPE	A	–	Supplementary	13.46 x 17.75 x 12.7
750510565	EP13	400	1875	BCM6303, BCM63x68, BCM631x8	VDSL2	CPE	A	6	Supplementary	13.97 x 16.31 x 12.7
750510566	EP13	100	1875	BCM6303, BCM63x68, BCM631x8	VDSL2	CPE	B	6	Supplementary	13.97 x 16.31 x 12.7
750510602	EP13	250	1875	BCM6303, BCM63x68, BCM631x8	VDSL2	CPE	B, J	–	Supplementary	13.46 x 17.75 x 12.7
750510614	EP13	250	1875	BCM63381	VDSL2 17a	CPE	B, J	–	Supplementary	13.46 x 17.75 x 12.7
750510572	EPX6	430	1875	BCM65800	VDSL2	CO	A	–	Functional	13.46 x 17.75 x 12.7

MID-DSLIKN

xDSL Transformers for use with Ikanos Chipsets



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Specifically designed for Ikanos DSL chipsets
- Tested and approved by Ikanos
- IEC60950-1 compatible

Applications

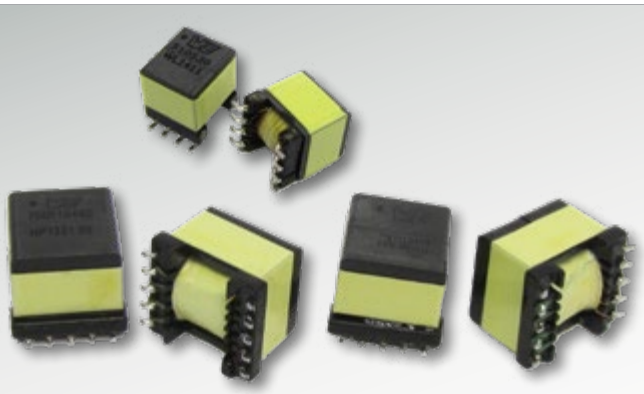
- ADSL/2/+
- VDSL/2
- SHDSL
- Gateway/Customer Premise Equipment (CPE)

Electrical Properties

Order Code	Package Size	L_1 (mH)	V_T (V_{AC})	IC Reference	xDSL Type	CO/CPE	Annex	U_S (kV)	Type of Insulation	LxWxH (mm)
750051576	EP13	3.00	2050	CX98102	SHDSL	CO & CPE	–	–	Supplementary	13.46 x 17.75 x 12.70
750051786	EP13	0.70	1875	–	ADSL	CPE	A, C	–	Supplementary	13.97 x 17.17 x 12.70
750510564	EP13	0.40	1875	IFE7/VX185, VX183	VDSL2	CPE	A	6	Basic	13.97 x 16.31 x 12.70
750510164	EP7	0.40	1875	CPE6	VDSL2	CPE	A	–	Supplementary	9.78 x 9.14 x 10.54
750510165	EP7	1.20	1875	CPE6	VDSL2	CPE	A	–	Supplementary	9.78 x 9.14 x 10.54
750510173	EP7	0.22	1875	CPE6 (rx)	VDSL2	CPE	B	–	Supplementary	9.78 x 9.14 x 10.54
750510174	EP7	0.15	1875	CPE6 (tx)	VDSL2	CPE	B	–	Supplementary	9.78 x 9.14 x 10.54
750510185	EP7	0.40	1875	CPE6	VDSL2	CPE	A	–	Supplementary	9.78 x 9.14 x 10.54
750510540	EP7	0.40	1875	FusiV® VX185	VDSL2	CPE	A	6	Basic	9.78 x 11.43 x 11.94
750510541	EP7	0.70	1875	FusiV® VX185	VDSL2	CPE	A	6	Basic	11.43 x 9.78 x 11.94
750510589	EP7	0.40	1875	FusiV® VX185	VDSL	CPE	A	6	Basic	9.78 x 11.28 x 10.54
750510590	EP7	0.70	1875	FusiV® VX185	VDSL	CPE	A	6	Basic	9.78 x 11.28 x 10.54

MID-DSLITL

xDSL Transformers for use with Intel® Chipsets



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Specifically designed for Intel® DSL chipsets
- Tested and approved by Intel®
- IEC60950-1 compatible

Applications

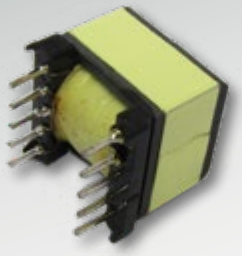
- ADSL/2/+
- VDSL/2
- SHDSL
- Access networks/Central Office (CO)
- Gateway/Customer Premise Equipment (CPE)

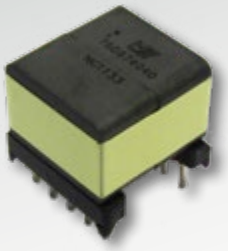
Electrical Properties

Order Code	Package Size	L_1 (mH)	V_T (V_{AC})	IC Reference	xDSL Type	CO/CPE	Annex	V_S (kV)	Type of Insulation	LxWxH (mm)
750052237	EP13	1.40	1875	XWAY ARX100, XWAY Danube, XWAY Amazon	ADSL2+	CPE	A	–	Supplementary	13.97 x 17.17 x 12.70
750510250	EP13	3.00	1875	SOCRATES™-4e	SHDSL	CO & CPE	–	–	Supplementary	13.97 x 17.17 x 12.70
750510311	EP13	1.40	1875	XWAY VRX200 Series	ADSL/VDSL	CPE	A	–	Supplementary	13.46 x 17.75 x 12.70
750510460	EP13	0.27	1875	VRX200	VDSL2	CPE	B, J	6	Supplementary	13.97 x 16.31 x 13.50
750510478	EP13	1.40	5375	VRX200	VDSL2	CPE	A	6	Supplementary	13.97 x 16.31 x 12.70
750510578	EP13	3.00	1875	SOCRATES™-4e	SHDSL	CO & CPE	–	–	Supplementary	13.46 x 17.75 x 12.70
750510595	EP13	3.00	1500	Socrates	SHDSL	CO & CPE	–	–	Supplementary	9.78 x 9.50 x 10.54
750510517	EP7	0.47	1875	VINAX V3	VDSL2/ADSL2+	CO	A, B, J	–	Functional	9.14 x 9.78 x 10.92
750510580	EP7	0.47	1875	VINAX V3, PEF88xxx	VDSL2	CO	A	–	Functional	9.78 x 9.50 x 10.54
750510652	EP7	0.47	1875	VINAX dp8	VDSL	FTTdp	–	–	Functional	9.78 x 9.14 x 10.92
750510668	EP7	0.47	1875	VINAX™ dp8, VINAX™ V3	VDSL2	CO	A	–	Functional	9.78 x 9.50 x 10.54
750510536	EPS7	1.44	1500	PEF66016, PEF55016, PEF55008, PEF66218, PEF55218, PEF55602	ADSL, ADSL2, ADSL2+	CO	A	–	Functional	7.87 x 9.02 x 10.16
750510611	EPX9	3.07	2000	Socrates	SHDSL	CO & CPE	–	–	Supplementary	9.78 x 9.50 x 10.54
750510623	EPX9	3.07	1875	Socrates	SHDSL	CO & CPE	–	–	Functional	10.16 x 10.16 x 12.70

MID-DSLMCM

xDSL Transformers for use with Macom Chipsets





CUSTOM SOLUTIONS POSSIBLE

Characteristics

- IEC60950-1 compatible

Applications

- SHDSL

Electrical Properties

Order Code	L_1 (mH)	V_T (V_{AC})	IC Reference	xDSL Type	CO/CPE	Type of Insulation	LxWxH (mm)
750050050	2	2500	BT8921, BT8970, CN8973	SHDSL	CO & CPE	Reinforced	13.97 x 13.97 x 12.70
750050772	2	2050	RS8973	HDSL	CO & CPE	Supplementary	13.97 x 13.97 x 12.70
750051062	2	2500	RS8973	SHDSL	CO & CPE	Supplementary	13.46 x 17.75 x 12.70

MID-DSLSCK

xDSL and G.Fast Transformers for use with Sckipio Chipsets

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Tiny toroidal / binocular packages
- Specifically designed for Sckipio G.FAST / DSL chipsets
- Tested and approved by Sckipio

Applications

- Access networks/Central Office (CO)
- Gateway/Customer Premise Equipment (CPE)
- G.FAST
- Distribution point unit

Electrical Properties

Order Code	Package Size	L_1 (µH)	L_2 (µH)	N_{LINE} : N_{DEVICE}	V_T (V_{AC})	IC Reference	xDSL Type	CO/CPE	V_S (kV)	Type of Insulation	LxWxH (mm)
750510624	Balun	75	–	1.2 : 1	1875	SCK1002	G.FAST	CO & CPE	–	Functional	6.73 x 9.02 x 3.68
750510660	Balun	75	–	1.2 : 1	1875	SCK1002	G.FAST	CO & CPE	–	Functional	6.2 x 6.9 x 3.68
750510720	Balun	40	–	1 : 1	1875	SCK1002	G.FAST	CO & CPE	–	Functional	6.73 x 9.02 x 3.68
750510721	Balun	75	–	1 : 1	1875	SCK1002	G.FAST	CO & CPE	–	Functional	6.2 x 6.9 x 3.68
750510737	Balun	47	74	1 : 1 or 1.25 : 1	1500	SCK1002	G.FAST	CO & CPE	–	Functional	5.26 x 8.55 x 4.06
750510738	Balun	25	39	1.25 : 1 or 1 : 1	1875	SCK1002	G.FAST	CO & CPE	6	Supplementary	6.1 x 9.7 x 5
750510739	Balun	96	–	1 : 1.25	1875	SCK1002	G.FAST	CO & CPE	–	Functional	6.3 x 9.02 x 3.68
750510782	Balun	60	86	1:1 or 1.2:1	1875	SCK1002	G.FAST	CO & CPE	–	Functional	5.26 x 8.55 x 4.06
750510783	Balun	50	72	1 : 1 or 1.2 : 1	1875	SCK1002	G.FAST	CO & CPE	6	Supplementary	6.1 x 9.7 x 5
750510784	Balun	135	–	1.25 : 1	1875	SEK22201	G.FAST	CO & CPE	–	Functional	6.85 x 8.6 x 3.78
750510785	Balun	86	–	1 : 1	1875	SEK22201	G.FAST	CO & CPE	–	Functional	6.85 x 8.6 x 3.78

MID-SPLT

Central Office Splitter for xDSL Applications

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Ultra compact structure design
- Integrated splitter inductors, capacitors and resistors
- Next generation miniaturization
- Overall customer BOM and board space reduction
- Cost reduction compared to discrete filters

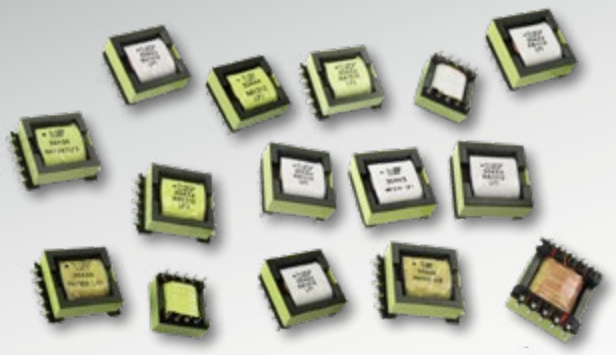
Applications

- Central office splitter for xDSL
- Added flexibility at a lower total cost

Electrical Properties

Order Code	xDSL Type	CO / CPE	Annex	LxWxH (mm)
750510359	ADSL	CO	A, B	22 x 13.7 x 12.9

MID-FLY
Flyback Transformers



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low profile design
- Discontinuous mode flyback switching
- Switching frequency: 40-250kHz
- Input voltage: 4.75-85V_{DC}
- Secondary voltages of 5, 12, 15, 24V
- Operating temp: -40°C to 125°C

Applications

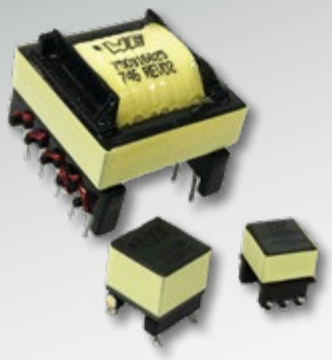
- Isolated power design
- Sensor interfaces
- Isolated telecom converters
- Power over Ethernet
- White goods
- Industrial control
- Building automation

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{O3} (V)	I_{O3} (A)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750030398	EFD15	4.75-16	5	0.30	5	0.30	5	0.30	10.65	1 : 1.1 : 1.1 : 1.1	-	500	100-250	15.75 x 22.23 x 8.89
750030399	EFD15	4.75-16	5	0.46	12	0.09	12	0.09	10.65	1 : 1.1 : 2.5 : 2.5	3.85	500	100-250	15.75 x 22.23 x 8.89
750030400	EFD15	4.75-16	5	0.46	15	0.08	15	0.08	10.65	1 : 1.1 : 3.1 : 3.1	3.80	500	100-250	15.75 x 22.23 x 8.89
750030401	EFD15	4.75-16	5	0.46	24	0.05	24	0.05	10.65	1 : 1.1 : 4.95 : 4.95	3.80	500	100-250	15.75 x 22.23 x 8.89
750030402	EFD15	16-40	5	0.60	5	0.60	5	0.60	32.30	1.733 : 1 : 1 : 1	2.98	500	100-250	15.75 x 22.23 x 8.89
750030403	EFD15	16-40	5	0.60	12	0.27	12	0.27	32.30	1.733 : 1 : 2.27 : 2.27	2.85	500	100-250	15.75 x 22.35 x 8.89
750030404	EFD15	16-40	5	0.80	15	0.17	15	0.17	32.30	1.733 : 1 : 2.86 : 2.86	3.90	500	100-250	15.75 x 22.35 x 8.89
750030405	EFD15	16-40	5	0.80	24	0.11	24	0.11	32.30	1.733 : 1 : 4.54 : 4.54	2.84	500	100-250	15.75 x 22.23 x 8.89
750030416	EFD20	4.75-16	5	0.38	5	0.38	5	0.38	32.30	1 : 1 : 1 : 1	4.88	500	40-100	21.97 x 28.7 x 10.8
750030418	EFD20	4.75-16	5	0.40	12	0.16	12	0.16	26.80	1 : 1 : 2.28 : 2.28	4.88	500	40-100	21.97 x 28.7 x 10.8
750030420	EFD20	4.75-16	5	0.40	15	0.13	15	0.13	26.80	1 : 1 : 2.83 : 2.83	4.88	500	40-100	21.97 x 28.7 x 10.8
750030421	EFD20	4.75-16	5	0.40	24	0.08	24	0.08	26.80	1 : 1 : 4.44 : 4.44	4.88	500	40-100	21.97 x 28.7 x 10.8
750030424	EFD20	16-40	5	0.77	5	0.77	5	0.77	39.20	1.33 : 1 : 1 : 1	4.70	500	40-100	21.97 x 28.7 x 10.8
750030426	EFD20	16-40	5	0.77	12	0.32	12	0.32	39.20	1.33 : 1 : 2.27 : 2.27	4.70	500	40-100	21.97 x 28.7 x 10.8
750030428	EFD20	16-40	5	0.77	15	0.26	15	0.26	39.20	1.33 : 1 : 2.83 : 2.83	-	500	40-100	21.97 x 28.7 x 10.8
750030430	EFD20	16-40	5	0.77	24	0.16	24	0.16	39.20	1.33 : 1 : 4.488 : 4.488	-	500	40-100	21.97 x 28.7 x 10.8
750030432	EFD20	16-40	5	1.00	5	1.00	5	1.00	26.80	1.636 : 1 : 1 : 1	-	500	100-250	21.97 x 28.7 x 10.8
750030434	EFD20	16-40	5	1.00	12	0.42	12	0.42	26.80	1.636 : 1 : 2.274 : 2.274	-	500	100-250	21.97 x 28.7 x 10.8
750030438	EFD20	16-40	5	1.00	24	0.21	24	0.21	26.80	1.636 : 1 : 4.548 : 4.548	-	500	100-250	21.97 x 28.7 x 10.8
750030439	EFD25	16-40	5	1.33	5	1.33	5	1.33	55.90	2.091 : 1 : 1 : 1	-	500	100-250	26.04 x 26.67 x 14.35
750030440	EFD25	16-40	5	1.33	12	0.55	5	0.55	55.90	2.091 : 1 : 2.273 : 2.273	-	500	100-250	26.04 x 26.67 x 14.35
750030441	EFD25	16-40	5	1.33	15	0.45	15	0.45	55.90	2.091 : 1 : 2.818 : 2.818	4.95	500	100-250	26.04 x 26.67 x 14.35
750030442	EFD25	16-40	5	1.33	24	0.27	24	0.27	55.90	2.091 : 1 : 4.535 : 4.535	-	500	100-250	26.04 x 26.67 x 14.35
750030443	EFD25	30-85	5	2.00	5	2.00	5	2.00	66.00	2.778 : 1 : 7.717 : 7.717	-	500	100-250	26.04 x 26.67 x 14.35
750030444	EFD25	30-85	5	2.00	12	0.83	12	0.83	66.00	2.778 : 1 : 2.334 : 2.334	-	500	100-250	26.04 x 26.67 x 14.35
750030445	EFD25	30-85	5	2.00	15	0.67	15	0.67	66.00	2.78 : 1 : 2.89 : 2.89	-	500	100-250	26.04 x 26.67 x 14.35
750030446	EFD25	30-85	5	2.00	24	0.42	24	0.42	66.00	2.778 : 1 : 4.44 : 4.44	-	500	100-250	26.04 x 26.67 x 14.35

MID-FLYADI

Flyback Transformers for Analog Devices



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low leakage inductance
- Single or multiple outputs
- Up to 12W output power
- Isolation voltage: 2000V_{AC}

Applications

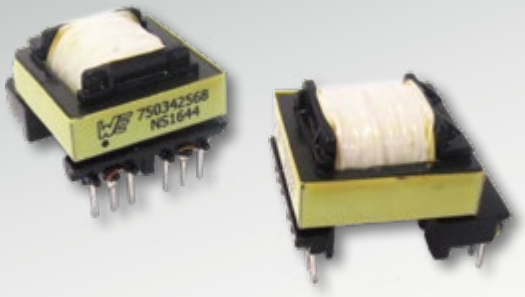
- Industrial controls
- Programmable logic controller (PLC)
- Factory automation
- Isolated DC/DC power supplies

Electrical Properties

Order Code	V_I (V_{DC})	V_{O1} (V)	I_{O1} (mA)	V_{O2} (V)	I_{O2} (mA)	V_{aux} (V)	L_1 (µH)	N_{PRI} : N_{SEC} : N_{AUX}	I_{SAT1} (mA)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750316566	18-32	24	45	–	–	–	150	1 : 1	220	2000	250	7 x 6.91 x 7.8
750316743	18-32	24	30	–	–	–	280	1 : 1	250	2000	250	8.26 x 8.6 x 9.65
750316825	18-36	24	400	5	500	10	97	6.25 : 4.5 : 1 : 2.75 : 1.75	2800	2500	66	23 x 22 x 17.53

MID-FLYIFX

Flyback Transformers for Infineon Technologies



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Multiple outputs
- Reinforced insulation
- Low leakage inductance
- THT
- Lead-free and RoHS compliant

Applications

- Industrial controls
- Factory automation
- IGBT driver
- Telecom power supplies

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{01} (V)	I_{01} (A)	V_{02} (V)	I_{02} (A)	V_{03} (V)	I_{03} (A)	V_{04} (V)	I_{04} (A)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750342568	EE20/10/6	10-26	15	0.17	-8	0.17	15	0.17	-8	0.17	40.9	1.33 : 1.8 : 1.8 : 1	2500	120	22 x 25 x 16.5

MID-FLYLT

Flyback Transformers for Linear Technology

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low leakage inductance
- High saturation current for low-power, DC/DC transformers
- Self-shielding and space efficient
- Functional insulation
- Isolation voltage: up to 1875V_{AC}
- Lead free and RoHS compliant
- Operating temp: -40°C to 125°C
- Package sizes: EP7, EP10, EP13 and ETD34
- Designed to meet IEC/UL/EN60950-1

Applications

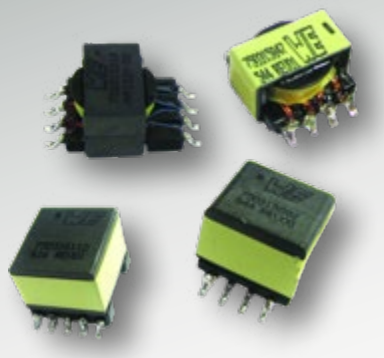
- Industrial & medical power supplies
- Isolated auxiliary/housekeeping power supplies
- Isolated DC/DC supplies
- Home automation
- Telecom

