

MAXREFDES116# Reference Design BOM RevA

Designation	Qty	Description
C1	1	47uF 20%, 50V, Aluminum electrolytic capacitor (6.3mm) Panasonic EEEFK1H470XP
C2	1	8200pF 10%, 50V, X7R ceramic capacitor (0402) VENKEL LTD C0402X7R500822KNP
C4	1	4.7uF 10%, 50V, X7R ceramic capacitor (1206) Murata GRM31CR71H475KA12
C5	1	68pF, 5%, 50V, C0G ceramic capacitor (0402) KEMET/MURATA C0402C680J5GAC;GRM1555C1H680JA01
C6,C8	2	0.047uF 10%, 25V, X7R ceramic capacitors (0402) TDK/MURATA C1005X7R1E473K; GRM155R71E473K
C7	1	0.47uF 10%, 50V, X7R ceramic capacitor (0805) KEMET/MURATA C0805C474K5RAC; GCM21BR71H474K
C9,C18	2	2.2uF, 10%, 16V, X7R ceramic capacitors (0805) KEMET/MURATA C0805C225K4RAC; GRM21BR71C225KA12
C11	1	1000pF 10%, 50V, X7R ceramic capacitor (0402) KEMET/MURAT C0402C102K5RAC;GRM155R71H102KA01
C12	1	0.022uF 10%, 100V, C0G ceramic capacitor (1206) TDK C3216C0G2A223K160
C13	1	1000pF 10%, 2000V, X7R ceramic capacitor (1808) TDK C4520X7R3D102K130KA
C15	1	0.47uF 10%, 16V, X7R ceramic capacitor (0603) KEMET/MURATA C0603C474K4RAC; GRM188R71C474K
C17,C19,C20,C23	4	47uF 10%, 10V, X7R ceramic capacitors (1210) Murata GRM32ER71A476KE15
C21	1	220pF 10%, 50V, C0G ceramic capacitor (0402) KEMET C0402C221K5GAC
C24	1	0.01uF 10%, 16V, X7R ceramic capacitor (0402) NIC COMPONENTS CORP./MURATA/YAGEO NMC0402X7R103K16TRP; GRM155R71C103KA01; CC0402KRX7R7BB103
D3,D7	2	Fast-switching diodes, 100V 300mA (SOD-123) Diodes Inc. 1N4148W-7-F
D8	1	1.24-18V shunt voltage reference (SOT-23-3) Diodes Inc. TLV431BFTA
VIN, GNDO, PGND, VOUT	4	CONNECTOR; MALE; THROUGH HOLE; POWER HEADER AND BOARD STACKER; STRAIGHT; 1PIN SAMTEC FWJ-01-01-T-S
VIN1, GNDO1, PGND1, VOUT1	4	EVK KIT PARTS; MAXIM PAD; WIRE; NATURAL; SOLID; WEICO WIRE; SOFT DRAWN BUS TYPE-S; 20AWG WEICO WIRE 9020 BUSS
L1	1	INDUCTOR; SMT; SHIELDED; 2.2UH; TOL=+/-20%; 16.3A Coilcraft SER1052-222ML
N1	1	MOSFET N-CH 80V 30A (PowerPAK 1212-8) Vishay SIS468DN-T1-GE3
N2,N3	2	MOSFET; NCH; PG-TDSON8; PD-(28W); I-(58A); V-(25V) INFINEON BSC050NE2LS
P1	1	MOSFET P-CH 80V 2.2A (SOT23-3) Vishay SI2337DS-T1-GE3
Q4	1	Optocoupler transistor (SOIC 4) Avago ACPL-217-56AE

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Designation	Qty	Description
R1	1	28.7k ohm 1% resistor (0402) Any Any
R3	1	100k ohm 1% resistor (0402) Any Any
R6	1	24k ohm 1% resistor (0402) Any Any
R5,R7,R33	3	30k ohm 1% resistor (0402) Any Any
R9	1	47k ohm 1% resistor (0402) Any Any
R10	1	22k ohm 1% resistor (0402) Any Any
R11	1	680k ohm 1% resistor (0402) Any Any
R15,R16	2	10k ohm 1% resistors (0402) Any Any
R17	1	220 ohm 1% resistor (0402) Any Any
R18	1	0.02 ohm 1%, 1W sense resistor (2010) TT ELECTRONICS LRC-LRF2010LF-01-R020F
R23,R24	2	10 ohm 1% resistors (0402) Any Any
R26	1	120 ohm 1% resistor (0402) Any Any
R27	1	10K OHM; 0.5%; 50PPM; 0.063W; THICK FILM resistor(0603) Panasonic ERJ-3RBD1002V
R31	1	510 OHM; 1%; 100PPM; 0.10W; THICK FILM resistor (0402) PANASONIC ERJ-2RKF5100X
R32	1	91k ohm 1% resistor (0402) Any Any
R34	1	0 ohm 1% resistor (0402) Any Any
T1	1	5:3 transformer Würth 750316065 Sumida 10387T065 HanRun HR102059 Halo TGSP-P154EFD20LF
U1	1	Active-Clamp Current-Mode PWM Controller (16 TQFN-EP) Maxim MAX17599ATE+
C3, C14,C16,C22	0	Not installed, ceramic capacitor (0402)
R2, R4,R30	0	Not installed, resistor (0402)
R20, R25,R35	0	Not installed, resistor (1206)
PCB	1	PC board: MAXREFDES116# 24V Input 5V Output 40W Converter