

600 to 700 V MDmesh™ M6 High-voltage, SJ MOSFETs To boost the efficiency



MDmesh™ M6 technology offers improved PFC and LLC efficiency especially at light load conditions for increased power density

Shrink Your Design and Boost Efficiency with the MDmesh™ M6 power MOSFET series.

Combining an optimized capacitance profile and low gate charge (Q_g), the MDmesh™ M6 MOSFET series is today's reference for resonant topologies.

Our new high-voltage, super-junction MDmesh™ M6 series opens the door to power converter designers for new scenarios targeting high efficiency and power density.

KEY FEATURES

- Optimized threshold voltage for soft switching.
- Extremely low Q_g and optimized capacitance profile for light load conditions.
- Low gate charge for operation at high frequencies

KEY BENEFITS

- Good switching behavior for hard and soft switching
- Extremely high efficiency performance to increase power density
- Targets high efficiency in new topologies for power conversion applications

KEY APPLICATIONS

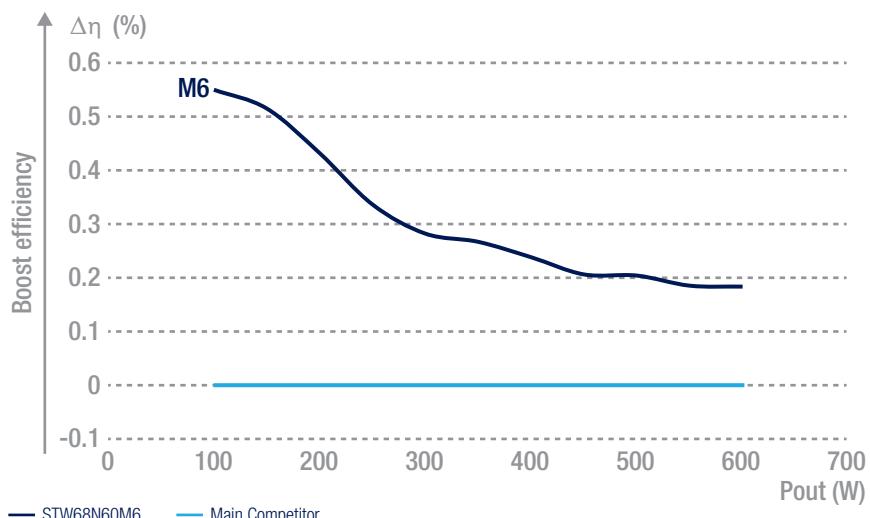
- Chargers
- Adapters
- Silver box modules
- LED lighting
- Telecom
- Servers
- Solar inverters

MDmesh™ M6 SERIES

600 V - 650 V - 700 V BV_{DSS} rated

ST's latest super-junction technology optimized for resonant topologies. With a breakdown voltage ranging from 600 to 700 V, MDmesh™ M6 MOSFETs are available in a wide range of package options including a TO-Leadless (TOLL) package solution, allowing efficient thermal management.

Efficiency test performed in open loop 700 W LLC system



LIST OF AVAILABLE POWER TRANSISTORS IN OUR HIGH-VOLTAGE, SUPER-JUNCTION MDmesh™ M6 SERIES

BV _{DSS} (V)	Max RDS (Ω)	Max ID (A)	Q _g (nC)	Sales Type	Packages											
					D²PAK	DPAK	I²PAK	H²PAK-8	TO-220	TO-220FP	TO-247	TO-247 LL	TO247-4	PowerFLAT 5x6 HV	PowerFLAT 8x8 HV	TOLL
600	0.280	13	16	STx18N60M6*	•	•			•	•				•		
	0.238	15	19	STx22N60M6*	•				•	•				•		
	0.190/ 0.210**	17/ 15**	23	STx24N60M6	•		•		•	•	•				•	
	0.125/ 0.135**	25	33.4	STx33N60M6					•	•	•				•	•
	0.099/ 0.110**	30/ 25**	44	STx36N60M6	•		•	•	•	•	•				•	•
	0.069	39	57	STx48N60M6							•	•	•			
	0.041	63	106	STx68N60M6							•	•	•			
	0.036	72	110	STx75N60M6							•	•	•			

Note: * In developments

** Referred to PowerFLAT™ 8x8 HV only



To explore the complete MDmesh™ M6 product portfolio, visit www.st.com or use our ST-MOSFET-Finder mobile app for Android and iOS



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