Electrical Properties

Order Code	Series	Package Size	V_I (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{aux}(V)	L (µH)	N_{PRI} : N_{SEC} : N_{AUX}	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	Max LxWxH (mm)
750312872	LT3798	ETD34	20-60	28.0	4.00	–	–	24.0	14.00	1 : 1 : 0.8	25.90	1500	50	39.6 x 43.18 x 30.84
750311019	LT8300	EP7	35-75	3.3	0.60	–	–	6.6	400.00	6 : 1 : 2	0.75	1875	200-300	9.78 x 9.14 x 10.54
750311558	LT8300	EP7	35-75	5.0	0.40	–	–	5.0	300.00	4 : 1 : 1	-	1875	200-300	9.78 x 9.14 x 10.54
750311559	LT8300	EP7	35-75	5.0	0.40	–	–	5.0	175.00	4 : 1 : 1	0.80	1875	200-300	9.78 x 9.14 x 10.54
750311659	LT8300	EP10	36-72	24.0	0.08	–	–	5.0	300.00	5 : 5 : 1	0.56	1875	180	9.78 x 9.14 x 10.54
750311660	LT8300	EP10	36-72	15.0	0.14	–	–	5.0	350.00	6 : 3 : 1	0.52	1875	190	9.78 x 9.14 x 10.54
750311838	LT8300	EP10	36-72	15.0	0.07	15.0	0.07	–	350.00	2 : 1 : 1	0.52	1875	190	9.78 x 9.14 x 10.54
750312365	LT8300	EP10	30-72	12.0	0.30	–	–	–	300.00	4 : 1	0.60	1875	100	10.16 x 13.36 x 8.64
750312366	LT8300	EP10	18-75	5.0	0.30	–	–	–	400.00	7.11 : 1	0.58	1875	100	10.16 x 13.36 x 8.64
750312367	LT8300	EP10	22-72	3.3	0.50	–	–	–	300.00	8.4 : 1	0.45	1875	100	10.16 x 13.36 x 8.64
750312557	LT8300	EP10	36-72	5.0	0.38	–	–	–	300.00	6 : 1	0.45	1875	70	10.16 x 13.36 x 8.64
750312558	LT8300	EP10	36-72	12.0	0.07	12.0	0.07	–	300.00	2 : 1 : 1	0.54	1875	70	9.78 x 9.14 x 10.54
750312559	LT8300	EP10	36-72	24.0	0.07	–	–	–	300.00	1 : 1	0.45	1875	70	10.16 x 13.36 x 8.64
750313970	LT8301	EP10	18-42	3.3	0.50	3.3	0.75	–	40.00	2 : 1 : 1	2.00	1875	200-300	13.34 x 15.24 x 11.43
750313972	LT8301	EP10	18-42	5.0	0.28	5.0	0.28	–	40.00	1 : 1 : 1	2.00	1875	200-300	13.34 x 15.24 x 11.43
750313973	LT8301	EP10	8-32	3.3	0.50	3.3	0.50	–	40.00	4 : 1 : 1	2.00	1875	200-300	13.34 x 15.24 x 11.43
750313974	LT8301	EP10	8-32	5.0	0.36	0.36	0.36	–	40.00	3 : 1 : 1	2.00	1875	200-300	13.34 x 15.24 x 11.43
750313975	LT8301	EP10	8-32	24.0	0.70	24.0	0.70	–	40.00	1 : 2 : 2	2.00	1875	200-300	13.34 x 15.24 x 11.43
750313976	LT8301	EP10	8-32	48.0	0.04	48.0	0.04	–	40.00	1 : 4 : 4	2.00	1875	200-300	13.34 x 15.24 x 11.43
750313439	LT8302	EP10	8-40	3.3	2.00	–	–	–	12.00	2 : 1	8.00	1875	100	13.34 x 15.24 x 11.43
750313441	LT8302	EP10	8-32	5.0	1.75	–	–	–	9.00	2 : 1	8.00	1875	100	13.34 x 15.24 x 11.43
750313442	LT8302	EP10	8-40	1.6	1.60	–	–	–	12.00	3 : 2	7.30	1875	100	13.34 x 15.24 x 11.43
750313443	LT8302	EP10	8-32	12.0	0.38	12.0	0.38	–	9.00	1 : 1 : 1	7.30	1875	100	13.34 x 15.24 x 11.43
750313445	LT8302	EP10	8-32	24.0	0.32	–	–	–	9.00	1 : 2	7.50	1875	100	13.34 x 15.24 x 11.43
750313457	LT8302	EP10	8-32	48.0	0.18	–	–	–	9.00	1 : 4	7.50	1875	100	13.34 x 15.24 x 11.43
750313460	LT8302	EP10	4-8	5.0	1.20	–	–	–	12.00	4 : 1	7.75	1875	100	13.34 x 15.24 x 11.43
750315825	LT8303	EP7	36-72	3.3	1.00	–	–	–	150.00	8 : 1	0.90	1875	50-200	10.16 x 13.36 x 8.64
750315826	LT8303	EP7	36-72	5.0	0.72	–	–	–	150.00	6 : 1	0.90	1875	50-200	10.16 x 13.36 x 8.64
750315827	LT8303	EP7	36-72	5.0	0.58	–	–	–	150.00	4 : 1	0.80	1875	50-200	10.16 x 13.36 x 8.64
750315828	LT8303	EP7	36-72	12.0	0.26	–	–	–	150.00	2 : 1	0.80	1875	50-200	10.16 x 13.36 x 8.64
750315829	LT8303	EP7	36-72	24.0	0.13	–	–	–	150.00	1 : 1	0.80	1875	50-200	10.16 x 13.36 x 8.64
750315830	LT8303	EP7	36-72	48.0	0.06	–	–	–	150.00	1 : 2	0.80	1875	50-200	10.16 x 13.36 x 8.64
750315831	LT8303	EP7	9-36	5.0	0.35	–	–	–	150.00	10 : 1	0.80	1875	50-200	10.16 x 13.36 x 8.64
750315832	LT8303	EP7	9-36	100.0	0.02	–	–	–	150.00	1 : 4	0.80	1875	50-200	10.16 x 13.36 x 8.64
750315833	LT8303	EP7	36-72	12.0	0.13	12.0	0.13	–	150.00	2 : 1 : 1	0.80	1875	50-200	10.16 x 13.36 x 8.64
750315834	LT8303	EP7	36-72	5.0	0.35	5.0	0.35	–	150.00	6 : 1 : 1	0.80	1875	50-200	10.16 x 13.36 x 8.64
750315125	LT8304	EP13	18-72	5.0	4.50	–	–	–	40.00	6 : 1	3.80	1875	150-300	13.46 x 17.75 x 12.7
750315126	LT8304	EP13	36-72	12.0	1.25	–	–	–	40.00	2 : 1	3.80	1875	150-300	13.46 x 17.75 x 12.7
750315835	LT8304	EP13	36-75	3.3	4.80	–	–	–	40.00	8 : 1	3.20	1875	50-200	13.46 x 17.75 x 12.7
750315836	LT8304	EP13	36-75	24.0	0.60	–	–	–	40.00	1 : 1	3.20	1875	50-200	13.46 x 17.75 x 12.7
750315837	LT8304	EP13	36-75	48.0	0.30	–	–	–	40.00	1 : 2	3.20	1875	50-200	13.46 x 17.75 x 12.7
750315839	LT8304	EP13	4-36	200.0	0.01	–	–	–	40.00	5 : 1	3.20	1875	50-200	13.46 x 17.75 x 12.7
750312504	LTC3300	EP13	2-5.5	20.0	0.25	–	–	–	3.46	1 : 1	10.20	500	130-300	13.46 x 17.75 x 12.7

MID-FLYMAX

Flyback Transformers for Maxim Integrated



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low profile
- Low leakage inductance
- SMT
- Isolation voltage: up to 3750V_{AC} at 1 second

Applications

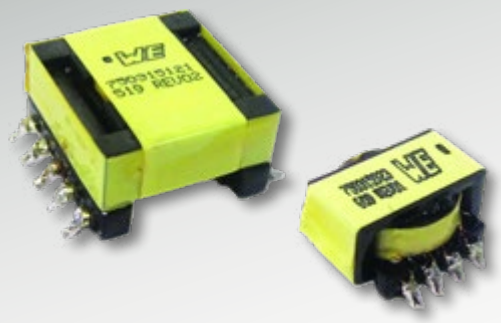
- Industrial controls
- Factory automation
- Micro PLC
- Telecom and datacom power supplies

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{O3} (V)	I_{O3} (A)	V_{aux} (V)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V)	f_{switch} (kHz)	LxWxH (mm)
750317095	EE20/10/6	18-60	54	1.10	–	–	–	–	–	6.8	1 : 1.44	20.00	1500	125	22.25 x 14.4 x 23.24
750317233	EP7	8-28	5	0.50	–	–	–	–	–	16.0	2 : 1	2.40	1500	143	9.78 x 9.5 x 10.54
750317234	EP7	18-60	5	0.50	–	–	–	–	–	84.0	4 : 1	0.84	1500	143	9.78 x 9.5 x 10.54
750317235	EP7	8-28	12	0.25	–	–	–	–	–	16.0	1 : 1	2.40	1500	143	9.78 x 9.5 x 10.54
750317236	EP7	18-60	12	0.25	–	–	–	–	–	84.0	2 : 1	0.84	1500	143	9.78 x 9.5 x 10.54
750315882	EP10	17-36	12	1.00	–	–	–	–	–	22.7	1.26 : 1	3.75	1875	500	13.34 x 15.24 x 11.43
750316742	EP10	18-36	12	0.50	–	–	–	–	–	54	1.87 : 1	1.75	3000	100	13.34 x 15.24 x 11.43
750316916	EP10	27-33	48	0.12	–	–	–	–	–	94	1 : 2.2	1.50	1500	100	13.34 x 15.24 x 11.43
750317248	EP10	8-28	5	1.00	–	–	–	–	–	8.0	2 : 1	4.20	1875	143	13.34 x 15.24 x 11.43
750317250	EP10	8-28	12	0.50	–	–	–	–	–	8.0	1 : 1	4.80	1875	143	13.34 x 15.24 x 11.43
750317251	EP10	18-60	12	0.50	–	–	–	–	–	42.0	2 : 1	1.80	1875	143	13.34 x 15.24 x 11.43
750317252	EP10	8-28	24	0.25	–	–	–	–	–	8.0	1 : 2	4.80	1875	143	13.34 x 15.24 x 11.43
750317253	EP10	8-60	24	0.25	–	–	–	–	–	42.0	1 : 1	1.80	1875	143	13.34 x 15.24 x 11.43
750342975	EP10	18-36	5	1.00	–	–	–	–	–	2.7	3 : 1	1.80	1800	200	13.34 x 15.24 x 11.43
750343122	EP10	18-36	5	1.00	–	–	–	–	–	27.0	3 : 1	1.80	1875	200	13.34 x 15.24 x 11.43
750343444	EP10	18-36	5	1.00	–	–	–	–	–	36	4.5 : 1	1.60	1875	180	13.34 x 15.24 x 11.43
750316112	EP13	17-36	12	1.60	–	–	–	–	–	11.0	1 : 1	6.00	1875	200	13.46 x 17.75 x 12.7
750316204	EP13	17-36	5	2.00	–	–	–	–	–	33	4.5 : 1	3.10	1500	90	13.46 x 17.75 x 12.7
750317263	EP13	8-28	5	2.00	–	–	–	–	–	4	2 : 1	12.00	1500	143	13.46 x 17.75 x 12.7
750317336	EP13	17-36	24	1.00	–	–	–	–	–	6.8	1 : 2	10.50	1500	125	13.97 x 17.17 x 12.7
750342955	EP13	18-36	5	3.00	–	–	–	–	8	9.0	3 : 1 : 1.67	–	1875	200	13.46 x 17.75 x 12.7
750343289	EP13	18-36	5	3.00	–	–	–	–	8	9	3 : 1 : 1.67	6.50	1875	200	13.46 x 17.75 x 12.7
750370883	EP13	17-36	5	1.50	–	–	–	–	–	18	2.5 : 1	4.00	1500	150	13.97 x 16.31 x 12.7
750315319	ER9.5S	24	5	0.02	7.5	0.1	10	0.02	12	300.0	4.57 : 1 : 1.28 : 1.85 : 2.28	0.15	3000	250	10 x 14 x 5
750315847	ER9.5	18-36	5	0.05	–	–	–	–	–	11.2	1.75 : 1	1.25	625	500	10 x 12.21 x 5.97
750343078	ER11.5	15-35	15	0.17	–	–	–	–	–	60.0	1 : 1	1.00	2000	150	12.04 x 12.85 x 6.1

MID-FLYSTM

Flyback Transformers for STMicroelectronics



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low profile
- SMT
- Low leakage inductance
- High saturation current

Applications

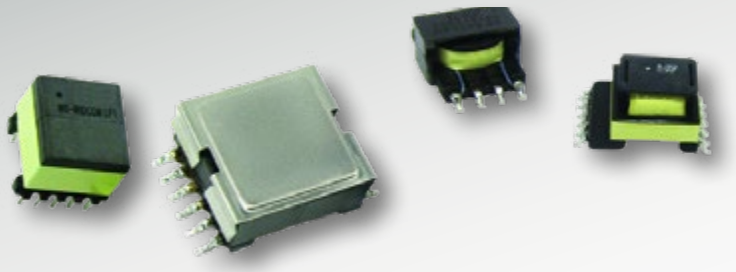
- Industrial power supplies
- Wireless chargers
- Power over Ethernet

Electrical Properties

Order Code	Package Size	V_I (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{aux} (V)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750315121	EPC17	5-15	5	2.0	–	5	1 : 1	8.50	625	500	19.55 x 23.75 x 10.65
750315923	ER11.5	33-57	5	0.6	12	310	3.58 : 1 : 2.5	0.43	1650	250	12.04 x 12.85 x 6.1

MID-FLYTI

Flyback Transformers for Texas Instruments



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low leakage inductance
- Low profile
- Isolation voltage: up to 3600V_{AC}
- Lead free and RoHS compliant
- Operating temp: -40°C to 125°C

Applications

- Industrial and medical power supplies
- Auxiliary power supplies
- Home automation
- Isolated DC/DC power supplies

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{01} (V)	I_{01} (A)	V_{02} (V)	I_{02} (A)	V_{03} (V)	I_{03} (A)	V_{04} (V)	I_{04} (A)	V_{aux} (V)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750342957	EE16/7/5	6-12	75.0	0.50	–	–	–	–	–	–	–	1.2	1 : 5	20.00	1875	300	18.5 x 16.5 x 18.8
750343772	EE16/7/5	24	100.0	0.13	-100	0.13	–	–	–	–	–	13.0	1 : 5.5 : 5.5	–	1500	100-500	18.5 x 16.5 x 18.8
750315626	EE16/8/5	3.3-5	120.0	0.10	–	–	–	–	–	–	–	1.5	1 : 15	20.00	2500	130	17.78 x 26.9 x 13.8
750316914	EE20/10/6	10-14	20.0	0.10	20	0.10	20	0.10	–	–	10	25.0	1 : 3 : 3 : 3 : 1.5	3.70	3000	400	22.2 x 25 x 16
750343373	EE20/10/6	18-60	12.0	3.00	12	1.00	–	–	–	–	–	15.0	1 : 1 : 1	5.00	1500	300	23 x 22 x 17.53
750313527	EFD15	4.5-16	3.3	0.06	5	0.06	18	0.06	–	–	–	10.0	1.88 : 1 : 1.5 : 3.76	5.80	3125	1200	17.15 x 22.23 x 8.89
750312791	EFD20	9-57	56.0	0.35	–	–	–	–	–	–	12	10.0	1 : 5 : 1.13	8.75	1875	200	23.11 x 29.65 x 11.43
750313102	EFD20	10-32	48.0	0.50	–	–	–	–	–	–	–	12.0	1:1:1:1	11.50	1500	200	23.11 x 29.08 x 11.43
750315252	EFD20	24-48	24.0	1.00	–	–	–	–	–	–	–	60.0	1 : 1.33	3.80	3750	130	21.08 x 21.08 x 11.05
750315623	EFD25	25-520	24.0	1.25	–	–	–	–	–	–	24	100.0	2 : 1 : 1	4.80	2215	100	23.07 x 32.45 x 13.97
750315778	EFD25	42.5-57	12.0	4.30	–	–	–	–	–	–	12	62.0	3.19 : 1 : 1	5.20	1875	225-270	27.03 x 32.45 x 13.97
750316708	EFD25	12-60	12.0	3.00	–	–	–	–	–	–	12	42.0	3 : 1 : 1	7.00	1000	100	26.04 x 26.67 x 14.5
760372002	EFD25	9-36	5.0	2.50	5	2.50	5	0.10	–	–	–	25.0	2 : 1 : 1 : 1	7.50	1875	200	27.03 x 32.31 x 13.97
750314189	EP7	3-6	5.0	0.20	–	–	–	–	–	–	–	2.5	1 : 1.67	–	2500	200-600	9.78 x 9.14 x 10.54
750317605	EP7	27-70	5.0	1.00	–	–	–	–	–	–	–	30.0	3 : 01	2.6	–	350	9.78 x 9.5 x 10.54
750342984	EP7	9-16	15.0	0.10	-15	0.10	–	–	–	–	15	30.0	1.5 : 1 : 1 : 1	1.00	1875	600	9.75 x 9.5 x 10.54
750342354	EP13	8-30	6.0	2.00	–	–	–	–	–	–	–	12.0	1.2 : 1	4.50	1875	400	13.46 x 17.75 x 12.7
750342985	EP13	15-36	24.0	0.50	6	0.10	6	0.10	–	–	24	30.0	7.33 : 4 : 1 : 1 : 4	2.60	1875	300	13.97 x 17.17 x 12.7
750315627	ER9.5S	3.3-5	120.0	0.01	–	–	–	–	–	–	–	5.0	1 : 15	2.20	2500	130	10 x 14 x 5
750342424	ETD39	23.25	25.0	0.23	25	0.23	25	0.23	25	0.23	12	23.0	0.9 : 1 : 1 : 1 : 1 : 0.5	–	3600	100	49 x 41.9 x 31.75
750341824	RM6	18-36	5.0	4.50	–	–	–	–	–	–	12	30.0	4 : 1 : 2	–	3000	240	17.65 x 16.64 x 15

MID-FBRTI

Full-Bridge Transformers for Texas Instruments

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low losses
- High efficiency
- Low DC resistance

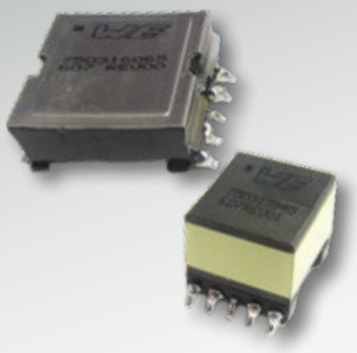
Applications

- Single phase UPS
- Battery charger
- Energy storage system

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{O1} (V)	I_{O1} (A)	L_1 (µH)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750343382	ETD49	36-60	300	5	45	1875	100	55 x 57 x 40.1

MID-FWD
Forward Transformers



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Small size
- SMT
- Low profile
- Low leakage inductance
- Functional insulation
- Operating temp: -40°C to 125°C

Applications

- PLCs
- Industrial process control and sensors
- Telecom and Datacom power supplies

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{aux} (V)	L_1 (µH)	N_{PRI} : N_{SEC} : N_{AUX}	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750316065	EFD20	17-36	5	8	–	22.5	1.67 : 1	1250	320	23.11 x 26.1 x 10.92
750315669	EFD25	34-62	28	2	10	190.0	2 : 1 : 2.66	1500	250	27.03 x 32.45 x 13.69
750315945	EP13	17-36	5	2	–	98.0	2.2 : 1	1250	500	13.46 x 17.75 x 12.7

MID-HB
Half-Bridge Transformers

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Small size
- Self-shielding package
- Low losses
- Pick-and-placeable
- Lead free and RoHS compliant
- Operating temp: -40°C to 100°C

Applications

- Factory automation and process control
- Building automation
- Portable instrumentation
- Field transmitters and other sensors

Electrical Properties

Order Code	Package Size	V_I (V_{DC})	V_{O1} (V)	I_{O1} (A)	L_1 (µH)	N_{PRI} : N_{SEC}	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750314839	EP7	3-5.2	5	0.01	3000	1 : 1.25	1875	30-70	9.79 x 9.14 x 10.54
750315504	EPX6	3-3.6	4	0.01	2500	1 : 1.8	1875	30-70	7.87 x 8.38 x 9.65
750343804	EPX7	15	25	0.10	20	1 : 4.2	3000	500	10.16 x 9.14 x 12.32
750343805	EPX7	18	18	0.10	20	1 : 43.2	3000	500	10.16 x 9.14 x 12.32

MID-PLN

Planar Transformers - 150W and 250W

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Switching frequency: 200kHz to 700kHz optimized
- Power range: 150W to 250W
- ER19/4.8/15 core effective area A_e (mm²): 60.0
- ERI25/10/18 core effective area A_e (mm²): 80.4
- B_{SAT} @125°C: 370mT
- Isolation voltage: 2250V_{DC}
- Operating temp: -40°C to 125°C
- Package size: ERI25/10/18 or ER19/4.8/15

Applications

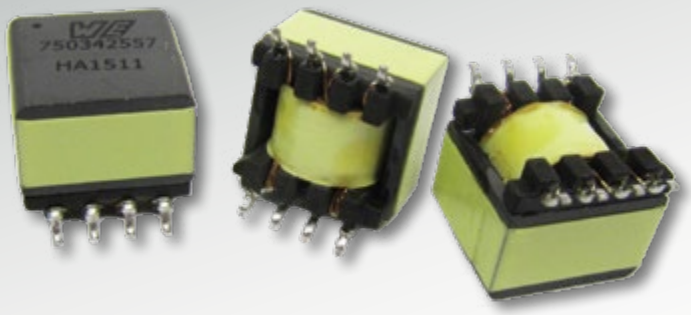
- Forward converter
- Half/Full bridge
- Active clamp

Electrical Properties

Order Code	Package Size	L_1 (µH)	$N_{PRI} : N_{SECI} : N_{AUX}$	V_T (V_{DC})	LxWxH (mm)
750341134	ERI25/10/18	65	2 : 2 : 4	2250	26.67 x 29.3 x 10.5
750341135	ERI25/10/18	145	3 : 3 : 4	2250	26.67 x 29.3 x 10.5
750341136	ERI25/10/18	260	4 : 4 : 4	2250	26.67 x 29.3 x 10.5
750341137	ERI25/10/18	410	5 : 5 : 4	2250	26.67 x 29.3 x 10.5
750341138	ERI25/10/18	65	2 : 2 : 3	2250	26.67 x 29.3 x 10.5
750341139	ERI25/10/18	145	3 : 3 : 3	2250	26.67 x 29.3 x 10.5
750341140	ERI25/10/18	260	4 : 4 : 3	2250	26.67 x 29.3 x 10.5
750341141	ERI25/10/18	410	5 : 5 : 3	2250	26.67 x 29.3 x 10.5
750341142	ERI25/10/18	65	2 : 2 : 2	2250	26.67 x 29.3 x 10.5
750341143	ERI25/10/18	143	3 : 3 : 2	2250	26.67 x 29.3 x 10.5
750341144	ERI25/10/18	260	4 : 4 : 2	2250	26.67 x 29.3 x 10.5
750341145	ERI25/10/18	410	5 : 5 : 2	2250	26.67 x 29.3 x 10.5
750341181	ER19/4.8/15	86	3 : 3 : 1 : 1	2250	21.08 x 23.37 x 10.5
750341182	ER19/4.8/15	117	3 : 4 : 1 : 1	2250	21.08 x 23.37 x 10.5
750341183	ER19/4.8/15	153	4 : 4 : 1 : 1	2250	21.08 x 23.37 x 10.5
750341184	ER19/4.8/15	194	4 : 5 : 1 : 1	2250	21.08 x 23.37 x 10.5
750341185	ER19/4.8/15	240	5 : 5 : 1 : 1	2250	21.08 x 23.37 x 10.5
750341186	ER19/4.8/15	290	5 : 6 : 1 : 1	2250	21.08 x 23.37 x 10.5
750341187	ER19/4.8/15	345	6 : 6 : 1 : 1	2250	21.08 x 23.37 x 10.5
750341188	ER19/4.8/15	86	3 : 3 : 2 : 2	2250	21.08 x 23.37 x 10.5
750341189	ER19/4.8/15	117	3 : 4 : 2 : 2	2250	21.08 x 23.37 x 10.5
750341190	ER19/4.8/15	153	4 : 4 : 2 : 2	2250	21.08 x 23.37 x 10.5
750341191	ER19/4.8/15	194	4 : 5 : 2 : 2	2250	21.08 x 23.37 x 10.5
750341192	ER19/4.8/15	240	5 : 5 : 2 : 2	2250	21.08 x 23.37 x 10.5
750341193	ER19/4.8/15	290	5 : 6 : 2 : 2	2250	21.08 x 23.37 x 10.5
750341194	ER19/4.8/15	345	6 : 6 : 2 : 2	2250	21.08 x 23.37 x 10.5
750341195	ER19/4.8/15	86	3 : 3 : 3 : 3	2250	21.08 x 23.37 x 10.5
750341196	ER19/4.8/15	117	3 : 4 : 3 : 3	2250	21.08 x 23.37 x 10.5
750341197	ER19/4.8/15	153	4 : 4 : 3 : 3	2250	21.08 x 23.37 x 10.5
750341198	ER19/4.8/15	194	4 : 5 : 3 : 3	2250	21.08 x 23.37 x 10.5
750341199	ER19/4.8/15	240	5 : 5 : 3 : 3	2250	21.08 x 23.37 x 10.5
750341200	ER19/4.8/15	290	5 : 6 : 3 : 3	2250	21.08 x 23.37 x 10.5
750341201	ER19/4.8/15	345	6 : 6 : 3 : 3	2250	21.08 x 23.37 x 10.5
750341202	ER19/4.8/15	86	3 : 3 : 4 : 4	2250	21.08 x 23.37 x 10.5
750341203	ER19/4.8/15	117	3 : 4 : 4 : 4	2250	21.08 x 23.37 x 10.5
750341204	ER19/4.8/15	153	4 : 4 : 4 : 4	2250	21.08 x 23.37 x 10.5
750341205	ER19/4.8/15	194	4 : 5 : 4 : 4	2250	21.08 x 23.37 x 10.5
750341206	ER19/4.8/15	240	5 : 5 : 4 : 4	2250	21.08 x 23.37 x 10.5
750341207	ER19/4.8/15	290	5 : 6 : 4 : 4	2250	21.08 x 23.37 x 10.5
750341208	ER19/4.8/15	345	6 : 6 : 4 : 4	2250	21.08 x 23.37 x 10.5

MID-IBMAX

Isolated Buck Transformers for Maxim Integrated Iso-Buck Chipsets



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- No optocoupler used for feedback
- Primary side regulation
- Reduces number of components

Applications

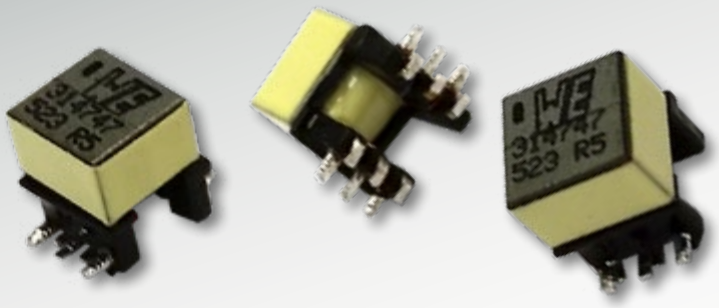
- Factory automation
- Programmable Logic Controllers (PLCs)
- Isolated communications interface like RS485, RS232

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{O3} (V)	I_{O3} (A)	V_{O4} (V)	I_{O4} (A)	V_{buck} (V)	L_1 (µH)	N_{PRI} : N_{SEC}	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750342779	EP7	17-36	7.0	0.10	-7.0	0.1	–	–	–	–	7.65	50	1 : 1 : 1	1.2	1875	200	9.78 x 9.5 x 10.54
750342878	EP7	17-36	7.0	0.20	–	–	–	–	–	–	7.65	50	1 : 1	1.2	1500	200	9.78 x 9.5 x 10.54
750342557	EP10	17-32	15.0	0.10	-15.0	0.1	–	–	–	–	8.70	50	1 : 1.8 : 1.8	1.4	1500	200	13.34 x 15.25 x 11.43
750342859	EP10	17-36	15.0	0.20	–	–	–	–	–	–	7.80	50	1 : 1.81	1.4	1875	200	13.34 x 15.24 x 11.43
750342860	EP10	18-36	24.0	0.10	–	–	–	–	–	–	10.30	80	1 : 2.4	1.2	1875	200	13.34 x 15.24 x 11.43
750342864	EP13	17-36	7.5	0.10	-7.5	0.1	15	0.1	-15	0.1	7.80	50	1 : 1 : 1 : 1 : 1	1.8	1875	200	13.46 x 17.75 x 12.7
750343160	EFD20	18-42	12.0	0.75	–	–	–	–	–	–	–	33	1 : 1.67	4.3	3000	250	21.5 x 33.8 x 12

MID-IBTEL

Isolated Buck Transformers for Telecom Applications



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Excellent leakage inductance and interwinding capacitance
- SMT
- Isolation voltage: 2250V_{AC} at 1 second
- Operating temp: -40ºC to 125ºC

Applications

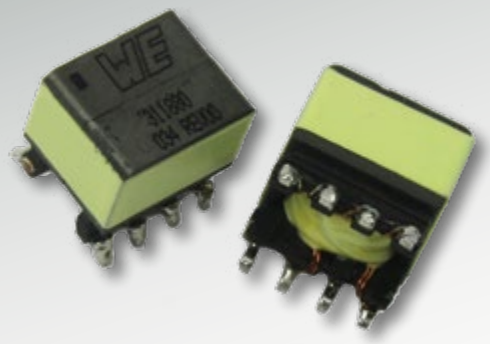
- PoE powered devices
- IP phones
- WLAN access points
- Security cameras
- Telecom

Electrical Properties

Order Code	Package Size	V_I (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{buck} (V)	L_1 (µH)	N_{PRI} : N_{SEC}	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750314743	EP5HV	36-72	10	0.05	10	22	1 : 1	1.05	2250	200-350	7 x 9.1 x 7.8
750314744	EP5HV	36-72	10	0.05	10	33	1 : 1	1.07	2250	200-350	7 x 9.1 x 7.8
750314745	EP5HV	36-72	10	0.05	10	47	1 : 1	0.91	2250	200-350	7 x 9.1 x 7.8
750314746	EP5HV	36-72	10	0.05	10	22	1 : 1	0.76	2250	200-350	7 x 9.1 x 7.8
750314747	EP5HV	36-72	10	0.05	10	33	1 : 1	0.54	2250	200-350	7 x 9.1 x 7.8
750314748	EP5HV	36-72	10	0.05	10	47	1 : 1	0.50	2250	200-350	7 x 9.1 x 7.8

MID-IBTI

Isolated Buck Transformers for Texas Instruments Fly-Buck™ Chipsets



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Fly-Buck™ topology
- Low cost and high efficiency
- Excellent leakage inductance and interwinding capacitance performance
- Operating temp: -40°C to 125°C

Applications

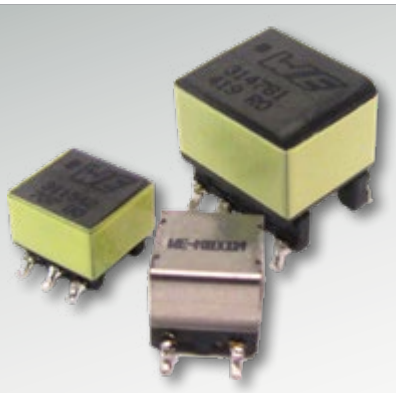
- Industrial Programmable Logic Controllers (PLCs)
- Building automation and process control
- Isolated interface power: RS-422, RS-485, CAN, I2C, LAN
- Motor drive control, inverters and industrial automation
- Isolated low-power drivers & regulators, smart e-meters
- Bias power supplies for gate drives and op-amps

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{O3} (V)	I_{O3} (A)	V_{O4} (V)	I_{O4} (A)	V_{buck} (V)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750342611	EE13/7/4	9-15	15.00	0.35	–	–	–	–	–	–	4.50	40.0	1 : 3.4	2.00	3500	200-400	13.72 x 20.45 x 10.16
750314851	EE16/8/5	14-40	14.00	0.10	5.00	0.05	14	0.05	5	0.05	–	68.0	1.833 : 1.666 : 1 : 1.666 : 1	1.80	4000	300	17.78 x 26.1 x 14
750315393	EE16/8/5	11.8-13.2	12.00	0.60	–	–	–	–	–	–	4.20	37.5	1 : 3	3.00	1875	600	17.96 x 20.3 x 14.3
750342627	EE16/8/5	9-15	9.00	0.25	–	–	–	–	–	–	–	20.0	2.4 : 1	2.00	4500	200-350	20.32 x 24.4 x 16
750314624	EE20/10/6	17-35	16.00	0.10	9.00	0.10	-16	0.10	-9	0.10	11.00	60.0	1.08 : 1 : 1.75 : 1 : 1.75	1.55	5000	250-600	16 x 25 x 16
750316586	EE20/10/6	10-14	7.00	0.30	12.00	0.05	30	0.08	–	–	-12.00	150.0	1.69 : 1 : 1.69 : 4.07	1.30	4000	200	22.2 x 25 x 16
750342706	EFD15	12-36	18.00	0.15	-18.00	0.15	6	0.50	-6	0.50	–	47.0	1.44 : 2.94 : 2.94 : 1 : 1	1.68	1250	500	15.75 x 22.35 x 8.89
750315039	EFD20	24	5.00	1.00	15.00	0.20	–	–	–	–	8.50	40.0	1.43 : 1 : 2.86 : 2.86	1.80	1875	250	23.11 x 29.08 x 11.43
750312750	EP5	20-100	10.00	0.30	–	–	–	–	–	–	–	23.0	1 : 1	0.76	1500	750	6.6 x 8.26 x 5.6
750312924	EP5	36-75	10.00	0.12	5.00	0.08	–	–	–	–	10.00	26.0	2 : 2 : 1	0.55	1875	750	8.35 x 6.35 x 9.5
750311780	EP7	2.5-3.5	15.00	0.20	15.00	0.20	–	–	–	–	–	2.0	1 : 8: 8	10.00	2500	500	9.78 x 9.14 x 11
750311880	EP7	3-6	5.00	0.20	–	–	–	–	–	–	–	2.5	1 : 2.5	–	4000	200-600	9.78 x 9.14 x 11
750312547	EP7	3-6	5.00	0.20	–	–	–	–	–	–	–	1.0	1 : 2.4	–	3000	500	9.78 x 9.14 x 11
750314597	EP7	10-40	15.50	0.25	–	–	–	–	–	–	10.30	60.0	1 : 1.5	0.84	1875	150	9.78 x 9.14 x 11
750314952	EP7	10-40	3.30	0.01	3.30	0.03	–	–	–	–	3.30	2500.0	1 : 1.25	–	2500	100	9.78 x 9.14 x 11
750315547	EP7	12-50	3.60	0.10	–	–	–	–	–	–	3.30	42.0	1 : 1.2	1.10	2500	300	9.78 x 9.14 x 11
750315703	EP7	5-15	5.00	0.50	–	–	–	–	–	–	–	25.0	1 : 1	1.00	2500	200	9.78 x 9.5 x 11
750316170	EP7	3.5-5.5	13.50	0.01	-14.00	0.01	5	0.10	–	–	2.17	2.7	1 : 8 : 8 : 3	7.00	1875	400	9.78 x 9.5 x 11
750314225	EP10	15-40	5.00	0.25	5.00	0.25	–	–	–	–	7.80	50.0	1.5 : 1	1.30	1500	250-600	13.34 x 15.3 x 11
750314226	EP10	15-40	15.00	0.15	15.00	0.15	–	–	–	–	7.80	50.0	2 : 1	1.20	1500	250-600	13.34 x 15.3 x 11
750315811	EP10	36-72	12.00	0.83	–	–	–	–	–	–	12.00	60.0	1 : 1	2.10	1875	300	13.34 x 15.3 x 11
750342156	EP10	15-40	12.75	0.60	12.75	0.60	–	–	–	–	–	66.0	1 : 1	1.20	1875	600	13.34 x 15.3 x 11
750313995	EP13	15-40	15.00	0.05	5.00	0.10	5	0.10	15	0.05	7.80	50.0	1.5 : 1 : 1 : 2 : 2	1.50	1500	250-600	13.46 x 17.75 x 12.7
750315445	EPC13	9-18	15.00	0.20	9.00	0.20	–	–	–	–	15.00	25.0	1 : 1 : 0.598	2.50	2500	300	14.6 x 14.73 x 8.5
750342773	EPW15	10-20	6.00	0.40	6.00	0.40	–	–	–	–	–	60.0	1 : 1.91 : 1.91	2.90	6000	2500	15.7 x 22.1 x 23.3
750314441	ER9.5	17-36	24.00	0.03	3.30	0.05	–	–	–	–	9.50	80.0	1 : 2.56 : 0.389	0.52	1500	200	10 x 13.8 x 4
750315176	ER9.5	17-36	24.00	0.03	3.30	0.05	–	–	–	–	9.50	80.0	1 : 2.56 : 0.389	0.52	1500	200	10 x 12.21 x 5.97
750342304	ER9.5	10-36	7.00	0.25	–	–	–	–	–	–	–	260.0	1 : 1	–	1750	250-600	10 x 12.07 x 5.97
750315144	ER9.5S	12-36	-17.50	0.03	17.50	0.05	–	–	–	–	9.00	80.0	1 : 2 : 2	0.50	625	300	10 x 14 x 5
750315245	ER9.5S	20-30	5.00	0.20	–	–	–	–	–	–	5.50	30.0	1 : 1	0.96	1875	350	10 x 14 x 5
750315246	ER9.5S	16-36	5.00	0.20	–	–	–	–	–	–	5.00	26.0	1 : 1.09	0.96	1875	350	10 x 14 x 5
750315247	ER9.5S	20-30	15.00	0.10	–	–	–	–	–	–	7.80	30.0	1 : 2	0.88	1875	350	10 x 14 x 5
750315248	ER9.5S	20-30	5.00	0.10	-5.00	0.10	–	–	–	–	5.50	30.0	1 : 1 : 1	0.96	1875	350	10 x 14 x 5
750315249	ER9.5S	20-30	15.00	0.05	-15.00	0.05	–	–	–	–	10.40	30.0	1 : 1.5 : 1.5	0.92	1875	350	10 x 14 x 5
750315250	ER9.5S	20-30	5.00	0.10	-5.00	0.10	–	–	–	–	11.00	30.0	2 : 1 : 1	0.90	1875	350	10 x 14 x 5
750314442	ER11.5	16-36	10.00	0.03	5.00	0.08	-10	0.03	-5	0.08	13.00	45.0	2.08 : 2 : 1 : 2 : 1	0.78	1875	200-350	12.95 x 12.7 x 5.98
750314459	ER11.5	16-36	7.00	0.03	5.00	0.08	-5	0.08	-7	0.03	13.00	45.0	1.79 : 1.29 : 1 : 1.29 : 1	0.80	1875	200-350	12.95 x 12.7 x 5.98
750314460	ER11.5	16-36	12.00	0.03	12.00	0.03	-5	0.08	-5	0.08	13.00	45.0	1.79 : 2.29 : 2.29 : 1 : 1	0.90	1875	200-350	12.95 x 12.7 x 5.98
750314461	ER11.5	16-36	15.00	0.03	5.00	0.10	-5	0.10	–	–	13.00	45.0	1.92 : 3 : 1 : 1	0.96	1875	200-350	12.95 x 12.7 x 5.98
750314462	ER11.5	16-36	5.00	0.10	12.00	0.04	-12	0.04	–	–	13.00	45.0	1.92 : 1 : 2.38 : 2.38	0.98	1875	200-350	12.95 x 12.7 x 5.98
750314463	ER11.5	16-36	24.00	0.02	12.00	0.04	-12	0.04	–	–	13.00	45.0	1 : 2.36 : 1.16 : 1.16	0.96	1875	200-350	12.95 x 12.7 x 5.98
750315856	ER11.5	16-36	24.00	0.04	5.00	0.05	-5	0.02	–	–	9.00	120.0	1 : 3 : 0.56 : 0.56	0.65	625	250	13 x 12.85 x 6.35
750342206	ER11.5	18-24	15.00	0.15	5.00	0.10	15	0.15	–	–	–	50.0	2 : 3 : 1 : 3.2 : 1	–	1500	200-400	12.95 x 12.85 x 6.35
750316561	ER14.5	18-31	5.00	0.50	3.30	1.00	–	–	–	–	7.50	60.0	2 : 1.43 : 1	1.25	1875	200	15.49 x 17.02 x 7.1
750342178	ER14.5	17-32	15.00	0.05	5.00	0.10	5	0.10	15	0.05	13.00	50.0	1 : 1.935 : 1.935	1.50	1500	250	15.49 x 17 x 7
750315038	PQ2020	7-26	23.00	0.30	23.00	0.10	23	0.10	23	0.10	9.40	36.5	1 : 2.33 : 2.33 : 2.33 : 2.33	0.90	4500	250-600	23.36 x 23.88 x 24.14

MID-PPLT

Push-Pull Transformers for Linear Technology



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Small size
- SMT
- Low profile
- Low leakage inductance
- Operating temp: -40°C to 125°C

Applications

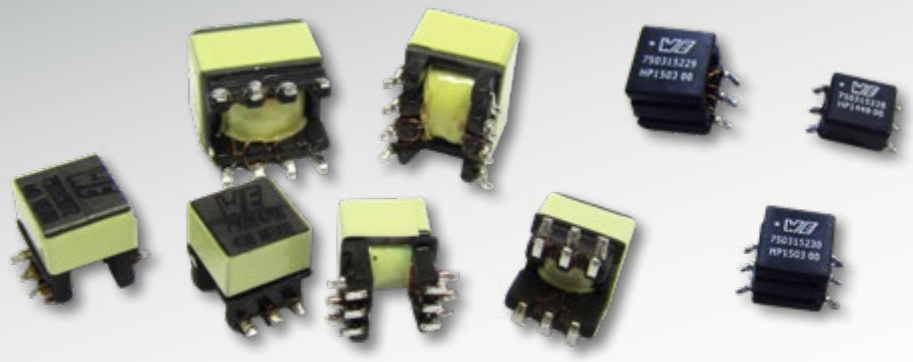
- Isolated interface power supply for RS232, RS485
- Industrial automation
- Process control
- Medical equipment

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{O1} (V)	I_{O1} (mA)	L_1 (µH)	N_{PRI} : N_{SEC}	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750031160	EE5	5	5	50	500	1 : 2.7	1250	500	6.1 x 8.76 x 6.35
750311542	EP5	5	5	50	500	1 : 2.73	1000	500	6.6 x 8.26 x 5.59
750314781	EP7	9-15	20	500	40	1 : 2	1000	1000	9.78 x 9.14 x 10.54

MID-PPMAX

Push-Pull Transformers for Maxim Integrated



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- SMT parts with a small footprint
- Low profile
- Rounded self-shielding cores in EP packages
- Very low leakage inductance
- Functional or supplementary insulation
- Isolation voltage: up to 6250V_{AC} at 1 second
- Lead free and RoHS compliant
- Operating temp: -40°C to 125°C

Applications

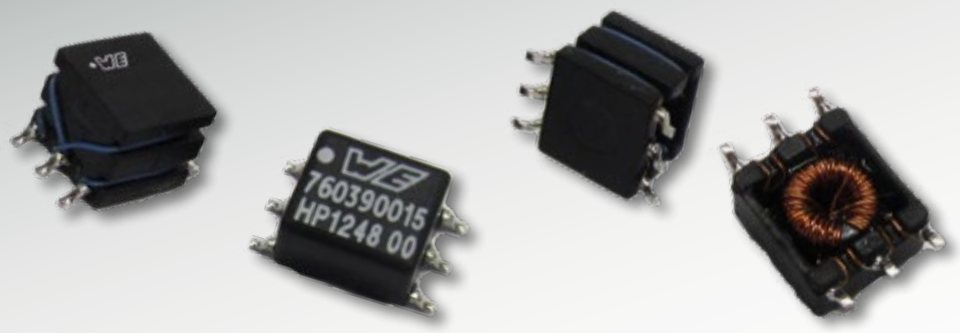
- Isolated communication fieldbus interfaces
- 24V PLC supply isolation
- Industrial automation
- Isolated medical power
- Robotics and power meter data interface

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{O1} (V)	I_{O1} (A)	L_1 (µH)	N_{PRI} : N_{SEC}	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750314706	EP5HV	3-5.5	5.4-9.9	0.50	250	1 : 1.8	3125	250	7 x 9.1 x 7.8
750315072	EP5HV	3-5.5	2-3.6	0.50	635	1.53 : 1	3125	250	7 x 9.1 x 7.8
750315089	EP5HV	3-5.5	3-5.5	0.50	635	1 : 1	3125	250	7 x 9.1 x 7.8
750315090	EP5HV	3-5.5	3-5.5	0.50	270	1 : 1	3125	250	7 x 9.1 x 7.8
750315213	EP7	8-36.0	8-36.0	0.50	563	1 : 1	3125	250	9.79 x 9.14 x 10.54
750315214	EP7	8-36.0	2-9.0	0.50	563	4 : 1	3125	250	9.78 x 9.14 x 10.54
750315225	TOR4.3/2.8/2.3	3.3	3.6	0.20	388	1 : 1.1	3438	350-550	6.73 x 10.46 x 4.19
750315226	TOR4.3/2.8/2.3	3.3	4.3	0.20	388	1 : 1.3	3438	350-550	6.73 x 10.46 x 4.19
750315227	TOR4.3/2.8/2.3	3.3	5.6	0.20	388	1 : 1.7	3438	350-550	6.73 x 10.46 x 4.19
750315228	TOR4.3/2.8/2.3	3.3	6.6	0.16	388	1 : 2	3438	350-550	6.73 x 10.46 x 4.19
750315229	TOR4.3/2.8/3	5.0	5.0	0.20	384	1 : 1.1	6250	350-550	9.14 x 12.7 x 7.62
750315230	TOR4.3/2.8/3	5.0	5.0	0.15	384	1: 1.4	6250	350-550	9.14 x 12.7 x 7.62
750315231	TOR4.3/2.8/3	3.3	5.0	0.13	384	1 : 1.6	6250	350-550	9.14 x 12.7 x 7.62
750315232	TOR4.3/2.8/3	3.3	5.0	0.10	384	1 : 2	6250	350-550	9.14 x 12.7 x 7.62

MID-PPTI

Push-Pull Transformers for Texas Instruments



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Small size
- SMT
- Low profile
- Functional, supplementary, or reinforced insulation
- Operating temp: -40°C to 125°C
- Standards detail: IEC60950-1, EN60950-1/ CSA60950-1 and AS/NZS609501.1
- Standards detail for SN6505B supplementary insulation series: IEC61010-1
- Standards detail for high voltage series: IEC60664-1, IEC60950-1 and IEC60601-1

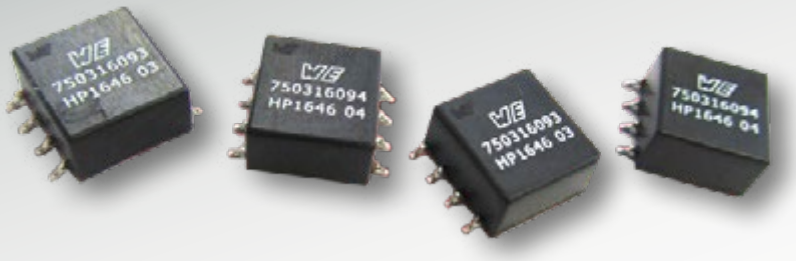
Applications

- Isolated interface power supply for CAN, RS-485, RS-422, RS-232, SPI, I2C, lower-power LAN
- Industrial automation
- Process control
- Medical equipment
- PLC analog and digital I/O modules
- Isolated gate driver power supplies
- AC motor drives
- Uninterruptible Power Supplies (UPS)
- Solar inverters
- Polyphase energy meters
- Protection relays and IEDs

Electrical Properties

Order Code	Series	Insulation	V_i (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	L_I (µH)	N_{PRI} : N_{SEC}	V_T (V_{AC})	f_{switch} (kHz)	∫Udt (µVs)	LxWxH (mm)
750342312	LM5030	Reinforced	22.8-25.2	8.70	0.250	–	–	90.75	5.5 : 1	3750	500	–	22.2 x 25 x 16
750343547	LM5030	Basic	24.0	110.00	1.000	–	–	100.00	1 : 7.5	1500	100-400	–	27.94 x 29.21 x 21.59
750343548	LM5030	Basic	24.0	55.00	2.000	–	–	100.00	1 : 3	1500	100-400	–	27.94 x 29.21 x 21.59
760390012	SN6501	Functional	5.0	5.00	0.350	–	–	475.00	1 : 1.1	3125	300-620	11.0	6.73 x 10.05 x 4.19
760390013	SN6501	Functional	3.3	5.00	0.350	–	–	475.00	1 : 1.7	3125	250-550	11.0	6.73 x 10.05 x 4.19
760390014	SN6501	Functional	5.0	5.00	0.350	–	–	475.00	1 : 1.3	3125	300-620	11.0	6.73 x 10.05 x 4.19
760390015	SN6501	Functional	3.3	5.00	0.350	–	–	475.00	1 : 2	3125	250-550	11.0	6.73 x 10.05 x 4.19
750313626	SN6501HV	Reinforced	3.3	5.00	0.150	–	–	340.00	1 : 2	6250	250-550	11.0	9.14 x 12.7 x 7.62
750313638	SN6501HV	Reinforced	5.0	3.30	0.150	–	–	340.00	1.3 : 1	6250	250-550	11.0	9.14 x 12.7 x 7.62
750313734	SN6501HV	Reinforced	5.0	5.00	0.150	–	–	340.00	1 : 1.1	6250	250-550	11.0	9.14 x 12.7 x 7.62
750313769	SN6501HV	Reinforced	3.3	5.00	0.150	–	–	340.00	1 : 1.7	6250	250-550	11.0	9.14 x 12.7 x 7.62
750343725	SN6501HV	Reinforced	5.0	19.50	0.050	–	–	50.00	1 : 3.9	6250	420	–	9.14 x 12.95 x 7.62
750315240	SN6505A	Reinforced	5.0	5.00	1.000	–	–	110.00	1 : 1.1	6250	150	23.0	12.32 x 15.41 x 11.89
750316031	SN6505A	Reinforced	3.3	3.30	1.000	–	–	370.00	1 : 1.75	6250	150	20.0	12.32 x 15.41 x 11.89
750316032	SN6505A	Reinforced	3.3	5.00	1.000	–	–	370.00	1 : 2	6250	150	20.0	12.32 x 15.41 x 11.89
750316033	SN6505A	Reinforced	5.0	3.30	1.000	–	–	370.00	1.3 : 1	6250	150	20.0	12.32 x 15.41 x 11.89
750315371	SN6505B	Functional	5.0	5.00	1.00	–	–	72.00	1 : 1.1	3125	400	8.6	8.3 x 12.6 x 4.1
750316028	SN6505B	Functional	3.3	3.30	1.000	–	–	72.00	1 : 1.7	3125	400	8.9	8.3 x 12.6 x 4.1
750316029	SN6505B	Functional	3.3	5.00	0.900	–	–	72.00	1 : 2.1	3125	400	8.9	8.3 x 12.6 x 4.1
750316030	SN6505B	Functional	5.0	3.30	1.000	–	–	94.00	1.3 : 1	3125	400	10.2	8.3 x 12.6 x 4.1
750316769	SN6505B	Functional	5.0	15.00	0.175	–	–	350.00	1 : 3.45	3125	400	11.0	6.73 x 10.46 x 4.19
750316770	SN6505B	Functional	5.0	12.00	0.225	–	–	350.00	1 : 2.91	3125	400	11.0	6.73 x 10.46 x 4.19
750316818	SN6505B	Functional	5.0	15.00	0.390	–	–	86.00	1 : 3.5	3125	400	9.0	8.30 x 12.60 x 4.10
750316819	SN6505B	Functional	5.0	12.00	0.460	–	–	86.00	1 : 2.88	3125	400	9.0	8.30 x 12.60 x 4.10
750342879	SN6505B	Functional	5.0	17.00	0.050	–	–	50.00	1 : 3.5	3750	420	–	9.14 x 12.95 x 7.62
750343341	SN6505B	Functional	5.0	12.50	0.060	–	–	38.00	1 : 2.6	3750	400	–	9.14 x 12.95 x 7.62
750316853	SN6505B	Supplementary	3.3	12.00	0.170	–	–	200.00	1 : 4	3125	420	15.0	8.30 x 14.75 x 4.20
750316854	SN6505B	Supplementary	5.0	12.00	0.230	–	–	200.00	1 : 2.5	3125	420	15.0	8.30 x 14.75 x 4.20
750316855	SN6505B	Supplementary	3.3	23.00	0.090	–	–	200.00	1 : 7	3125	420	15.0	8.30 x 14.75 x 4.20
750316856	SN6505B	Supplementary	5.0	23.00	0.145	–	–	200.00	1 : 4.67	3125	420	15.0	8.30 x 14.75 x 4.20
750316886	SN6505B	Supplementary	5.0	5.00	0.675	–	–	200.00	1 : 1.17	3125	420	15.0	8.30 x 14.75 x 4.20
750316887	SN6505B	Supplementary	3.3	5.00	0.460	–	–	200.00	1 : 1.67	3125	420	15.0	8.30 x 14.75 x 4.20
750316888	SN6505B	Supplementary	5.0	3.30	0.900	–	–	200.00	1.2 : 1	3125	420	15.0	8.30 x 14.75 x 4.20
750317072	SN6505B	Supplementary	3.3	20.00	0.090	–	–	200.00	1 : 6.17	3125	420	15.0	8.30 x 14.75 x 4.20
750316016	SN6505B	Functional	5.0	12.85	0.095	5.70	0.200	72.00	1 : 2.57 :1.14	3125	400	8.9	11.63 x 12.60 x 3.56
750316017	SN6505B	Functional	5.0	12.85	0.095	4.27	0.200	72.00	1.17 : 3 : 1	3125	400	8.9	11.63 x 12.60 x 3.56
750316018	SN6505B	Functional	5.0	15.70	0.085	5.70	0.200	72.00	1 : 3.14 : 1.14	3125	400	8.9	11.63 x 12.60 x 3.56
750316019	SN6505B	Functional	5.0	15.70	0.095	4.27	0.200	72.00	1.17 : 3.67 : 1	3125	400	8.9	11.63 x 12.60 x 3.56
750316668	SN6505B	Functional	5.0	12.85	0.095	5.70	0.200	72.00	1 : 2.57 : 1.14	3125	400	8.9	11.63 x 12.60 x 1.98
750316669	SN6505B	Functional	5.0	12.85	0.095	4.27	0.200	72.00	1.17 : 3 : 1	3125	400	8.9	11.63 x 12.60 x 1.98
750316670	SN6505B	Functional	5.0	15.70	0.085	5.70	0.200	72.00	1 : 3.14 : 1.14	3125	400	8.9	11.63 x 12.60 x 1.98
750316671	SN6505B	Functional	5.0	15.70	0.095	4.27	0.200	72.00	1.17 : 3.67 : 1	3125	400	8.9	11.63 x 12.60 x 1.98

MID-GDT
Gate Drive Transformers



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low profile
- Dielectric rating: 1500V_{AC}
- Pick-and-placeable
- Very low leakage inductance

Applications

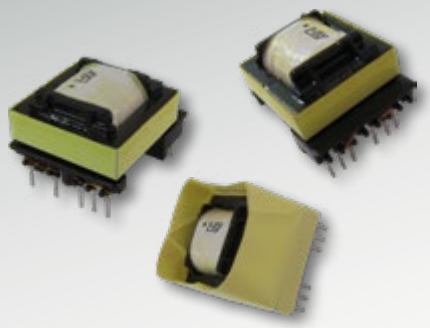
- Industrial power supplies
- Smart grid power supplies
- Medical devices
- Telecom base station power supplies
- Motor drive control
- Solar energy harvesting

Electrical Properties

Order Code	Package Size	L_1 (µH)	$N_{PRI} : N_{SEC}$	R_{DC} (Ω)	L_S (µH)	C_{WW} (pF)	V_T (V_{AC})	∫Udt (µVs)	LxWxH (mm)
750316093	TOR-8P-HT5.3	1710	1 : 1 : 1	0.649	0.50	70	1500	70.0	10.26 x 12.98 x 5.36
750316094	TOR-8P-HT5.3	261	1 : 2.5 : 2.5	0.148	0.15	45	1500	70.0	10.26 x 12.98 x 5.36
750311765	TOR-8P-HT7.6	1200	1 : 1	0.700	–	–	5000	27.2	9.02 x 8.64 x 7.62

MID-OLDIA

Offline Flyback Transformers for Dialog Semiconductor



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Excellent EMI performance
- High efficiency
- Low leakage inductance
- Single or dual output
- Designed to meet UL1310

Applications

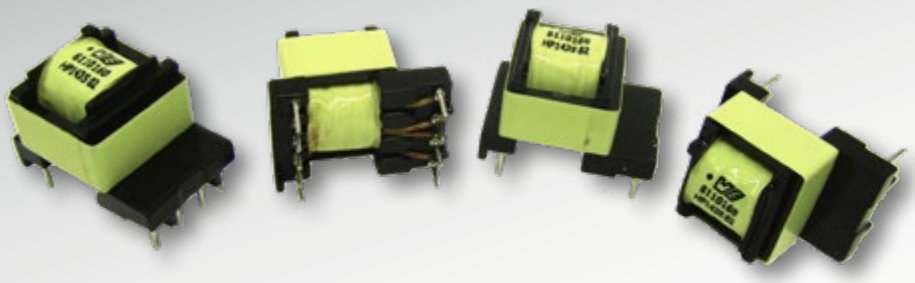
- White goods
- Home appliances
- Offline flyback power supplies

Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{aux} (V)	L_1 (µH)	N_{PRI} : N_{SEC} : N_{AUX}	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750343107	EE20/10/6 (EF20)	85-265	5	2	–	–	9	750	14.6 : 1 : 1.83	3750	60	23.3 x 27.3 x 19
750343108	EE20/10/6 (EF20)	90-264	12	1	5	0.3	14	600	14.5 : 1 : 1.25 : 2	3750	70	22.2 x 26 x 16
750343109	EE20/10/6 (EF20)	90-264	5	3	–	–	14	490	14.5 : 1 : 2.25	3750	70	22.2 x 26 x 16

MID-OLEE

EE-Style Offline Flyback Transformers



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Switching frequency 50-150kHz
- Low real estate
- Extended rails
- Reinforced insulation
- Lead free and RoHS compliant
- Operating temp: -40°C to 125°C
- Designed to meet IEC60950-1, EN60950-1, UL60950-1/CSA60950-1 and AS/NZS60950.1

Applications

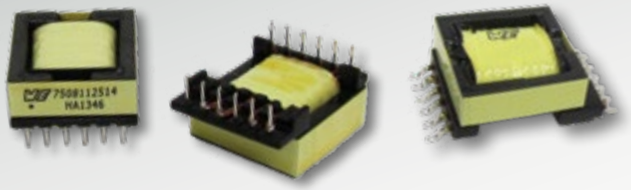
- Offline switching power
- Power electronics
- Electronic ballasts
- White goods
- Industrial controls
- Industrial telecom
- Metering
- LED lighting

Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{aux} (V)	L (mH)	N_{PRI} : N_{SEC} : N_{AUX}	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
7508110160	EE13/6/6	50-265	5	1.00	–	–	8.7	1.59	15 : 1 : 1.75	0.48	4500	45-70	14.2 x 20.45 x 14.6
7508110330	EE13/6/6	55-265	12	0.45	–	–	8.7	1.88	8.71 : 1 : 1.35 : 1	0.36	4500	50-60	14.2 x 20.45 x 14.6
7508110333	EE13/6/6	55-265	15	0.32	–	–	20.0	1.88	5 : 1 : 1.33	0.36	4500	50-65	14.2 x 20.45 x 14.6
7508110419	EE13/6/6	55-265	24	0.17	–	–	20.0	2.25	3.8 : 1.19 : 1	0.26	4500	50-65	14.2 x 20.45 x 14.6
7508110420	EE13/6/6	55-265	30	0.16	–	–	20.0	1.95	3.8 : 1.48 : 1	0.32	4500	50-65	14.2 x 20.45 x 14.6
750817014	EE13/7/4	55-265	5	0.70	–	–	16.0	1.84	13 : 1 : 3	0.38	3750	50	13.8 x 23.9 x 11
750817015	EE13/7/4	55-265	5	0.90	–	–	16.0	0.49	13.14 : 1 : 3	0.88	3750	150	13.8 x 23.9 x 11
7508170310	EE13/7/4	55-265	12	0.30	–	–	16.0	1.99	5.79 : 1 : 1.32	0.37	3750	50	13.8 x 23.9 x 11
7508170311	EE13/7/4	55-265	12	0.42	–	–	16.0	0.49	5.75 : 1 : 1.31	0.86	3750	150	13.8 x 23.9 x 11
7508170312	EE13/7/4	55-265	15	0.21	–	–	16.0	1.99	4.63 : 1 : 1.06	0.36	3750	50	13.8 x 23.9 x 11
7508170313	EE13/7/4	55-265	15	0.31	–	–	16.0	5.90	4.6 : 1 : 1.05	0.73	3750	150	13.8 x 23.9 x 11
750811116	EE16/8/5	85-265	5	2.55	–	–	14.0	1.31	23.3 : 1 : 3.8	0.80	3000	80-120	17.78 x 26.1 x 13.8
750811137	EE16/8/5	85-265	12	1.05	–	–	14.0	1.39	9.7 : 1 : 1.57	0.74	3000	80-130	17.78 x 26.1 x 13.8
750813530	EE16/8/5	85-130	15	0.54	6	0.54	14.0	1.50	21.7 : 2.3 : 1 : 2.7	0.62	3000	80-100	17.78 x 26.1 x 13.8
750813540	EE16/8/5	85-130	25	0.40	6	0.40	14.0	1.25	21.3 : 3.8 : 1 : 3.2	0.80	3000	80-100	17.78 x 26.1 x 13.8
750813551	EE16/8/5	85-130	35	0.29	6	0.29	14.0	1.50	21.3 : 5.3 : 1 : 3.2	0.62	3000	80-110	17.78 x 26.1 x 13.8
750815530	EE16/8/5	195-265	15	0.52	6	0.52	14.0	8.00	48 : 2.3 : 1.32	0.27	3000	80-110	17.78 x 26.1 x 13.8
750815542	EE16/8/5	195-265	25	0.50	6	0.50	14.0	5.00	51 : 3.8 : 1 : 3.2	0.39	3000	80-120	17.78 x 26.1 x 13.8
750815550	EE16/8/5	195-265	35	0.33	6	0.33	14.0	6.00	52 : 5.6 : 1 : 3.4	0.33	3000	80-115	17.78 x 26.1 x 13.8
750370288	EE20/10/6	85-265	5	1.00	–	–	17.0	1.70	16.88 : 1 : 1.88	1.05	3750	65	22.25 x 14.4 x 23.24
750370289	EE20/10/6	85-265	5	1.00	5	1.00	10.0	1.70	15 : 1 : 1 : 2.25	0.80	3750	65	22.25 x 14.4 x 23.24

MID-OLEFD

EFD-Style Offline Flyback Transformers



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- For universal input voltage
- Switching frequency: 68kHz to 170kHz
- Low profile
- Isolation voltage: 4500V_{AC} at 1 second
- Operating temp: -40°C to 125°C
- Designed to meet IEC61558-2 reinforced 400V_{DC}

Applications

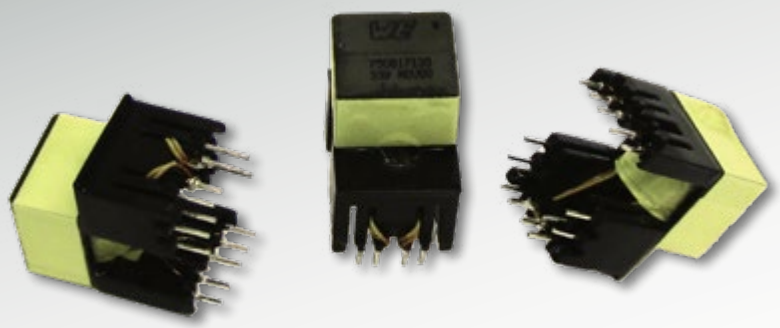
- LED lighting
- Offline switching power
- Power electronics
- Electronic ballasts
- White goods

Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{O3} (V)	I_{O3} (A)	V_{aux} (V)	V_{aux1} (V)	V_{aux2} (V)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750811611	EFD20 SMT	85-265	5	2.00	5	2.00	–	–	20	6	14	800	20 : 0.833 : 0.833 : 2.16 : 1	1.4	4500	68-100	21.5 x 33.8 x 12
750811643	EFD20 SMT	85-265	24	0.50	24	0.50	–	–	20	6	14	800	20 : 3.6 : 3.6 : 2.2 : 1	1.4	4500	68-120	21.5 x 33.8 x 12
750811913	EFD20 SMT	85-265	5	1.25	5	1.25	7	1.1	20	6	14	800	16.66 : 0.833 : 0.833 : 1.166 : 2.166 : 1	1.4	4500	68-130	21.5 x 33.8 x 12
750811914	EFD20 SMT	85-265	5	1.30	5	1.30	19	0.5	20	6	14	800	20 : 0.8 : 0.8 : 2.8 : 2.2 : 1	1.4	4500	68-140	21.5 x 33.8 x 12
7508112327	EFD20 SMT	85-265	16	1.30	–	–	–	–	20	6	14	800	20 : 2.4 : 2.2 : 1	1.4	4500	68-130	21.5 x 33.8 x 12
7508112510	EFD20 SMT	85-265	32	0.75	–	–	–	–	20	6	14	800	20 : 4.8 : 2.2 : 1	1.4	4500	68-120	21.5 x 33.8 x 12
7508112511	EFD20 SMT	85-265	40	0.60	–	–	–	–	20	6	14	800	20 : 6 : 2.2 : 1	1.4	4500	68-120	21.5 x 33.8 x 12
7508116312	EFD20 SMT	85-265	12	1.00	12	1.00	–	–	20	6	14	800	20 : 1.8 : 1.8 : 2.2 : 1	1.4	4500	68-120	21.5 x 33.8 x 12
750811612	EFD20 THT	85-265	5	1.30	5	1.30	–	–	20	–	–	800	5.26 : 0.26 : 0.26 : 1	1.4	4500	68-110	21.5 x 29 x 12
750811613	EFD20 THT	85-265	5	1.80	12	0.90	–	–	20	–	–	800	6.66 : 0.6 : 0.6 : 1	1.4	4500	68-160	21.5 x 29 x 12
750811614	EFD20 THT	85-265	5	1.20	24	0.62	–	–	20	–	–	800	8.33 : 1.16 : 1.16 : 1	1.4	4500	68-190	21.5 x 29 x 12
750811644	EFD20 THT	85-265	24	0.40	24	0.40	–	–	20	–	–	800	11.11 : 1.88 : 1	1.4	4500	68-140	21.5 x 29 x 12
7508112330	EFD20 THT	85-265	16	1.15	–	–	–	–	20	–	–	800	8.333 : 1 : 1.25	1.4	4500	68-120	21.5 x 29 x 12
7508112512	EFD20 THT	85-265	32	0.75	–	–	–	–	20	–	–	800	11.11 : 1.55 : 1	1.4	4500	68-170	21.5 x 29 x 12
7508112513	EFD20 THT	85-265	40	0.58	–	–	–	–	20	–	–	800	6.66 : 0.8 : 1	1.4	4500	68-170	21.5 x 29 x 12
7508116313	EFD20 THT	85-265	12	0.85	12	0.85	–	–	20	–	–	800	9.09 : 0.27 : 1.18 : 1	1.4	4500	68-120	21.5 x 29 x 12
750811512	EFD25 THT	85-265	5	1.58	5	1.58	–	–	20	–	–	770	20 : 1 : 1 : 2.75 : 1.25	2.0	4500	68-120	26.3 x 33 x 14
750811616	EFD25 THT	85-265	5	1.70	12	2.00	–	–	20	–	–	468	20 : 1 : 2.33 : 2.66 : 1.33	2.5	4500	68-170	26.3 x 33 x 14
750811617	EFD25 THT	85-265	5	1.10	24	0.60	–	–	20	–	–	793	20 : 4.5 : 1 : 2.75 : 1.25	2.0	4500	68-170	26.3 x 33 x 14.81
750811645	EFD25 THT	85-265	24	0.71	24	0.71	–	–	20	–	–	470	16.66 : 4 : 4 : 2.33 : 1	2.0	4500	68-100	26.3 x 33 x 14
7508112334	EFD25 THT	85-265	16	1.60	–	–	–	–	20	–	–	414	16 : 2.33 : 2 : 1	2.2	4500	68-110	26.3 x 33 x 14
7508112514	EFD25 THT	85-265	32	1.00	–	–	–	–	20	–	–	460	16 : 4.66 : 2 : 1	1.9	4500	68-115	26.3 x 33 x 14
7508112515	EFD25 THT	85-265	40	0.80	–	–	–	–	20	–	–	500	16.66 : 6.33 : 2.33 : 1	1.9	4500	68-105	26.3 x 33 x 14
7508116314	EFD25 THT	85-265	12	1.30	12	1.30	–	–	20	–	–	450	16.66 : 2 : 2.33 : 1	2.1	4500	68-110	26.3 x 33 x 14

MID-OLEPW

EPW-Style Offline Flyback Transformers



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Tall EP package provides excellent noise performance and high creepage and clearance with a relatively small footprint
- 30% smaller footprint than equivalent EE16 package
- Primary to secondary creepage and clearance up to 14mm with three isolated outputs
- Secondary-to-secondary creepage and clearance up to 8.5mm
- Designed to meet up to 10kV surge
- Reinforced insulation
- Isolation voltage: up to 4000V_{AC} at 1 second
- Operating temp: -40°C to 125°C

Applications

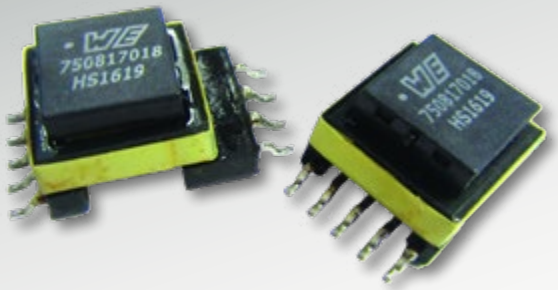
- Smart metering
- Data concentrators
- Smart grid
- Industrial
- Applications requiring 8-10kV surge compliance

Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{01} (V)	I_{01} (A)	V_{02} (V)	I_{02} (A)	V_{03} (V)	I_{03} (A)	V_{aux} (V)	L_1 (mH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750817038	EPW15S SMT	85-480	12.0	0.60	5	0.60	–	–	18	1.58	21.6 : 2.4 : 1 : 3.6	0.56	3000	65	15.8 x 26.5 x 13.5
750817039	EPW15S SMT	85-480	18.0	0.50	6	0.30	–	–	18	1.50	17 : 2.83 : 1 : 2.83	0.50	3750	65	15.8 x 26.5 x 13.5
750817112	EPW15S SMT	85-480	5.0	2.80	–	–	–	–	18	1.11	20.33 : 1 : 3.33	0.90	3000	65	15.8 x 26.5 x 13.5
750817139	EPW15S SMT	85-480	12.0	1.00	–	–	–	–	18	1.14	9 : 1 : 1.5	0.50	3750	65	15.8 x 26.5 x 13.5
750817310	EPW15S SMT	85-480	15.0	0.80	–	–	–	–	18	1.38	7.14 : 1 : 1.21	0.50	3750	65	15.8 x 26.5 x 13.5
750817100	EPW15C THT	85-480	3.3	3.00	–	–	–	–	18	1.41	30 : 1 : 4.75	0.76	4000	68-120	15.7 x 22.1 x 23.3
750817135	EPW15C THT	85-480	12.0	1.05	–	–	–	–	18	1.23	9.09 : 1 : 1.45	0.74	4000	68-120	15.7 x 22.1 x 23.3
750817500	EPW15C THT	85-480	3.3	0.90	12	0.50	–	–	18	1.65	29.33 : 3.66 : 1 : 5	0.42	4000	68-190	15.7 x 22.1 x 23.3
750817510	EPW15C THT	85-480	6.0	0.95	18	0.20	–	–	18	1.50	17 : 1 : 2.83 : 2.83	0.58	4000	68-155	15.7 x 22.1 x 23.3
750817821	EPW15C THT	85-480	3.3	0.35	6	0.22	18	0.2	18	2.42	29.33 : 1 : 1.66 : 5 : 1	0.27	4000	68-240	15.7 x 22.1 x 23.3
750817822	EPW15C THT	85-480	3.3	0.35	6	0.22	18	0.2	18	2.42	29.33 : 1 : 1.66 : 5 : 1	0.26	4000	68-240	15.7 x 22.1 x 23.3

MID-OLIFX

Offline Flyback Transformers for Infineon Technologies



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low leakage inductance
- Extended rail
- Isolation voltage: up to 5000V_{AC}
- Operating temp: -40º to 125ºC including temp rise

Applications

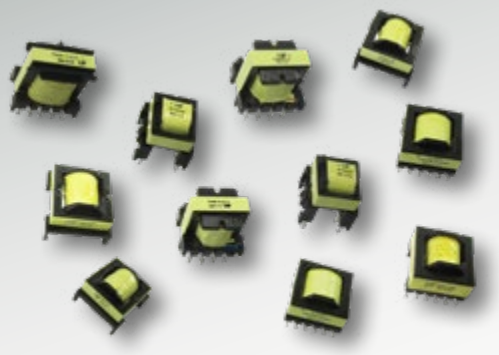
- Offline switch-mode power supplies
- Retrofit LED lighting
- Street and indoor lighting
- Internet of Things (IoT)
- Metering

Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{aux} (V)	V_{aux2} (V)	L_1 (µH)	N_{PRI} : N_{SEC} : N_{AUX}	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750817018	EE13/7/4	88-270	6	0.50	–	–	14.4	–	2190	12.6 : 1 : 2.4	0.25	3750	65	13.8 x 23.9 x 11
750311798	EE16/8/5	85-135	27	0.35	–	–	29	–	2400	6 : 1 : 1.085	0.70	2500	100	20.32 x 24.38 x 16
750342063	EE16/8/5	90-265	26	0.33	–	–	–	–	1750	4.72 : 1	–	1800	65	17.96 x 20.3 x 14.3
750342230	EE16/8/5	85-265	12	0.50	12	0.50	12	12	4150	7 : 1 : 1 : 1	–	2000	50	19 x 21 x 15.5
750815141	EE16/8/5	195-265	27	0.35	–	–	19	–	6300	19 : 1 : 1.4	0.20	4500	100	20.32 x 24.38 x 16
750341723	EE19/8/5	90-264	5	2.10	–	–	20	–	1600	15 : 1 : 3	–	1875	40	21.5 x 18 x 18.5
750316266	EE20/10/6	76-93	48	0.60	–	–	–	–	830	2.27 : 1	1.60	1500	100	23 x 22 x 17.53
750341844	EE20/10/6	85-265	12	1.00	–	–	18	–	882	6 : 1 : 1.45	–	3750	65	23 x 23 x 17.53
750342411	EE20/10/6	65-300	5	2.40	–	–	16	–	571	13.5 : 1 : 3.25	–	3750	100	23 x 22.86 x 17.53
750342625	EE20/10/6	85-265	5	4.00	–	–	20	–	410	13.5 : 1 : 2.75	–	3750	100	23 x 22.86 x 17.53
750342983	EE20/10/6	85-265	12	1.00	–	–	15	–	1572	6.32 : 1 : 1.26	–	5000	40	22.2 x 26 x 16.5
750342992	EE20/10/6	85-265	12	0.84	–	–	15	–	1300	6.67 : 1 : 1.25	–	5000	65	23 x 22 x 17.53
750343019	EE20/10/6	75-282	12	1.50	–	–	15	–	346	6 : 1 : 1.33	–	5000	100	22.2 x 26 x 16
750343050	EE20/10/6	75-282	12	1.00	–	–	15	–	467	6 : 1 : 1.33	–	5000	100	22.2 x 25.4 x 16
750343053	EE20/10/6	85-265	12	1.67	–	–	15	–	516	5.83 : 1 : 1.25	–	5000	65	22.2 x 25.4 x 16
750343074	EE20/10/6	65-320	12	1.20	5	0.20	15	–	998	17.6 : 1.4 : 1 : 2.8	–	3750	55	22.2 x 25 x 16
750845151	EE20/10/6	195-265	40	0.28	–	–	15	–	3900	11.58 : 2 : 1	0.40	3750	90	22.2 x 22 x 19
750341900	EE25/13/7	85-300	12	2.50	–	–	19	–	229	6 : 1 : 1.6	–	3750	100	27.94 x 30.23 x 21.59
750342158	EE25/13/7	85-265	12	2.50	–	–	18	–	368	6 : 1 : 1.5	–	5000	65	27.94 x 29.21 x 21.59
750342294	EE25/13/7	90-305	48	0.40	–	–	–	–	1600	3.88 : 1 : 1.65 : 1.65	–	3750	160	27.05 x 32.25 x 22.86
750342655	EE25/13/7	85-265	12	2.30	–	–	20	–	360	6.3 : 1 : 1.3	–	3000	100	27.95 x 20.32 x 28.58
750342657	EE25/13/7	85-265	12	2.83	–	–	20	–	250	6 : 1 : 1.38	–	3750	100	27.95 x 20.32 x 28.58
750343023	EE25/13/7	85-265	12	2.50	–	–	15	–	368	6 : 1 : 1.38	–	5000	65	27.05 x 32.25 x 22.86
750343051	EE25/13/7	85-265	12	2.33	–	–	15	–	639	6.55 : 1 : 1.27	–	5000	40	27.05 x 33 x 22.86
750343052	EE25/13/7	75-282	12	2.33	–	–	15	–	188	6.1 : 1 : 1.42	–	5000	100	27.05 x 34 x 22.86
750343101	EE25/13/7	85-300	7	2.00	5	0.20	15	–	400	16 : 1.3 : 1 : 9	2.00	3750	55	28 x 33 x 22.86
750343389	EE25/13/7	85-300	7	2.00	5	0.20	15	–	400	16 : 1.3 : 1 : 9	2.00	3750	55	28 x 33 x 22.86
750343401	EE30/15/7	85-300	12	3.41	5	0.20	15	–	320	16.7 : 2.3 : 1 : 2.7	2.50	3750	65	34.16 x 35.2 x 24
750343506	EE30/15/7	85-320	12	3.50	5	0.20	15	–	320	16.7 : 2.3 : 1 : 2.7	3.00	3750	65	34.16 x 35.2 x 24
750343534	EE30/15/7	85-300	5	0.20	12	2.67	12	–	360	16.7 : 2.3 : 1 : 2.7	2.50	3750	65	34.16 x 35.2 x 24
750845240	EE30/15/7	195-265	24	2.00	–	–	15	–	2600	17.788 : 1.555 : 1.555 : 1	1.20	4500	47	31.5 x 35.2 x 24
750343268	ER28/17	67-320	12	4.50	5	1.00	15	–	372	16.3 : 2.3 : 1 : 2.5	4.00	3000	55	32 x 39 x 26
750343773	ER28/17	85-300	12	4.58	5	1.00	14	–	266	14.67 : 1.33 : 1 : 3	–	5000	40	32 x 39 x 26
750342295	ETD34	90-305	48	1.60	–	–	–	–	310	3.86 : 1 : 1.64 : 1.64	–	3000	160	39.6 x 43.18 x 30.48
750841291	PQ2016	90-264	60	0.40	15	0.10	18	–	200	15.6 : 1 : 3.6 : 1.2	–	3750	60	24 x 24 x 18.67
750314100	PQ2020	90-305	15	0.88	–	–	15	–	540	3.88 : 1 : 1	3.00	2020	70	23.36 x 23.88 x 24.14
750315967	PQ2020	90-305	15	0.88	15	0.02	15	–	540	3.86 : 1 : 1 : 1	2.40	2020	53-126	23.36 x 23.88 x 24.14
750343265	PQ2020	90-300	45	0.88	–	–	16	–	544	3.87 : 1 : 1 : 1	2.40	2300	55	23.36 x 23.88 x 24.14
750341570	RM6	180-260	36	0.30	–	–	18	–	2300	5.29 : 1 : 0.5	–	3000	100	17.65 x 20 x 13.21

MID-OLLT

Offline Flyback Transformers for Linear Technology



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Flyback topology
- Designs for Universal, US and European input voltages
- Low leakage inductance
- Isolation voltage: up to 4500V_{AC}
- Transformer designs ranging from 1.5W to 100W+

Applications

- Offline up to 100W+ applications
- High DC V_{IN} isolated applications
- Offline bus converter (12, 24 or 48V outputs)
- PFC
- Industrial power supplies
- Medical power supplies

Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{aux} (V)	L (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750813002	EE13/6/6	85-265	3.4	1.00	17.00	2000	20 : 1 : 5	0.35	4500	100	15 x 15.75 x 18.5
750817020	EE13/6/6	141-318	10.0	0.15	12.00	4000	9.33 : 1 : 1.17	0.34	4600	150	15 x 15.75 x 18.5
7508110210	EE13/6/6	85-135	11.0	0.35	15.00	2000	6.67 : 1 : 1.67	0.27	4500	100	15 x 15.75 x 18.5
750813134	EE16/7/5	85-265	14.0	1.00	18.00	600	8 : 1 : 1.28	1.75	4500	100	18 x 16.5 x 18
750813144	EE16/7/5	85-265	28.0	0.50	20.00	600	4 : 1 : 0.71	1.75	4500	100	18 x 16.5 x 18
750316022	EP13	100-269	5.0	1.60	20.00	3300	24 : 1 : 4	0.36	1875	100	13.46 x 17.75 x 12.7
750316466	EP13	50-92	12.0	0.60	24.00	5000	24 : 1 : 2	3.30	1500	50-130	13.46 x 17.75 x 12.7
7508111324	ER20/10/6	100-269	12.0	1.00	12.00	2750	10 : 1 : 1	0.50	4000	50	22.25 x 14.4 x 23.24
7508111417	ER20/10/6	85-265	28.0	0.50	24.00	700	4 : 1 : 0.86	1.50	4500	100	22.25 x 14.4 x 22.99
7508111518	ER20/10/6	100-269	48.0	0.30	12.00	2400	2.5 : 1 : 0.25	0.49	4000	50	22.25 x 14.4 x 23.24
750312646	ER28/14	120-430	33.0	2.50	22.00	200	6 : 1.5 : 1	6.00	1875	70	31 x 31 x 25
750811248	ER28/14	85-265	24.0	2.00	24.00	300	4 : 1 : 1	3.50	4500	60-400	31 x 31 x 25
750811290	ER28/14	85-265	125.0	0.40	21.25	461	1 : 1 : 0.17	3.15	4500	150	31 x 31 x 25
750811291	ER28/14	85-265	85.0	0.40	20.00	400	1 : 1 : 0.24	5.70	4500	60	31 x 31 x 25
750817220	ER28/14	90-650	8.0	3.00	28.00	1000	14.28 : 1 : 3.28	3.20	5500	60	31 x 31 x 25
750817251	ER28/14	85-305	48.0	1.00	24.00	250	4 : 2 : 1	4.50	4500	60	31 x 31 x 25
750811330	ETD34	85-265	18.0	5.00	18.00	300	6 : 1 : 1	4.00	4500	200	39.6 x 43.18 x 30.48
750811351	ETD34	85-265	36.0	3.00	25.00	180	4 : 1 : 0.67	7.40	4500	75	39.6 x 43.18 x 30.48
750813390	ETD34	85-265	90.0	1.00	19.80	180	1 : 1 : 0.22	9.00	4500	100	39.6 x 43.18 x 30.48

MID-OLMAX

Offline Flyback Transformers for Maxim Integrated

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low leakage inductance
- Offline isolated power supplies
- Up to 72W output power
- Isolation voltage: up to 4500V_{AC}

Applications

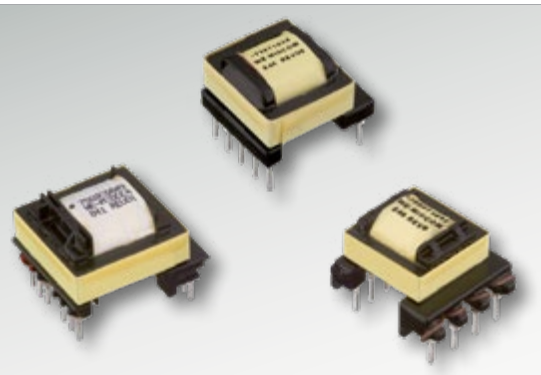
- Industrial power supplies
- Building automation
- Offline isolated power supplies

Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (mA)	V_{aux} (V)	L (µH)	N_{PRI} : N_{SEC} : N_{AUX}	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750316881	SMT	150-240	24	500	–	1.750	5.83 : 1 : 0.52	550	3900	140	17.78 x 26.90 x 13.80
750317114	THT	81-128	24	3000	12	0.097	3.18 : 1 : 0.52	8000	8000	125	27.95 x 20.32 x 28.58
750317615	SMT	154-284	24	145	12	3.000	6 : 1 : 1.92	220	220	125	13.80 x 23.90 x 11.00

MID-OLNXP

Offline Flyback Transformers for NXP Semiconductors



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Universal or European offline input voltages
- Isolation voltage: up to 6000V_{AC}
- Operating temp: –40°C to 125°C

Applications

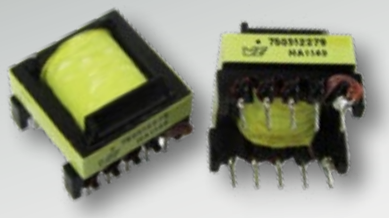
- Smart meters
- Dimmable 12V LED driver
- Especially designed for several ICs from NXP
- Lighting

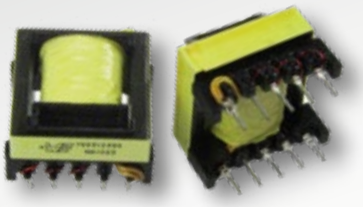
Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{O3} (V)	I_{O3} (A)	V_{aux} (V)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750311525	EE13/6/6	85-265	40	0.50	–	–	–	–	20	700	5.789 : 1.947 : 1	1.00	2500	100	14.73 x 14.73 x 15.24
750871035	EE13/6/6	85-265	12	0.45	–	–	–	–	15	2000	8 : 1 : 1.25	0.36	4500	100	15 x 15.75 x 18.5
760871038	EE13/6/6	85-272	15	0.42	–	–	–	–	18	1850	5.76 : 1 : 1.18	0.28	4500	100	15 x 15.75 x 18.5
750871013	EE13/7/4	81-275	5	0.60	–	–	–	–	15	1800	17 : 1 : 3	0.35	4500	100	13.72 x 20.45 x 10.16
750871530	EE16/8/5	85-272	12	0.70	5	0.70	–	–	12	1600	17.71 : 2.14 : 1 : 2.14	0.58	4800	100	20.32 x 24.38 x 16
750871830	EE16/8/5	85-272	12	0.70	5	0.50	3.3	0.5	15	900	52.96 : 4 : 1 : 2 : 8	0.93	4500	100	20.32 x 24.38 x 16
750841630	EE20/10/6	88-265	12	0.70	24	0.35	–	–	12	1600	10 : 1 : 2 : 1	0.72	6000	100	22.2 x 25 x 16
750871630	EE20/10/6	85-272	12	2.00	5	1.00	–	–	12	500	15.8 : 1.2 : 1 : 2.2	1.90	4800	100	21 x 25 x 16
750871831	EE25/13/7	85-272	12	0.70	5	0.50	3.3	0.5	15	900	54 : 4 : 1 : 2 : 8	1.10	4500	100	26.4 x 31.8 x 22.86
750340505	EFD25	85-265	24	0.50	–	–	–	–	12	1080	4.047 : 1 : 2	–	4000	100	26.04 x 26.67 x 13.59
750312870	EP13	190-260	39	0.24	–	–	–	–	30	719	4.58 : 1.367 : 1	0.75	4000	100	13.97 x 13.97 x 12.7
760874040	EP13	180-265	30	0.30	–	–	–	–	20	1210	3.25 : 1 : 0.2	0.50	1500	100	13.97 x 13.97 x 12.7

MID-OLON

Offline Flyback Transformers for ON Semiconductor





CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low leakage inductance
- THT
- Customized secondary winding turns for different output voltages
- Isolation voltage: up to 4500V_{AC}
- Lead free and RoHS compliant
- Operating temp: –40°C to 125°C

Applications

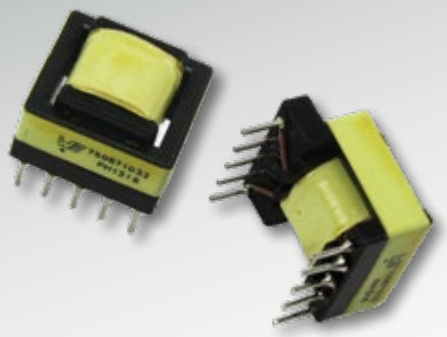
- E-meter power supply
- Industrial equipment
- White goods
- Small instruments

Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{O3} (V)	I_{O3} (A)	V_{aux} (V)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750313309	EE16/8/5 (EF16)	180-270	5.0	1.00	9.0	0.20	–	–	–	5500	31.1 : 1 : 1.40	0.12	1250	110	17.96 x 20.3 x 14.3
750811042	EE16/8/5 (EF16)	90-265	24.0	0.36	–	–	–	–	15.65	1800	5.25 : 1 : 0.65	0.40	4500	100	20.32 x 24.38 x 16
750312279	EE20/10/6 (EF20)	85-265	5.0	4.00	–	–	–	–	14.00	750	20 : 1 : 2.67	0.84	3750	100	23 x 22 x 17.53
750312495	EE20/10/6 (EF20)	85-265	12.0	1.80	–	–	–	–	14.00	750	10 : 1 : 1.17	–	3000	100	23 x 22 x 17.53
750341526	EE20/10/6 (EF20)	60-600	15.0	0.45	15.0	0.15	8.0	0.15	15.00	660	6 : 1 : 0.562 : 1	–	4000	67	22.2 x 25 x 16.61
750341793	EE20/10/6 (EF20)	85-600	5.0	1.00	12.0	0.40	–	–	12.00	2250	14.9 : 1 : 2.30 : 2.4	–	3000	50	23 x 22 x 17.53
750341566	EE25/13/7 (EF25)	45-600	15.0	0.60	8.0	0.15	–	–	16.00	970	5.18 : 1 : 0.55	–	3750	67	27.05 x 32.25 x 22
750341867	EE25/13/7 (EF25)	80-660	5.0	0.50	7.5	0.50	12.0	0.50	18.00	1300	18 : 1 : 1.40 : 2.60 : 3	–	3750	100	27.05 x 32.25 x 22.86
750311215	EFD20	90-135	18.0	0.35	–	–	–	–	15.00	870	6.67 : 1 : 1 : 1.67	0.65	4500	70	21.59 x 21.08 x 11.68
750311620	EFD20	21-135	25.0	0.45	–	–	–	–	19.00	1900	5.33 : 1 : 0.761	0.62	4500	53-120	23.11 x 25.91 x 10.92
750311475	EFD25	90-305	50.0	0.35	25.0	0.70	–	–	15.00	1720	7.67 : 1 : 1 : 1.83	1.05	4500	39	26.92 x 26.67 x 14.61
750315465	EFD25	85-265	12.0	2.00	12.0	2.00	–	–	14.00	400	6.29 : 1 : 1 : 2	2.00	4000	80	26.3 x 33 x 14.75
7508116315	EFD25	85-265	5.30	1.00	7.2	3.00	12.5	3.00	20.00	560	16 : 1.33 : 1 : 4.67	1.60	4100	100	26.3 x 33 x 14.75
7508111125	EPW15	85-265	5.0	3.00	–	–	–	–	14.00	1800	20.63 : 1 : 2.62	0.80	4000	42-94	15.8 x 26.5 x 13.5
750811744	ETD34	64-265	24.0	5.00	12.0	0.05	–	–	14.00	450	12.83 : 1.83 : 1 : 1.17	6.00	4500	80	39.6 x 43.18 x 30.48
750314896	PQ2625	85-265	19.0	3.20	–	–	–	–	14.00	600	4 : 1 : 0.73	3.75	3000	65	29.2 x 30.35 x 29.3
750313054	PQ3220	80-400	34.0	0.01	19.0	5.25	–	–	15.50	500	7.2 : 2 : 1.2 : 1	4.25	4000	30-150	34 x 37.34 x 24.13
750311267	PQ3230	85-265	50.0	1.50	–	–	–	–	28.00	625	2.24 : 1 : 0.52	5.50	3750	70	35.56 x 37.34 x 34.29
750311269	PQ3230	85-265	28.0	3.20	–	–	–	–	28.00	600	4 : 1 : 1	4.75	3750	70	35.56 x 37.34 x 34.29
750343768	RM7	90-264	20.0	1.50	–	–	–	–	60.00	530	6.67 : 1 : 3	–	3000	70	19.56 x 18.8 x 14.35
750343412	RM8	85-265	20.0	1.80	–	–	–	–	60.00	460	6.67 : 1 : 3	1.50	3000	150	19.56 x 18.8 x 14.35
750343542	RM8	90-265	20.0	2.25	–	–	–	–	50.00	360	6.5 : 1 : 2.5	–	3000	70	21.59 x 21.59 x 17.27
750343635	RM8	90-265	20.0	2.25	–	–	–	–	60.00	360	6.5 : 1 : 3	2.50	3000	70	21.59 x 21.59 x 17.27

MID-OLPI

Offline Flyback Transformers for Power Integrations



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Universal offline input voltage
- Output power from 2 to 35W
- Isolation voltage: up to 5000V_{AC}
- Operating temp: –40°C to 125°C

Applications

- Offline switch-mode power supplies
- Especially designed for several ICs from Power Integrations

Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{O3} (V)	I_{O3} (A)	V_{aux} (V)	V_{aux2} (V)	V_{aux3} (V)	L_1 (mH)	N_{PRI} : N_{SEC} : N_{AUX}	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750315304	EE13/6/6	85-265	10.5	0.08	3.3	0.75	1.5	0.125	9.20	–	–	4.05	19.3 : 6.7 : 2.3 : 1 : 2 : 2	0.22	3750	100	14.2 x 20.45 x 14.3
750811016	EE16/7/5	85-265	5.0	1.20	–	–	–	–	13.55	–	–	1.67	16.42 : 1 : 2.71	0.45	4500	100	16.9 x 18.8 x 13
750871032	EE16/7/5	85-265	12.0	0.35	–	–	–	–	12.96	–	–	1.55	7.14 : 1 : 1.08	0.45	3750	66	16.9 x 18.8 x 13.97
750811019	EE16/8/5	85-265	6.0	0.33	–	–	–	–	18.78	–	–	2.70	13.5 : 1 : 3.13	0.25	4500	132	20.32 x 24.38 x 16
750811023	EE16/8/5	85-265	8.0	0.30	–	–	–	–	7.20	–	–	2.28	10.8 : 1 : 0.9	0.30	4500	66	20.32 x 24.38 x 16
7508110100	EE16/8/5	85-265	6.2	0.32	–	–	–	–	–	–	–	2.64	11.07 : 1	0.35	4500	132	20.32 x 24.38 x 16
7508110101	EE16/8/5	85-265	5.0	1.00	–	–	–	–	8.60	4.3	4.3	1.07	15 : 1 : 0.857	0.70	4500	65	20.32 x 24.38 x 16
7508110102	EE16/8/5	85-265	5.0	0.56	–	–	–	–	8.60	4.3	4.3	2.58	18.29 : 1 : 0.857	0.33	4500	65	20.32 x 24.38 x 16
750310849	EE20/10/6	85-265	12.0	1.00	–	–	–	–	22.00	–	–	0.90	8 : 1 : 2	0.90	5000	132	21 x 25 x 16
750811630	ER28/14	85-265	12.0	2.00	5.0	2.20	–	–	11.65	–	–	1.04	23.33 : 1.33 : 1 : 2.33	2.20	4500	66	31 x 31 x 25

MID-OLRM

RM-Style Offline Flyback Transformers

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Extended rail
- Vertical core direction
- Universal input
- Compact
- Grounded core for improved EMI performance
- Reinforced insulation

Applications

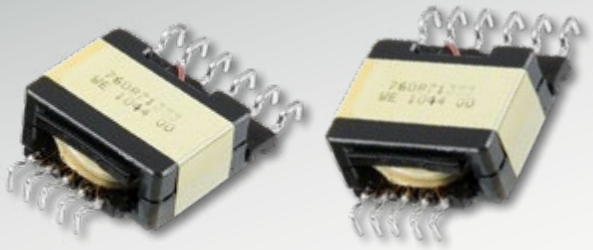
- White goods
- Offline flyback applications
- Industrial controls
- LED lighting
- Smart adapters
- Metering

Electrical Properties

Order Code	Package Size	V_I (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{aux} (V)	L (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750811418	RM6	100-265	5	0.700	12	0.29	24	4000	26 : 1 : 2.4 : 4.8	0.45	3900	40-100	20.07 x 23 x 15
7508110172	RM6	100-265	5	1.500	–	–	20	4000	24 : 1 : 4	0.45	3900	40-100	20.07 x 23 x 15
7508110348	RM6	100-265	12	0.600	–	–	24	4000	10 : 1 : 2	0.45	3900	40-100	20.07 x 23 x 15
7508114310	RM6	100-265	12	0.300	12	0.30	24	4000	10 : 1 : 1 :2	0.45	3900	40-100	20.07 x 23 x 15
750811618	RM8	85-265	12	1.100	5	2.00	16	742	20 : 2.25 : 1 : 3	2.60	3900	44-105	24.64 x 24.64 x 17.32
7508112110	RM8	85-265	5	4.800	–	–	16	670	19 : 1 : 2.75	2.70	3900	44-80	24.64 x 24.64 x 17.32
7508112349	RM8	85-265	12	2.200	–	–	16	681	8.75 : 1 : 1.38	2.50	3900	44-77	24.64 x 24.64 x 17.32
7508116316	RM8	85-265	12	1.750	5	0.45	16	742	20 : 2.25 : 1 : 3	2.60	3900	44-84	24.64 x 24.64 x 17.32
750811648	RM10	85-265	24	0.400	24	0.40	24	600	4.5 : 1 : 1 : 1	3.75	3900	100	31.5 x 31.5 x 20.5
7508112111	RM10	85-265	5	4.000	–	–	20	600	18 : 1 : 4	3.75	3900	100	31.5 x 31.5 x 20.5
7508112355	RM10	85-265	12	1.667	–	–	24	600	9 : 1 : 2	3.75	3900	100	31.5 x 31.5 x 20.5
7508116318	RM10	85-265	12	0.800	12	0.80	24	600	9 : 1 : 1 : 2	3.75	3900	100	31.5 x 31.5 x 20.5

MID-OLSLIM

Slim Offline Flyback Transformers



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Output power > 65 W
- Switching frequency: 130kHz
- Isolation voltage: 4000V_{AC}
- Operating temp: -40°C to 125°C
- Total max height (mm): 12
- Height above PCB (mm): 8

Applications

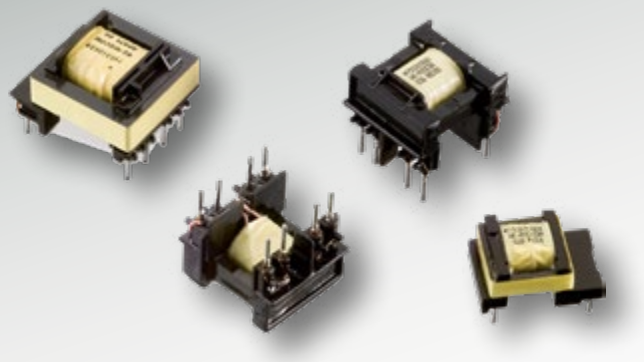
- Offline switch-mode power supplies
- TV
- Devices with height issues
- Lighting

Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{O3} (V)	I_{O3} (A)	V_{aux} (V)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
760871333	LEP28	85-265	12	1.875	12	1.875	12	1.875	15	250	6.25 : 1 : 1 : 1 : 1.25	3.75	4000	130	29.4 x 47.5 x 12

MID-OLSTM

Offline Flyback Transformers for STMicroelectronics



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Nominal input voltage: 85–265 V_{AC} (120–375 V_{DC})
- Multiple output options
- Options for fixed frequency or quasi-resonant mode operation
- Most products meet reinforced insulation
- Isolation voltage: 2 kV_{AC} up to 5 kV_{AC}
- Operating temp: -40°C to 125°C

Applications

- Offline switch-mode power supplies
- Especially designed for several ICs from STMicroelectronics
- Auxiliary power supply
- Home appliances
- Consumer electronics

Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{aux} (V)	V_{aux2} (V)	L_1 (mH)	N_{PRI} : N_{SEC} : N_{AUX}	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750370024	EE13/7/4	85-265	12.0	0.50	–	–	16.0	–	1.600	8 : 1 : 1.33	0.34	4000	115	13.72 x 20.45 x 10.8
750370423	EE13/7/6	85-265	5.0	0.60	–	–	13.3	–	1.500	13.33 : 1 : 2.78	0.60	4875	115	15 x 15.75 x 18.5
750810014	EE13/7/6	85-265	5.0	1.20	–	–	–	–	1.200	12.36 : 1	0.53	1875	60	15 x 15.75 x 18.5
7508110341	EE13/7/6	85-265	12.0	0.35	–	–	15.0	–	1.500	6.87 : 1 : 1.27	0.52	4000	115	15 x 15.75 x 18.5
750314288	EE16/7/5	85-265	-5.0	0.80	7.0	0.42	–	–	2.500	14.2 : 1.4 : 1	0.50	2500	60	18.5 x 16.5 x 18.8
750314352	EE16/7/5	85-265	6.0	0.10	15.0	0.70	12.0	–	0.900	11.88 : 1 : 2.33 : 2.11	0.82	1875	115	18.5 x 16.5 x 18.8
750315363	EE16/7/5	85-265	12.0	0.60	–	–	5.1	–	2.000	5.86 : 1 : 0.586	0.63	3750	60	17 x 13.4 x 21.5
750316413	EE16/7/5	85-265	6.0	0.10	15.0	0.60	13.0	–	1.500	11.67 : 1.5 : 1 : 2.17	0.70	1875	60	18.5 x 16.5 x 18.8
750316878	EE16/7/5	85-265	13.0	0.70	4.5	0.10	15.0	–	2.200	23.3 : 1.66 : 1 : 2.83	470.00	4000	80	17.04 x 13.84 x 22.55
750817436	EE16/7/5	265-297	5.0	0.50	12.0	0.22	15.0	–	2.300	19.14 : 1 : 2.43 : 3	0.42	4000	115	18.5 x 16.5 x 18.8
760871431	EE16/7/5	88-265	4.5	0.15	13.0	0.42	12.0	–	2.000	27.67 : 1 : 3.17 : 1.22	–	4500	55	18 x 16.5 x 18
7508110345	EE16/7/5	85-265	12.0	0.50	–	–	6.0	–	2.000	5.78 : 1 : 0.52	0.48	5000	60	17 x 13.4 x 21.5
750310660	EE16/8/5	85-265	12.0	0.50	–	–	12.0	–	1.200	7.87 : 1 : 1	0.66	4500	120	20.83 x 22.35 x 17.53
750370026	EE16/8/5	85-265	12.0	0.30	12.0	0.30	12.0	–	3.900	8.96 : 1 : 1 : 1	0.44	4000	70-134	20.2 x 24.2 x 15.5
750810131	EE16/8/5	85-265	12.0	1.00	–	–	12.0	–	1.800	5.8 : 1 : 1	0.32	2500	115	20.32 x 24.38 x 16
750871010	EE16/8/5	85-265	5.0	1.00	–	–	12.0	–	3.300	14.36 : 1 : 2.27	0.35	5000	60	20 x 24.58 x 16
750871011	EE16/8/5	85-265	5.0	1.00	–	–	12.0	–	4.000	21.9 : 1 : 2.9	0.40	5000	50-140	20 x 24 x 16
750871012	EE16/8/5	85-272	5.0	2.40	–	–	14.0	–	0.900	14.75 : 1 : 2.75	–	4500	50-140	20.32 x 24.38 x 16
750871030	EE16/8/5	85-265	12.0	0.60	–	–	12.0	–	2.380	9.55 : 1 : 1	0.56	5000	60	20 x 24.38 x 16
7508110110	EE16/8/5	85-265	5.0	1.20	–	–	12.0	–	1.230	15 : 1 : 2.3	0.60	3750	115	20.32 x 24.38 x 16
7508110342	EE16/8/5	85-265	12.0	0.35	–	–	12.0	–	1.200	7.86 : 1 : 1.07	0.58	4000	60	20.32 x 24.38 x 16
750370228	EE20/10/6	85-265	12.0	1.25	–	–	12.0	–	1.500	8 : 1 : 1	1.33	4000	50-60	22.2 x 25 x 16
750370378	EE20/10/6	85-264	12.0	1.00	–	–	15.0	5	1.500	5.6 : 1 : 0.8 : 0.52	1.20	4000	67-97	22.2 x 25 x 16
750370702	EE20/10/6	85-264	12.0	1.00	–	–	5.0	10	1.500	5.6 : 1 : 0.52 : 0.8	1.20	4000	67-97	22.2 x 25 x 16
750871110	EE20/10/6	85-265	5.0	2.50	–	–	10.0	–	1.600	14.4 : 1 : 2	1.10	4800	60	21 x 25 x 16
750871111	EE20/10/6	85-265	5.0	2.40	–	–	12.0	–	1.700	13.9 : 1 : 2.6	0.90	4800	60	21 x 25 x 16
760871131	EE20/10/6	85-265	12.0	0.50	12.0	0.50	15.0	–	1.400	9.6 : 1 : 1 : 1.2	0.70	4000	60	22.2 x 25 x 16
750810150	EFD20	85-265	35.0	0.33	–	–	13.0	–	0.915	3.9 : 1 : 0.44	1.45	4000	30	21.08 x 22 x 10.8
750343780	EFD20	140-300	36.0	0.35	–	–	12.0	–	0.915	3.9 : 1 : 0.44	–	1500	60	21.08 x 21.08 x 10.8
750341252	EPC13	200-265	15.0	0.35	–	–	20.0	–	5.000	7.5 : 1 : 1.35	–	1875	100	14.6 x 14.6 x 8.5
750810132	EPC25	85-265	12.0	1.00	–	–	12.0	–	1.600	5.89 : 1 : 1	1.00	2000	60	26.67 x 26.67 x 17.27
750315434	ETD34	78-283	52.0	1.20	–	–	15.0	15	0.640	4.5 : 1 : 0.29 : 0.29	3.60	3750	100	39.6 x 43.18 x 30.48
7508111123	RM6	85-265	5.0	3.00	–	–	12.0	–	0.900	14.4 : 1 : 2.2	0.95	4000	64-136	17.65 x 16.64 x 13.21

MID-OLTI

Offline Flyback Transformers for Texas Instruments

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Universal, US or European offline input voltage
- Small size
- Low leakage inductance
- Multiple-output options

Applications

- Industrial controls
- USB chargers
- Metering
- Process controls
- Factory automation
- Security systems
- Garage door opener auxiliary supplies

Electrical Properties

Order Code	Package Size	V_I (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{aux} (V)	V_{aux2} (V)	L_I (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)	Mount
750313747	EE13/6/6	85-265	5.0	1.20	–	–	20.0	–	960	14.66 : 1 : 3.66	0.560	3500	92-106	15 x 15.75 x 18.5	THT
750341569	EE13/6/6	196-265	22.0	0.35	–	–	22.0	–	3220	7.83 : 1 : 1	–	4500	90	14.73 x 14.73 x 15.24	THT
750341928	EE13/6/6	85-265	5.0	1.00	–	–	18.0	–	1350	15.66 : 1 : 3.67	–	4500	70	14.73 x 14.73 x 15.24	THT
750343140	EE13/6/6	71-301	12.0	0.10	–	–	8.0	4.0	2500	8 : 1 : 0.64 : 0.36	–	3750	52	14.2 x 20.45 x 15	THT
7508111111	EE13/6/6	85-265	5.0	2.00	–	–	19.0	–	560	13.66 : 1 : 3.5	–	3750	73-100	14.73 x 14.73 x 15.24	THT
750312723	EE13/7/4	85-265	5.0	1.00	–	–	20.0	–	925	15.33 : 1 : 4	0.440	4500	130	14.22 x 20.45 x 10.47	THT
750313651	EE13/7/4	184-265	12.0	0.25	–	–	18.0	–	3000	8 : 1 : 1.47	0.150	4500	100	13.72 x 20.45 x 10.16	THT
750313684	EE13/7/4	85-265	3.3	1.50	–	–	–	–	950	20 : 1 : 4	–	4500	100	14.22 x 20.45 x 10.47	THT
750313959	EE13/7/4	85-265	12.0	0.25	–	–	18.0	–	1800	8 : 1 : 1.47	0.290	4500	100	13.72 x 20.45 x 10.41	THT
750314752	EE13/7/4	85-265	3.3	0.60	3.3	0.01	15.0	–	2200	20 : 1 : 1 : 5	0.175	4500	110	14.22 x 20.45 x 10.47	THT
750315727	EE13/7/4	120-265	3.5	0.12	–	–	26.0	–	4000	20 : 1 : 6.67	0.105	3750	60	13.72 x 20.45 x 10.16	THT
750316711	EE13/7/4	78-325	13.0	0.10	–	–	13.0	–	1500	7 : 1 : 1	0.640	3000	640	13.72 x 20.45 x 10.16	THT
750342671	EE13/7/4	248-283	6.5	0.10	–	–	13.0	–	4000	10 : 1 : 2	0.100	3750	40	13.72 x 20.45 x 10.16	THT
750370271	EE13/7/4	19-265	12.0	0.06	–	–	15.0	–	4000	3.59 : 1 : 1.25	0.150	3125	130	13.8 x 23.9 x 11	SMT
750816130	EE13/7/4	42-318	15.0	0.25	–	–	15.0	–	400	3.4 : 1 : 1	1.200	2000	110	13.72 x 20.45 x 10.16	THT
7508110331	EE13/7/4	85-265	15.0	0.25	–	–	15.0	–	500	3.25 : 1 : 1	0.500	3750	130	13.72 x 20.45 x 10.54	THT
750315526	EE16/7/5	85-265	5.0	2.00	–	–	20.0	–	435	13.2 : 1 : 3.8	1.250	3900	100	17.5 x 18.8 x 13.8	THT
750341086	EE16/7/5	85-135	22.0	0.35	–	–	22.0	–	850	3.808 : 1 : 1	0.500	4500	100	16.9 x 18.8 x 13.31	THT
750341087	EE16/7/5	180-265	22.0	0.35	–	–	22.0	–	3000	7.615 : 1 : 1	0.300	4500	100	16.9 x 18.8 x 13.31	THT
750341599	EE16/7/5	180-264	36.0	0.28	–	–	14.0	–	2180	6.2 : 1 : 0.39 6.2 : 1 : 0.39	–	3750	70	16.9 x 18.8 x 13.31	THT
750341603	EE16/7/5	85-264	22.0	0.35	–	–	22.0	–	1800	5 : 1 : 1	–	4500	70	16.9 x 18.8 x 13.31	THT
750341696	EE16/7/5	180-264	22.0	0.35	–	–	30.0	–	800	3.47 : 1 : 1.3	–	3000	80	16.9 x 18.8 x 13.31	THT
750341914	EE16/7/5	85-264	5.0	1.50	–	–	15.0	–	1470	16.875 : 1 : 2.25	–	3000	70	17.8 x 18.8 x 13.5	THT
750342104	EE16/7/5	85-265	12.0	0.50	–	–	12.0	–	1350	6.68 : 1 : 1	0.530	3750	80	16.9 x 18.8 x 13.31	THT
750813046	EE16/7/5	85-135	26.6	0.25	–	–	12.0	–	1440	3.94 : 1 : 0.47	0.600	4500	72	16.9 x 18.8 x 13.31	THT
750815039	EE16/7/5	185-265	12.0	0.30	–	–	12.0	–	6600	5.5 : 1 : 1	0.230	4000	40-136	16.9 x 18.8 x 13.31	THT
750815047	EE16/7/5	185-265	30.0	0.28	–	–	15.0	–	3200	5.6 : 1 : 0.5	0.520	3750	70	16.9 x 18.8 x 13.31	THT
750841012	EE16/7/5	85-265	5.0	1.20	–	–	12.0	–	1660	16.875 : 1 : 2.25	–	3750	70	16.9 x 19.5 x 13.31	THT
750841034	EE16/7/5	85-264	12.0	0.50	–	–	12.0	–	1100	6 : 1 : 1	–	3000	60	16.9 x 18.8 x 13.31	SMT
7508110155	EE16/7/5	85-265	5.0	1.60	–	–	16.2	–	500	15 : 1 : 3	–	4500	30-130	16.9 x 18.8 x 13.31	THT
7508110329	EE16/7/5	100-375	15.0	0.34	–	–	15.0	–	700	5.5 : 1 : 1	0.580	4000	130	16.9 x 18.8 x 13.31	THT
7508111120	EE16/7/5	85-265	5.0	2.00	–	–	19.0	–	667	12.28 : 1 : 3.27	0.940	3750	65	18.5 x 16.5 x 18.8	THT
750310787	EE16/8/5	85-130	12.0	0.42	–	–	14.5	–	2800	11.57 : 1 : 1.21	0.450	2500	100	17.96 x 20.3 x 14.3	THT
750311553	EE16/8/5	90-140	25.0	0.40	–	–	–	–	803	4 : 1	0.600	4500	100	20.32 x 24.38 x 16	THT
750312170	EE16/8/5	71-262	5.0	5.00	–	–	16.0	–	400	22 : 1 : 3.33	1.250	1875	130	21.59 x 24.38 x 16	THT
750313739	EE16/8/5	85-265	5.0	1.20	–	–	17.0	–	1100	16.5 : 1 : 3.5	0.650	4500	115	20.32 x 24.38 x 16	THT

MID-OLTI

Offline Flyback Transformers for Texas Instruments

Electrical Properties *(CONTINUED)*

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{aux} (V)	V_{aux2} (V)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)	Mount
750313823	EE16/8/5	85-265	5.3	2.55	–	–	25.0	–	367	13 : 1 : 4.37	2.200	4500	80	20.32 x 24.38 x 16.51	THT
750314307	EE16/8/5	20-265	24.0	0.03	28.0	0.16	15.0	–	500	2.33 : 1.17 : 1 : 0.62	0.680	3750	130	17.78 x 26.1 x 13.8	SMT
750315369	EE16/8/5	85-265	5.0	1.50	–	–	16.0	–	825	16.5 : 1 : 3.5	0.850	4500	47-64	20.32 x 24.38 x 16	THT
750315942	EE16/8/5	71-254	18.0	0.35	5.0	0.35	–	–	1000	23.33 : 2.33 : 1	0.450	625	85	17.96 x 20.3 x 14.3	THT
750316686	EE16/8/5	85-265	12.0	1.00	–	–	12.0	–	500	6 : 1 : 1	0.925	3750	70	20.32 x 24.38 x 16	THT
750316710	EE16/8/5	107-305	18.0	0.25	18.0	0.04	18.0	–	1300	5 : 1 : 1 : 1	0.400	1610	100	20.32 x 24.38 x 16	THT
750317031	EE16/8/5	198-276	12.0	0.85	–	–	20.0	–	1700	–	0.360	3000	60	20.6 x 24.38 x 16	THT
750342792	EE16/8/5	71-601	250.0	0.03	250.0	0.03	15.0	–	736	1 : 2.88 : 2.88 : 0.18	–	3125	70	17.96 x 20.3 x 14.3	THT
750342999	EE16/8/5	90-270	9.0	0.75	–	–	9.0	5.0	970	8 : 1 : 0.54	–	3750	50	20.32 x 24.38 x 16	THT
750811434	EE16/8/5	85-265	16.5	0.30	5.0	1.00	16.5	–	770	18 : 6 : 1 : 6	0.800	3750	140-500	20.32 x 24.38 x 16	THT
750811445	EE16/8/5	85-265	24.0	0.20	5.0	0.50	18.0	–	1500	4 : 1 : 0.76	0.520	4500	100	20.32 x 24.38 x 16	THT
750813045	EE16/8/5	90-130	19.5	0.35	–	–	12.0	–	2400	10.72 : 1 : 0.818	0.400	5625	30-140	20.32 x 24.38 x 16	THT
750845150	EE16/8/5	196-264	34.0	0.40	–	–	22.0	–	2700	7.6 : 1 : 0.67	–	3750	100	18.9 x 21.9 x 15.24	THT
7508110325	EE16/8/5	64-265	12.0	0.50	–	–	18.0	–	1500	7.82 : 1 : 1.45	0.330	4000	100	20.32 x 24.38 x 16	THT
7508110338	EE16/8/5	85-265	12.0	0.50	–	–	24.0	–	1500	7.82 : 1 : 2	0.330	4000	100	20.32 x 24.38 x 16	THT
7508110410	EE16/8/5	180-265	19.5	0.35	–	–	10.0	–	13800	18.5 : 1 : 0.80	0.230	5625	30-140	20.32 x 24.38 x 16	THT
7508111323	EE16/8/5	85-265	12.0	1.00	–	–	12.0	–	2000	8 : 1: 1	0.500	4000	50-102	17.78 x 26.9 x 13.8	SMT
750314382	EE20/10/6	113-707	12.0	1.80	–	–	–	–	4500	15 : 1	0.480	3300	50	22.25 x 14.4 x 23.24	THT
750314727	EE20/10/6	85-265	12.0	2.00	3.3	0.50	18.0	–	250	20 : 3.5 : 1 : 5.5	1.800	4375	100	22.2 x 26 x 16	THT
750315241	EE20/10/6	141-283	36.0	1.00	–	–	18.0	–	1100	4 : 1 : 0.5	1.300	3750	45	22.5 x 25 x 16	THT
750315783	EE20/10/6	80-291	9.0	4.22	–	–	15.0	–	100	7 : 1 : 2	3.300	4400	100	22.5 x 25 x 16	THT
750316002	EE20/10/6	127-268	5.0	1.00	12.5	0.80	20.0	–	850	20 : 1 : 2.25 : 4	1.100	3750	100	22.2 x 25 x 16	THT
750316585	EE20/10/6	177-473	12.0	1.50	5.0	2.00	17.0	–	600	11.64 : 2.18 : 1 : 3	2.750	4000	30	22.2 x 25 x 16	THT
750317049	EE20/10/6	120-438	5.0	0.20	8.0	0.30	19.0	–	1100	15 : 1.5 : 1 : 3.5	950	4000	70	22.2 x 25 x 16	THT
750341448	EE20/10/6	85-265	12.0	1.00	–	–	28.0	–	450	7 : 1 : 2.33	–	3000	100	23 x 22 x 17.53	THT
750342288	EE20/10/6	85-264	5.0	2.00	25.0	0.30	12.0	–	480	12.14 : 1 : 5.44 : 2	–	3750	60	23 x 22 x 17.53	THT
750342415	EE20/10/6	88-275	15.0	0.80	–	–	25.0	–	856	6 : 1 : 1.5	–	4000	66	22.2 x 25 x 16	THT
750343154	EE20/10/6	85-318	11.0	0.20	7.2	0.10	7.5	5	410	14 : 1.5 : 1 : 1 : 1.75	–	3000	65	22.2 x 25 x 16.54	THT
750343306	EE20/10/6	70-300	12.0	0.25	12.0	3.00	–	–	360	9.5 : 1 : 1	1.550	3750	100	22.2 x 26 x 16.76	THT
750343466	EE20/10/6	60-282	24.0	0.15	–	–	16.5	–	280	4.29 : 1 : 0.72	1880	3000	100	22.2 x 25 x 16.5	THT
750343661	EE20/10/6	70-300	15.0	0.25	5.0	0.20	–	–	500	16 : 2.75 : 1 : 2.75	–	3000	85	22.2 x 25.8 x 16	THT
750343920	EE20/10/6	85-300	7.2	0.06	7.2	0.15	13.0	–	2300	17.6 : 1 : 1 : 1 : 2.2 : 1.8	–	4000	80	22.2 x 25 x 16	THT
750343972	EE20/10/6	110-420	16.0	0.70	16.0	0.20	12.3	–	1000	17.33 : 2.17 : 1 : 1.67	–	3000	80	22.2 x 25 x 16.5	THT
750370140	EE20/10/6	85-265	15.0	0.20	–	–	15.0	–	6000	6.2 : 1 : 1	0.310	5000	132	22.2 x 25 x 16	THT
750370156	EE20/10/6	141-265	13.0	2.50	–	–	26.0	5.2	520	12 : 1 : 2 : 0.5	–	3500	90	22.5 x 25 x 16	THT
750370833	EE20/10/6	102-440	12.0	0.10	–	–	20.0	–	1500	10.21 : 1 : 1.71	800	4000	70	21.24 x 20.78 x 15.88	THT
750811145	EE20/10/6	88-269	30.0	0.30	–	–	16.0	–	1200	4.42 : 1 : 0.54	–	3750	130	22.25 x 14.4 x 22.86	THT
750811146	EE20/10/6	85-265	38.0	0.35	–	–	17.0	–	430	2.91 : 1 : 0.45	1.600	3750	130	22.25 x 14.4 x 22.86	THT
750811148	EE20/10/6	85-265	30.0	0.23	–	–	16.2	–	430	2.91 : 1 : 0.54	–	3750	130	22.25 x 14.4 x 22.86	THT
750811227	EE20/10/6	64-265	10.5	2.00	–	–	21.0	–	300	7 : 1 : 2	1.500	3750	120	22.5 x 25 x 16	THT
750811438	EE20/10/6	78-269	12.0	0.13	6.0	0.13	12.0	–	750	14 : 2 : 1 : 2	1.800	3750	80	22.5 x 25 x 16	THT
750811647	EE20/10/6	85-265	17.4	1.00	6.6	1.00	18.0	–	250	10 : 1 : 2.5 : 2.75	1.700	4375	100	22.2 x 26 x 16	THT
750811932	EE20/10/6	90-290	15.0	0.39	15.0	0.20	–	–	220	6.5 : 1.25 : 1.25 : 1	–	4000	30-130	22.2 x 25 x 16	THT
750815040	EE20/10/6	209-265	20.0	0.35	–	–	15.0	–	2120	5.384 : 1 : 0.769	0.750	4500	65	22.5 x 25 x 16	THT
750817930	EE20/10/6	71-481	12.0	0.70	12.0	0.70	18.0	–	350	7 : 1 : 1 : 1 : 1.5	1.800	3750	100	22.5 x 25 x 16	THT
7508110347	EE20/10/6	64-283	12.0	0.67	–	–	15.0	10.0	1200	8.75 : 1 : 1.25 : 0.875	0.625	4600	110	22.2 x 25 x 16	THT
7508111329	EE20/10/6	85-265	12.0	0.90	–	–	22.0	15.0	400	6 : 1 : 1.83 : 0.5	0.700	3750	100	22.2 x 25 x 16	THT
7508112339	EE20/10/6	85-265	12.0	3.00	–	–	18.0	6.0	220	7 : 1 : 1.5 : 0.5	2.200	4500	100	22.2 x 25 x 16.5	THT
7508151501	EE20/10/6	180-265	30.0	0.60	–	–	14.0	–	1780	5.17 : 1 : 0.45	1.050	4500	70	22.5 x 25 x 16	THT
750315046	EE25/13/7	141-403	24.0	2.10	–	–	24.0	–	1000	8.67 : 1 : 1	2.000	3750	60	27.05 x 32.25 x 22.86	THT
750315242	EE25/13/7	141-283	12.0	1.80	12.0	1.80	20.0	16.0	600	12 : 1 : 1 : 1.67 : 1.33	–	3750	45	27.05 x 32.25 x 22.86	THT
750315307	EE25/13/7	141-265	12.0	1.00	12.0	1.00	18.0	–	350	12 : 1 : 1 : 1.5	4.000	3750	57	27.05 x 32.25 x 22.86	THT
750342851	EE25/13/7	43-318	24.0	1.00	15.0	0.07	15.0	–	150	3.75 : 1.5 : 1 : 1 : 1 : 1	2.750	3125	75	27.05 x 32.25 x 22.86	THT
750813550	EE25/13/7	90-135	50.0	0.34	12.5	0.08	12.5	–	1020	1.95 : 1: 0.268	1.500	3750	55-85	28.58 x 29.21 x 22.86	THT
750815330	EE25/13/7	134-265	12.0	4.20	–	–	10.5	–	800	10 : 1 : 0.9	2.600	3750	30-130	27.05 x 32.25 x 22.86	THT
7508112328	EE25/13/7	69-264	12.0	2.00	–	–	12.0	–	600	7 : 1: 2.36	2.600	3750	30-130	27.05 x 32.25 x 22.86	THT

MID-OLTI

Offline Flyback Transformers for Texas Instruments

Electrical Properties *(CONTINUED)*

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{aux} (V)	V_{aux2} (V)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)	Mount
750813423	EE25/13/7	85-265	23.0	0.20	–	–	17.0	–	150	3.5 : 1 : 0.75	5.800	3900	80	27.05 x 32.25 x 22.86	THT
750314722	EFD20	318-495	267.0	0.02	267.0	0.02	21.0	–	5300	2 : 1 : 1 : 1 : 0.08	0.430	2100	70	23.11 x 29.65 x 11.43	SMT
750342752	EFD20	85-264	5.5	3.00	–	–	12.0	–	515	15.5 : 1 : 2	–	3000	50	21.5 x 29 x 12	THT
750343025	EFD20	90-264	5.0	2.00	–	–	10.0	–	650	15.4 : 1 : 2	1.000	3750	50	21.84 x 29 x 13.46	THT
750343769	EFD20	85-265	12.0	1.125	3.3	0.30	12.0	–	620	16.8 : 2.4 : 1 : 2.4	–	3000	50	16.8 : 2.4 : 1 : 2.4	THT
750311959	EFD25	85-130	20.0	1.43	–	–	20.0	–	540	5 : 1 : 0.833	2.200	1875	80	26.04 x 26.67 x 13.59	THT
750313417	EFD25	85-265	19.0	3.43	–	–	10.0	–	400	6 : 1 : 0.55	3.300	1875	70-130	27.03 x 32.31 x 13.97	SMT
750315315	EFD25	57-452	24.0	0.50	6.0	1.50	15.5	–	400	12 : 4 : 1 : 2.67	1.600	9200	110	26.3 x 33 x 14.75	THT
7508112341	EFD25	85-265	12.0	3.00	–	–	12.0	–	380	7 : 1 : 1	3.300	4500	60-120	26.3 x 33 x 14.76	THT
750313829	EP13	195-265	12.0	0.42	–	–	–	–	1590	6.25 : 1	0.600	1875	100	13.46 x 17.75 x 12.7	SMT
750314878	EP13	71-440	18.7	0.10	13.0	0.05	–	–	1500	25.67 : 4.54 : 2.66 : 1	–	1875	74	13.97 x 13.97 x 12.7	THT
750315313	EP13	71-265	5.0	0.40	–	–	–	–	10000	20 : 1	0.150	1875	50	13.46 x 17.75 x 12.7	SMT
750315314	EP13	71-265	12.0	0.03	3.3	0.40	–	–	10000	30 : 2.38 : 1	0.150	1875	50	13.46 x 17.75 x 12.7	SMT
7508110127	EP13	58-265	5.0	1.00	–	–	15.0	–	1050	14.16 : 1 : 3.17	0.500	4000	120	13.97 x 13.97 x 12.7	THT
7508110151	EP13	85-265	5.0	1.00	–	–	15.0	–	1500	15.42 : 1 : 3.14	0.430	4000	70	13.97 x 13.97 x 12.7	THT
750314445	EP7	85-132	5.0	0.20	–	–	18.0	–	2500	12 : 1 : 3	0.135	2000	100	9.14 x 9.78 x 10.54	SMT
750314848	EP7	108-305	3.6	0.10	–	–	10.0	–	4000	10 : 1 : 3	0.100	500	100	9.78 x 9.14 x 10.54	SMT
750314940	EP7	50-283	15.0	0.03	–	–	–	–	4000	2.75 : 1	0.110	625	100	9.78 x 9.5 x 10.54	SMT
750343332	EP7	70-283	5.0	0.10	–	–	–	–	20180	12.61 : 1	–	1500	62	10.16 x 8.26 x 9.78	THT
750341657	EPC13	85-265	5.0	1.20	–	–	22.0	–	720	13 : 1 : 4.58	–	3000	10	10 x 15.62 x 2.75	THT
750341788	EPC13	180-265	12.0	0.35	–	–	12.0	–	1520	10 : 1 : 1	–	3000	70	10 x 15.62 x 2.26	THT
750341872	EPC13	85-265	5.0	1.20	–	–	15.0	–	1500	16.67 : 1 : 3	–	3000	10	10 x 15.62 x 14.1	THT
750315146	EPC17	85-265	5.0	0.50	7.0	0.50	17.0	–	750	15.83 : 1.17 : 1 : 3	1.000	2750	115	19 x 18.5 x 13	THT
750341591	EPC17	85-264	5.0	2.00	–	–	21.0	–	1000	15 : 1 : 4.3	–	3750	65	19 x 18.5 x 12.5	THT
750316133	EPW15	190-290	3.3	0.10	16.0	0.10	–	–	6000	30 : 1 : 4.5 : 1.5	130	3000	60	15.7 x 22.1 x 23.3	THT
750342279	ER28/14	71-283	12.0	2.00	-2.0	0.25	15.0	–	450	12.25 : 1.75 : 2 : 1 : 2	–	4000	50-130	30.51 x 24 x 33	THT
750343004	ER28/14	106-286	24.0	3.85	–	–	18.0	–	160	4 : 1 : 0.78	4.700	3750	65	30.5 x 24 x 33	THT
750811693	ER28/14	85-265	5.0	0.60	30.0	0.02	15.0	–	350	6.67 : 1.67 : 1 : 0.5	3.700	3750	20-70	29.84 x 24 x 33	THT
750813743	ER28/14	90-144	12.0	4.05	12.0	4.05	15.0	–	180	10 : 1 : 1 : 1	7.300	3750	60	31 x 31 x 25	THT
750315924	ER28/17	149-265	24.0	1.90	–	–	24.0	14.0	730	4.74 : 1 : 1 : 0.58	3.900	3750	60	31.1 x 24 x 36	THT
7508113417	ER28/17	64-265	19.0	3.85	–	–	11.0	–	140	3.25 : 1 : 0.583	9.100	3750	30-130	32 x 39 x 26	THT
750313928	ER9.5	175-265	5.5	0.25	–	–	18.0	–	3800	12 : 1 : 3	–	625	100	10 x 12.07 x 5.97	SMT
750314178	ER9.5	85-132	5.0	0.20	–	–	18.0	–	2500	12 : 1 : 3	–	625	100	10 x 12.07 x 5.97	SMT
750316326	ERL35	85-265	27.0	6.00	–	–	12.0	–	250	4 : 1 : 0.5	0.750	3600	120	36.5 x 44 x 28.5	THT
750342275	ERL35	180-264	42.0	2.00	24.0	1.60	15.0	–	240	6.67 : 1.67 : 1 : 0.5	–	3750	80	36.5 x 44 x 29	THT
750315340	ETD39	200-265	24.0	10.00	–	–	12.0	–	200	4.5 : 1 : 0.5	15.000	3750	60	49 x 41.9 x 31.75	THT
750342585	ETD29	400-690	24.0	2.00	16.0	0.14	16.0	–	2500	47.3 : 1 : 2.67 : 1.33	–	4500	68	35.56 x 24.38 x 44.2	THT
750343068	PQ2625	60-283	24.0	2.50	–	–	18.0	–	230	3.89 : 1 : 0.83	4.400	3750	65	29.2 x 30.35 x 29.3	THT
750315289	PQ3220	176-265	285.0	0.35	15.0	0.01	22.0	–	400	11 : 20.8 x 1 : 1.5	6.800	1875	62-84	35.56 x 37.34 x 24.13	THT
750315290	PQ3220	176-265	285.0	0.35	–	–	22.0	–	400	1 : 1.89 : 0.14	6.800	1875	62-84	35.56 x 37.34 x 24.13	THT
750342946	PQ3230	85-265	24.0	6.00	15.0	0.50	15.0	–	300	11 : 1.25 : 1 : 1.5	–	3750	60-120	35.56 x 37.34 x 34.29	THT
750315841	RM6	85-265	5.0	2.00	–	–	11.0	16.0	750	13 : 1 : 2.25 : 3.25	–	3750	60	17.65 x 16.64 x 13.21	THT
750341879	RM6	180-264	44.0	0.15	11.0	0.15	15.0	–	1000	9.25 : 3.6 : 1	–	800	70-100	17.65 x 16.64 x 15	THT
750343372	RM8	85-265	5.0	7.00	–	–	15.0	–	150	14 : 1 : 3	–	3750	70	21.59 x 21.59 x 17.27	THT
750343803	RM8	85-265	20.0	3.25	–	–	70.0	–	75	5.5 : 1 : 3	–	3750	450	21.59 x 21.59 x 17.27	THT
750315092	RM10	85-265	20.0	3.30	–	–	12.0	–	200	5.5 : 1 : 0.5	3.200	2000	130	32.4 x 40 x 20.5	THT
750343192	RM10	85-265	49.0	1.00	–	–	16.0	–	160	1.67 : 1 : 0.33	–	3750	70	26.16 x 26.16 x 19.05	THT

MID-FWDTI

Offline Forward Transformers for Texas Instruments

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Compact design
- 200W power output
- THT
- Reinforced insulation
- Lead-free and RoHS compliant
- Designed to meet IEC60950-1, EN60950-1, UL60950-1/ CSA60950-1 and AS/NZS60950.1

Applications

- Offline switching power
- Power electronics
- Electronic ballasts
- Audio amplifiers

Electrical Properties

Order Code	Package Size	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	L_1 (mH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750315800	PQ3230	247-318	36	5.6	2	4 : 1	1.5	4000	200	35.56 x 37.34 x 34.29

MID-LLCEPC

EPC-Style Offline LLC Transformers

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Innovative crimp terminal for better solder integrity
- Up to 400W output
- High efficiency
- Low DC resistance
- Low EMI
- Reinforced insulation
- Isolation voltage: $3900V_{AC}$

Applications

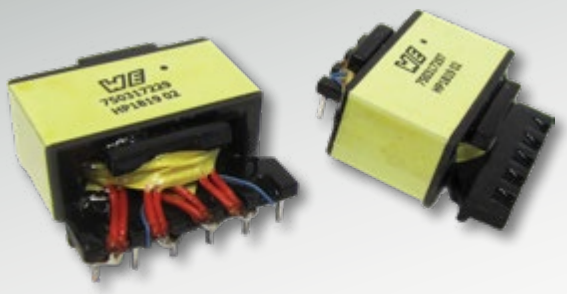
- LLC resonant converters
- High efficiency switch-mode power supplies
- Display panels
- Telecom circuits
- Audio

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{aux} (V)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	L_S (µH)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750315913	EPC40	340-420	12	31.25	22	276	17 : 1 : 2	3.3	46	3900	70-140	41.91 x 53.98 x 26.90
750315914	EPC40	340-420	18	22.20	18	276	11.63 : 1 : 1	5.0	46	3900	70-140	41.91 x 53.98 x 26.90
750315915	EPC40	340-420	24	16.20	22	276	8.7 : 1 : 1	3.4	46	3900	70-140	41.91 x 53.98 x 26.90
750315916	EPC40	340-420	48	8.10	22	276	4.34 : 1 : 0.5	3.4	46	3900	70-140	41.91 x 53.98 x 26.90

MID-LLCNAV

Offline Forward Transformers for Navitas Semiconductor



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- High efficiency
- Up to 150W
- High power density
- Small land size
- THT
- Reinforced insulation
- Low profile height: 11mm max.

Applications

- GaN power supplies
- High frequency power supplies
- White goods
- Fast charging
- High efficiency charging

Electrical Properties

Order Code	V_i (V_{AC})	V_{O1} (V)	I_{O1} (A)	V_{aux1} (V)	V_{aux2} (V)	L_1 (µH)	N_{PRI} : N_{SEC} : N_{AUX}	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)	Mount
750317229	385-415	19	8	27	9	190	11 : 1 : 1.5 : 1	2.3	3000	500	26.5 x 32.1 x 11	THT

MID-FLT
Flat Wire Power Inductors

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- 15A rated current
- High saturation current
- Low DCR
- Operating temp: -40°C to 125°C

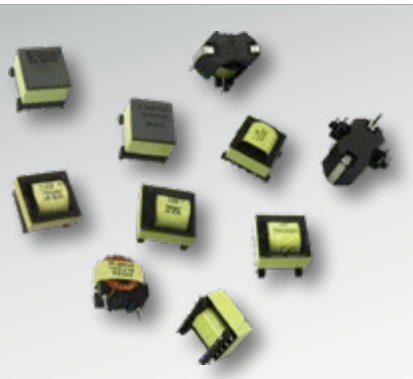
Applications

- Solar string inverters
- Solar central inverters

Electrical Properties

Order Code	L_1 (µH)	I_{SAT} (A)	R_{DC1} (Ω)	I_{R1} (A)	LxWxH (mm)	Mount
750343810	340.0	24	0.050	15	67.5 x 67.5 x 39.88	THT
750343811	9.5	15	0.006	15	42 x 27 x 42	THT

MID-LLIT
Inductors for Lighting Applications



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Inductance: 52-3500µH
- With and without auxiliary winding
- Saturation current: up to 25A
- Rated for up to 250V_{AC} functional applications
- Operating temp: -40°C to 125°C

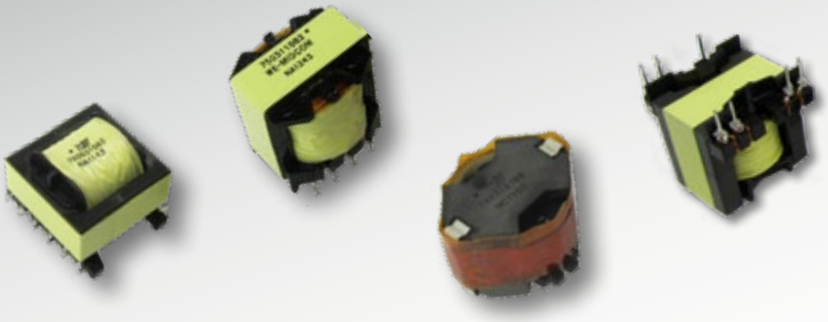
Applications

- LED lamps
- LED downlights
- Power factor corrected LED drivers
- Buck LED drivers

Electrical Properties

Order Code	Package Size	L_1 (µH)	I_{SAT} (A)	R_{DC} (Ω)	V_T (V_{AC})	LxWxH (mm)
750313017	EE16/8/5	125	3.3	0.200	500	17.15 x 17.15 x 13.34
750313062	EE16/8/5	155	2.6	0.200	500	17.15 x 17.15 x 13.34
750313755	EE20/10/6	1200	1.0	0.640	–	23.00 x 22.00 x 17.53
750312352	EE25/13/11	3500	2.0	2.150	–	30.35 x 27.05 x 22.60
750312407	EE25/13/11	1100	4.0	1.350	1875	30.35 x 27.05 x 22.60
750311524	EP13	180	–	0.110	1250	13.97 x 13.97 x 12.70
750311819	EP13	270	–	0.135	1250	13.97 x 13.97 x 12.70
750312626	RM6	2100	0.9	1.530	–	17.65 x 16.64 x 13.21
750312186	TOR17/9.5/6.4	696	–	0.128	–	20.83 x 24.64 x 11.43
750315814	TOR27/15/11	52	25.0	0.052	500	31.05 x 16.84 x 32.75

MID-PFC
Inductors for Power Factor Correction



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Inductance 125-2500µH
- With or without auxiliary winding
- Saturation current: up to 15A
- Rated for up to 250V_{AC} basic applications
- Operating temp: -40°C to 125°C

Applications

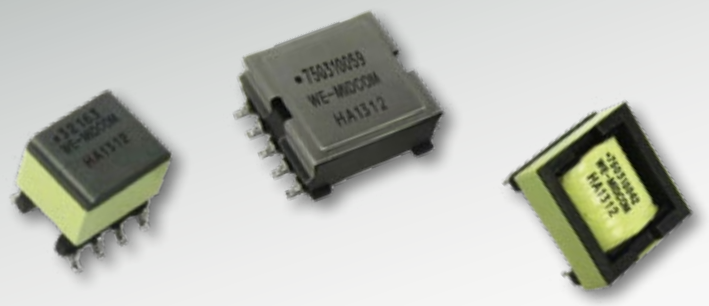
- Power factor correction

Electrical Properties

Order Code	Package Size	L_1 (µH)	I_{sat} (A)	R_{DC} (Ω)	V_T (V)	V_R (V_{AC})	LxWxH (mm)
760800001	EE13/6/6	127	2.50	0.300	2000	120	15.00 x 15.75 x 18.50
750311082	EE25/13/13	2500	–	0.750	2500	–	26.00 x 23.50 x 29.50
750311083	EE25/13/13	2000	–	0.490	1875	265	26.00 x 23.50 x 29.50
760801080	EE25/13/13	2000	2.60	1.160	–	120	30.35 x 27.05 x 22.60
750317297	ER25/4.9/15	77.5	7.00	0.047	500	–	26.50 x 31.20 x 11.00
750340680	PQ2020	675	–	0.400	1000	–	23.36 x 23.88 x 24.14
750341751	PQ2625	210	3.00	0.041	1250	235	28.96 x 29.84 x 29.85
750315797	PQ3230	350	15.00	0.170	–	–	35.56 x 37.34 x 34.29
750316867	PQ3230	350	15.00	0.170	–	–	35.56 x 37.34 x 34.29
750312188	RM10	320	5.80	0.130	1600	–	26.16 x 26.16 x 19.05
750313048	RM10	390	4.00	0.230	1875	–	26.16 x 26.16 x 19.05
750343062	RM10	330	5.00	0.195	1500	–	26.16 x 26.16 x 19.05
750316867	PQ3230	125	12.00	0.033	1875	–	35.56 x 37.34 x 34.29
750343383	PQ4040	4.5	70.00	0.002	1000	–	43.00 x 46.00 x 47.00

MID-POE

Power Over Ethernet Transformers



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Optimized for PoE applications
- Small size
- Cost effective
- Low resistance
- Flat top for pick and place operation
- Custom designs available
- Isolation voltage: up to 1875V_{AC}

Applications

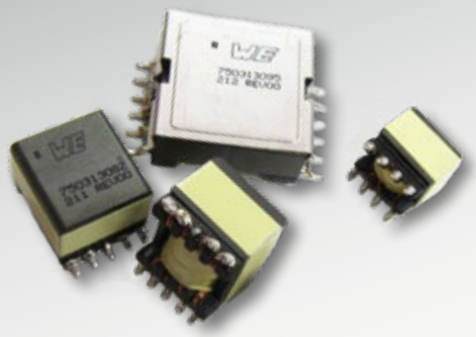
- PoE powered devices for IEEE 802.3at, af and bt applications
- IP phones
- WLAN access points
- Security cameras
- Wireless data systems
- Information displays
- Suitable for PoE ICs such as LTC4267, LT4276, TPS23753A, TPS23751, TPS23754, TPS2378,TPS2379

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{O2} (V)	I_{O2} (A)	V_{O3} (V)	I_{O3} (A)	V_{aux} (V)	L_1 (µH)	N_{PRI} : N_{SEC} : N_{AUX}	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750310002	EFD20	20-72	5.0	4.00	–	–	–	–	15	28.0	3.5 : 1 : 2.75	–	1500	200	23.11 x 29.65 x 11.43
750310042	EFD20	30-57	12.0	5.00	-12.0	1.60	–	–	12	154.0	2 : 1 : 1 : 1	–	1875	250	21.08 x 21.08 x 10.8
750310059	EFD20	36-72	5.0	6.00	–	–	–	–	17	29.2	8 : 1 : 3.5	–	1875	200	23.11 x 25.91 x 10.92
750310167	EFD20	36-72	3.3	3.00	12.0	1.60	5	0.4	12	25.0	5 : 0.75 : 2 : 1 : 2	–	1875	200	23.11 x 29.08 x 11.43
750310346	EFD20	36-72	12.0	2.50	–	–	–	–	12	100.0	3 : 1 : 1	–	1875	200	23.11 x 29.08 x 11.43
750310027	EP10	9-50	3.3	3.03	–	–	–	–	8	20.4	4.505 : 1 : 2.5	–	1500	200	13.34 x 15.24 x 11.43
750310031	EP10	33-57	12.0	0.58	–	–	–	–	8	264.0	3.49 : 1 : 0.71	–	1500	200	13.34 x 15.24 x 11.43
750310032	EP10	33-57	12.0	0.58	–	–	–	–	12	155.0	1.47 : 1 : 1	–	1500	200	13.34 x 15.24 x 11.43
750032173	EP13	33-57	12.0	1.13	–	–	–	–	8	127.0	3.424 : 1 : 0.712	–	1500	200	13.46 x 17.75 x 12.7
750032395	EP13	13-59	3.3	3.20	5.0	0.50	–	–	12	37.0	3.5 : 1 : 1.832	–	1500	200	13.46 x 17.75 x 12.7
750310007	EP13	35-57	3.3	2.50	12.0	0.33	–	–	12	127.0	6 : 1 : 3.4 : 3.4	–	1875	300	13.46 x 17.75 x 12.7
750310035	EP13	33-57	5.0	2.70	–	–	–	–	12	77.4	3.66 : 1 : 2.49	–	1500	200	13.46 x 17.75 x 12.7
750310310	EP13	13-59	3.3	2.50	6.6	0.20	–	–	10	37.0	2.63 : 1 : 1.377	–	1500	200	13.46 x 17.75 x 12.7
750310377	EP13	36-57	12.0	1.08	–	–	–	–	12	127.0	2 : 1 : 1	–	1875	250	13.46 x 17.75 x 12.7
750310018	EP7	33-57	3.3	0.91	–	–	–	–	8	500.0	12.05 : 1 : 2.51	–	1500	200	10.8 x 13.35 x 9.14
750310019	EP7	36-57	3.3	0.91	–	–	–	–	12	310.0	5.5 : 1 : 3.75	–	1875	200	10.8 x 13.35 x 9.14
750310020	EP7	33-57	5.0	0.60	–	–	–	–	8	500.0	8 : 1 : 1.664	–	1500	200	10.8 x 13.35 x 8.89
750310022	EP7	33-57	12.0	0.25	–	–	–	–	8	521.0	3.497 : 1 : 0.713	–	1500	200	10.8 x 13.35 x 8.89
750316331	EPW15	36-57	3.3	8.00	–	–	–	–	12	54.0	8 : 1 : 3.67	3.75	1875	250	15.5 x 21.69 x 13.5
750316332	EPW15	36-57	5.0	6.00	–	–	–	–	12	48.0	5 : 1 : 2.2	4.50	1875	250	15.5 x 21.69 x 13.5
750316333	EPW15	36-57	12.0	3.00	–	–	–	–	12	41.0	2.67 : 1 : 1	5.00	1875	250	15.5 x 21.69 x 13.5
750316334	EPW15	36-57	3.3	18.00	–	–	–	–	12	50.0	7 : 1 : 3.5	–	1875	250	15.5 x 21.69 x 13.5
750316335	EPW15	36-57	5.0	14.00	–	–	–	–	12	50.0	4 : 1 : 2.33	–	1875	250	15.5 x 21.69 x 13.5
750316336	EPW15	36-57	12.0	6.00	–	–	–	–	12	50.0	2 : 1 : 1	–	1875	250	15.5 x 21.69 x 13.5

MID-POELT

Power Over Ethernet Transformers for Linear Technology



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Optimized for PoE applications
- Low leakage inductance
- Low resistance
- Low profile
- High saturation current
- Output voltages of 5V, 12V and 24V
- Up to 90W output power
- Isolation voltage: up to $3000V_{AC}$

Applications

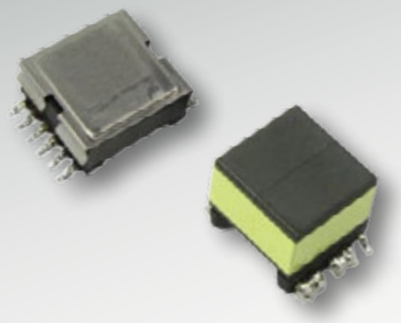
- PoE power supplies
- Security cameras
- Commercial and public information displays
- IP phones
- WLAN access points
- High-power wireless data systems

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{aux} (V)	L_1 (µH)	$N_{PRI} : N_{SEC} : N_{AUX}$	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750313095	EFD20	40-57	5	17.0	10.75	175	3.46 : 1 : 2.22	–	3000	250	23.11 x 29.08 x 11.43
750315422	EFD20	9-57	12	2.0	10.00	9	1 : 1.12 : 1.12	8.50	1875	250	23.11 x 29.65 x 11.46
750316116	EFD20	41-57	12	4.0	12.00	18	2 : 1 : 1	7.70	1875	250	23.11 x 29.65 x 11.43
750313082	EP13	40-57	5	4.6	12.00	37	4.5 : 1 : 2.5	3.00	3000	250	13.46 x 17.75 x 12.7
750314782	EP13	40-57	24	1.0	12.50	37	1 : 1 : 0.56	2.75	3000	250	13.46 x 17.75 x 12.7
750314783	EP13	40-57	5	7.0	12.00	26	4.5 : 1 : 2.5	3.80	3000	250	13.46 x 17.75 x 12.7
750313109	EP7	36-57	5	2.3	12.00	44	4:1:2.5	1.80	3000	132	9.78 x 9.14 x 10.54

MID-POETI

Power Over Ethernet Transformers for Texas Instruments



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Small size and low profile
- Pick-and-placeable
- Very low leakage inductance
- Low resistance
- Lead free and RoHS compliant

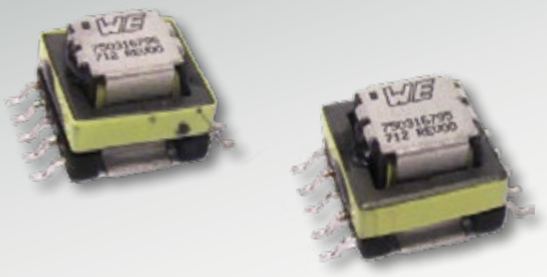
Applications

- PoE power supplies
- Security cameras
- Information displays
- IP phones
- WLAN access points

Electrical Properties

Order Code	Package Size	V_i (V_{DC})	V_{O1} (V)	I_{O1} (A)	V_{aux} (V)	L_1 (µH)	N_{PRI} : N_{SEC} : N_{AUX}	I_{SAT} (A)	V_T (V_{AC})	f_{switch} (kHz)	LxWxH (mm)
750313355	EFD20	36-72	12	5.0	12	100	2 : 1 : 1	–	1875	250	23.11 x 29.08 x 11.43
750343666	EFD25	36-57	12	2.0	16	60	2.5 : 1 : 1.33	3.9	1875	70	26.04 x 26.92 x 15.88
750311320	EP13	33-57	12	2.5	12	100	1.8 : 1 : 1	–	1500	250	13.46 x 17.75 x 12.7
750314433	EP13	36-57	5	2.0	10	180	6 : 1 : 2.17	1.0	1500	248	13.46 x 17.75 x 12.7
750343164	ER19/4.8/15	40-57	5	14.0	12	153	4 : 4 : 1 : 1 : 5	–	2250	200	21.08 x 23.37 x 10.5
750343576	ER19/4.8/15	40-57	24	3.0	12	100	4 : 4 : 4 : 4 : 4	–	2250	200-700	21.08 x 23.37 x 10.5
750317123	RM6	32-57	12	1.0	9	82	2.5 : 1 : 0.75	2.7	1500	850-1020	20.07 x 21.89 x 13.34

MID-SNS
Current Sense Transformers



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low profile
- Isolation voltage: up to 1500V_{AC}
- Operating temp: -40°C to 125°C

Applications

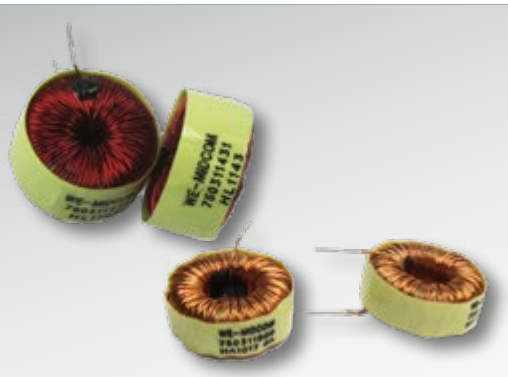
- Switch-mode power supplies
- Motor control
- Electronic lighting ballasts

Electrical Properties

Order Code	Package Size	L_I (mH)	$N_{PRI} : N_{SEC}$	R_{DC} (Ω)	V_T (V_{AC})	LxWxH (mm)
750340744	EE5	2.0	1 : 100	5.870	500	7.37 x 8.13 x 5.46
750316793	EE13/7/4 (EF12.6)	1.4	1 : 50	0.280	1500	14.48 x 20.2 x 10.5
750316794	EE13/7/4 (EF12.6)	5.6	1 : 100	0.280	1500	14.48 x 20.2 x 10.5
750316795	EE13/7/4 (EF12.6)	12.6	1 : 150	0.280	1500	14.48 x 20.2 x 10.5
750316796	EE13/7/4 (EF12.6)	22.4	1 : 200	0.280	1500	14.48 x 20.2 x 10.5

MID-FLIT

Filter Chokes for Lighting Applications



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Low DC Resistance

Applications

- LED lighting
- Smart lighting

Electrical Properties

Order Code	Package Size	L_1 (µH)	R_{DC} (Ω)
750311431	TOR11/5.8/4	750	0.57
750311505	TOR11/5.8/4	470	0.63

MID-D11
Dual Coil Common Mode Chokes

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Dielectric rating: 1500V_{AC}
- High differential inductance
- Extremely compact design
- Reduces number of components
- Operating temp: -40°C to 125°C
- Package size: EE11/6/3
- Designed to meet UL1993 for 177V_{AC} (250V peak) at less than 50W

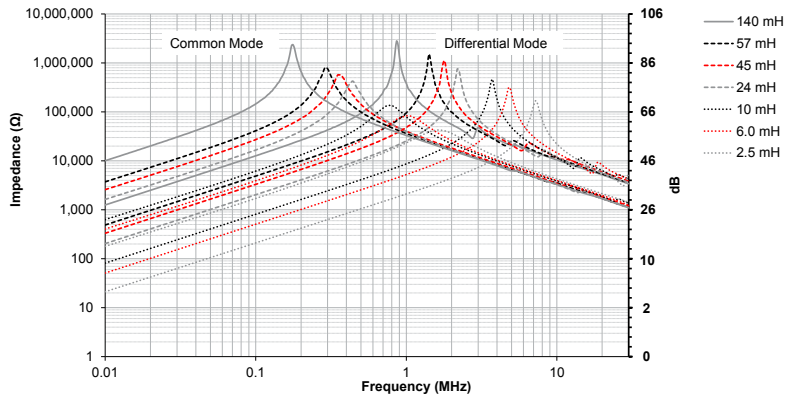
Applications

- LED lighting
- CCFL lighting
- Offline switching power
- Suppression of both common and differential mode noise
- Filtering on device with unstable ground
- Power line input and output filters
- Power electronics
- Electronic ballasts
- White goods
- Power tools

Electrical Properties

Order Code	Package Size	L (mH)	n	I_{sat} (A)	R_{DC} (Ω)	SRF (kHz)	V_T (V_{AC})	I_R (A)	Max LxWxH (mm)
750311650	EE11/6/3 THT	45.0	1 : 1	0.20	10.05	300	1875	0.18	15.75 x 8.71 x 13.0
750311861	EE11/6/3 THT	2.5	1 : 1	0.80	0.70	1500	1875	0.76	15.75 x 8.71 x 13.6
750311895	EE11/6/3 THT	6.0	1 : 1	0.50	1.60	850	1875	0.45	15.75 x 8.71 x 13.6
750311896	EE11/6/3 THT	10.0	1 : 1	0.35	2.50	800	1875	0.37	15.75 x 8.71 x 13.6
750311897	EE11/6/3 THT	24.0	1 : 1	0.25	6.30	440	1875	0.24	15.75 x 8.71 x 13.0
750311898	EE11/6/3 THT	57.0	1 : 1	0.15	15.70	280	1875	0.16	15.75 x 8.71 x 13.0
750311899	EE11/6/3 THT	140.0	1 : 1	0.10	39.00	190	1875	0.09	15.75 x 8.71 x 13.0
750315739	EE11/6/3 SMT	2.5	1 : 1	0.80	0.62	1500	1875	0.76	15.7 x 18.08 x 9.45
750315740	EE11/6/3 SMT	6.0	1 : 1	0.50	1.60	850	1875	0.45	15.7 x 18.08 x 9.45
750315741	EE11/6/3 SMT	10.0	1 : 1	0.35	2.50	800	1875	0.37	15.7 x 18.08 x 9.45
750315742	EE11/6/3 SMT	24.0	1 : 1	0.25	6.30	440	1875	0.24	15.7 x 18.08 x 9.45
750315743	EE11/6/3 SMT	45.0	1 : 1	0.20	10.05	300	1875	0.18	15.7 x 18.08 x 9.45
750315744	EE11/6/3 SMT	57.0	1 : 1	0.15	15.70	280	1875	0.16	15.7 x 18.08 x 9.45
750315745	EE11/6/3 SMT	140.0	1 : 1	0.10	39.00	190	1875	0.09	15.7 x 18.08 x 9.45

Common Mode and Differential Mode Attenuation



MID-DC16EU

Dual Common and Differential Mode Chokes for Power Lines

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Common and differential mode suppression
- High differential mode inductance
- Extremely compact design
- Reduces components needed
- Small PCB footprint
- Isolation voltage: 3125V_{AC} at 1 second
- Lead free and RoHS compliant
- Operating temp: -40°C to 125°C
- Designed to meet:
  - IEC60938-2 for 250V_{ACRMS} or V_{DC}
  - UL1283 for 300V_{RMS} (424.3V_{PEAK})
  - UL1993 for 347V_{ACRMS} or V_{DC}

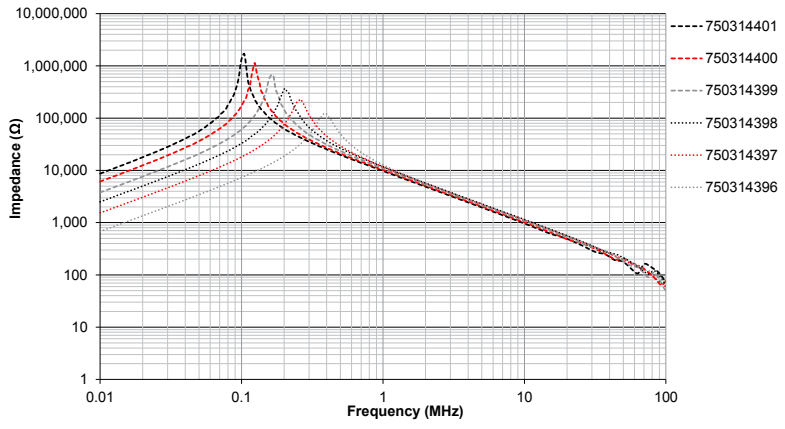
Applications

- LED lighting
- CCFL lighting
- Offline switching power
- Filtering on device with unstable ground
- Power line input and output filters
- Power electronics
- Electronic ballasts
- White goods
- Power tools

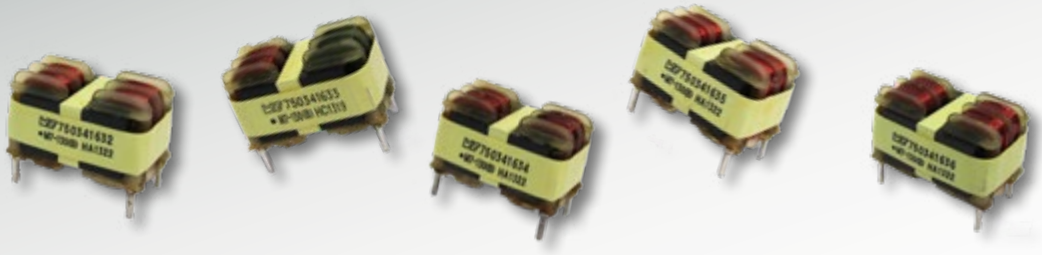
Electrical Properties

Order Code	Package Size	L_1 (mH)	I_{SAT} (A)	R_{DC} (Ω)	I_R (A)	LxWxH (mm)
750314396	EE18/8/8	12	2.20	0.61	0.90	25.2 x 17.6 x 14
750314397	EE18/8/8	22	1.84	0.91	0.70	25.2 x 17.6 x 14
750314398	EE18/8/8	30	1.55	1.33	0.58	25.2 x 17.6 x 14
750314399	EE18/8/8	56	1.19	2.40	0.44	25.2 x 17.6 x 14
750314400	EE18/8/8	91	0.95	3.68	0.35	25.2 x 17.6 x 14
750314401	EE18/8/8	150	0.75	5.77	0.27	25.2 x 17.6 x 14

Impedance Common Mode



MID-DC16US
Common Mode Chokes



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Common and differential mode suppression
- High differential mode inductance
- Extremely compact design
- Reduces components needed
- Small PCB footprint
- Isolation voltage: 1875V_{AC} at 1 second
- Operating temp: -40°C to 125°C
- Designed to meet UL1993 for 347$V_{AC\ RMS}$ or V_{DC}
- Designed to meet UL insulation system M7-130(B) E106391

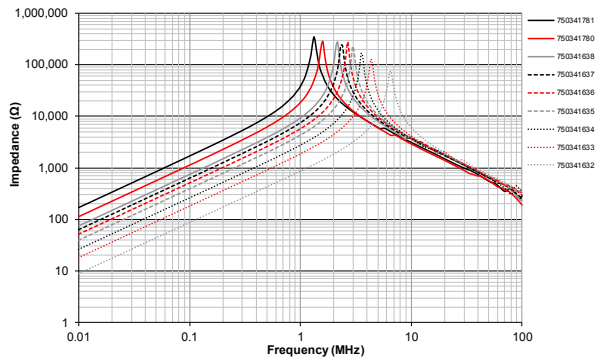
Applications

- LED lighting
- CCFL lighting
- Offline switching power
- Filtering on device with unstable ground
- Power line input and output filters
- Power electronics
- Electronic ballasts
- White goods
- Power tools

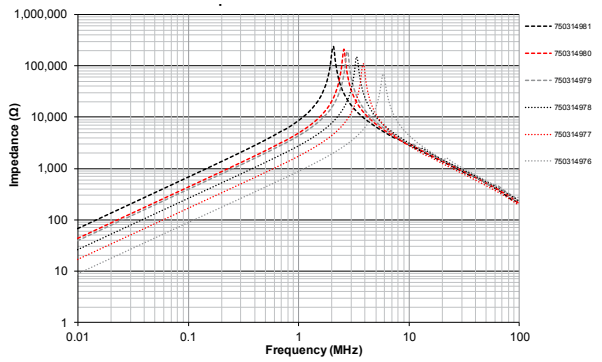
Electrical Properties

Order Code	Package Size	L_1 (mH)	I_{SAT} (A)	R_{DC} (Ω)	L_S(µH)	V_T (V_{AC})	LxWxH (mm)
750314976	EE16.5/6.5/9	3.3	5.0	0.16	90	2011	22.86 x 13.97 x 14
750314977	EE16.5/6.5/9	6.8	3.5	0.31	200	2011	22.86 x 13.97 x 14
750314978	EE16.5/6.5/9	10.0	3.0	0.45	300	2011	22.86 x 13.97 x 14
750314979	EE16.5/6.5/9	15.0	2.7	0.69	500	2011	22.86 x 13.97 x 14
750314980	EE16.5/6.5/9	18.0	2.5	0.73	540	2011	22.86 x 13.97 x 14
750314981	EE16.5/6.5/9	25.0	2.0	1.13	650	2011	22.86 x 13.97 x 14
750341632	EE16.5/6.5/9	3.3	5.0	0.19	90	2011	22.86 x 13.97 x 14.86
750341633	EE16.5/6.5/9	6.8	3.5	0.34	200	2011	22.86 x 13.97 x 14.86
750341634	EE16.5/6.5/9	10.0	3.0	0.51	300	2011	22.86 x 13.97 x 14.86
750341635	EE16.5/6.5/9	15.0	2.8	0.78	500	2011	22.86 x 13.97 x 14.86
750341636	EE16.5/6.5/9	20.0	2.5	0.92	580	2011	22.86 x 13.97 x 14.86
750341637	EE16.5/6.5/9	25.0	2.0	1.35	650	2011	22.86 x 13.97 x 14.86
750341638	EE16.5/6.5/9	30.0	1.5	1.45	850	2011	22.86 x 13.97 x 14.86
750341780	EE16.5/6.5/9	42.0	1.5	2.13	1000	2011	22.86 x 13.97 x 14.86
750341781	EE16.5/6.5/9	70.0	1.0	3.33	2000	2011	22.86 x 13.97 x 14.86

Impedance Differential Mode

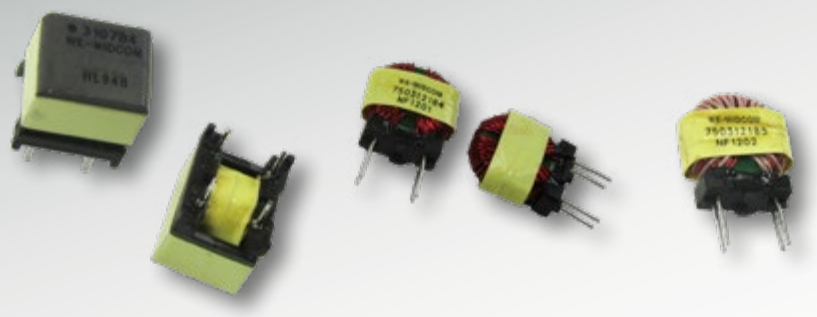


Impedance Differential Mode - 14mm Height



MID-CMCP

Power Common Mode Chokes



CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Lead free and RoHS Compliant
- Operating temp: -40° to 125°C

Applications

- Industrial and commercial lighting using mains input
- Offline power converters

Electrical Properties

Order Code	Package Size	L_1 (mH)	R_{DC1} (Ω)	R_{DC2} (Ω)	I_R (A)	V_T (V_{AC})	LxWxH (mm)
750312184	Toroid	4.00	0.034	0.034	2.00	1600	9.15 x 20.07 x 22.86
750312185	Toroid	4.80	0.074	–	2.00	1600	9.65 x 19.81 x 22.35
750343092	Toroid	5.50	0.040	0.040	2.50	1500	8.89 x 14.00 x 18.50
750343094	Toroid	0.11	0.007	0.007	5.00	600	6.10 x 12.06 x 13.06
750310784	EP7	50.00	6.250	6.250	0.17	1875	10.16 x 8.26 x 9.78

MID-CMCS

Signal Common Mode Chokes

CUSTOM SOLUTIONS POSSIBLE

Characteristics

- Small size
- SMT
- Isolation voltage: 1875V_{AC} at 1 second
- 1:1 turns ratio

Applications

- EMI reduction
- xDSL, ISDM, T1E1, and other telecom

Electrical Properties

Order Code	Package Size	L_1 (mH)	N_{PRI} : N_{SEC}	R_{DC} (Ω)	V_T (V_{AC})	LxWxH (mm)
750040190	Toroid	3.1	1 : 1	0.7	1875	8.89 x 8.64 x 5.33
750040609	Toroid	4.7	1 : 1	0.7	1875	8.89 x 6.30 x 4.10

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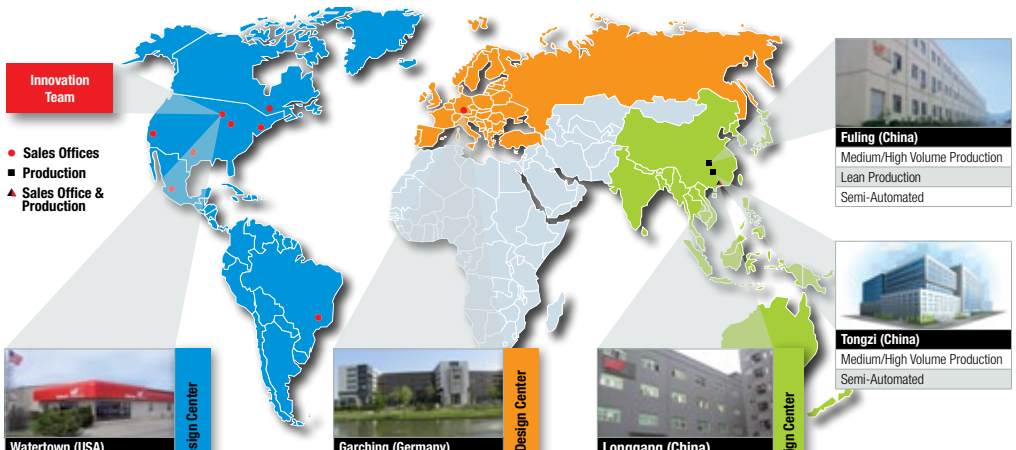
Wurth Electronics Midcom Inc.		Würth Elektronik Stelvio Kontek S.p.A.	Würth Elektronik iBE GmbH & Co. KG	AMBER Wireless GmbH
IQD Frequency Products			Erwin Büchele GmbH & Co. KG	



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