

600 V-650 V MDmesh™ M9



Super-junction Power MOSFETs for best efficiency



Industry's best figure of merit ($R_{DS(on)} \times Q_g$) enables increased power levels and higher power density for more compact solutions

Thanks to their extremely low on-state resistance ($R_{DS(on)}$) and gate charge (Q_g), the high-voltage super-junction STPOWER MDmesh M9* series enables designers to increase the power density for more compact system solutions in TO-LL, HU3PAK, and HV PowerFLAT packages.

With the best figure of merit on the market, the silicon power MOSFET MDmesh M9 series ensures higher power levels and increased efficiency with respect to previous technologies.

KEY FEATURES & BENEFITS

- Best Figure of Merit ($R_{DS(on)} \times Q_g$) on the market
- Industry's best $R_{DS(on)}$ for 650V voltage range
- Lowest Q_g
- Higher reverse diode dv/dt and MOSFET dv/dt ruggedness
- Higher power levels
- Increased power density and lower conduction losses
- High efficiency and low switching power losses
- High switching speed
- Increased robustness and reliability for more compact designs

KEY APPLICATIONS

- Telecom servers and data centers
- 5G Power stations
- Flat TV panels and PC SMPS
- Fast chargers
- Solar microinverters

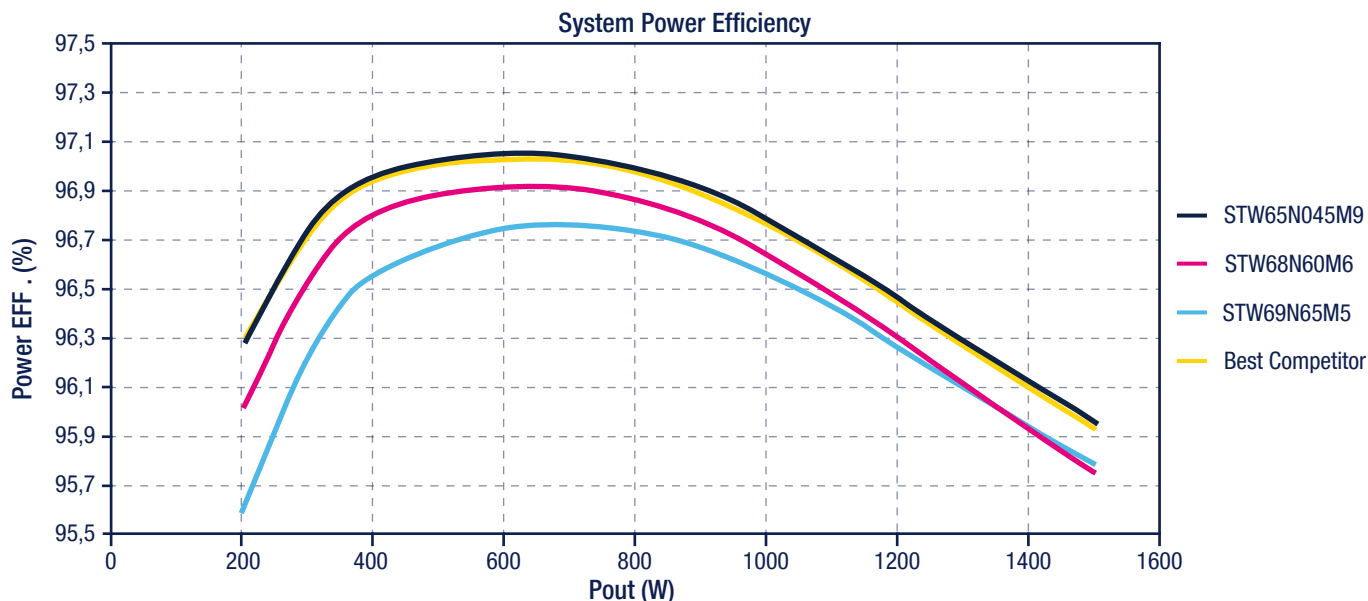
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MDmesh M9 super-junction Power MOSFETs

600 to 650 V_{DS} rated

ST's latest super-junction power MOSFET technology tailored for both hard and soft switching topologies and with the best figure of merit (FoM) on the market, MDmesh M9 devices ensure the best efficiency across the whole load range. With a breakdown voltage range of 600 to 650 V, these super-junction STPOWER MOSFETs are available in a wide range of packages from TO-247 to the most innovative SMD packages including TO-LL (leadless) and HV PowerFLAT (5x6 mm or 8x8 mm).

Application focus: Test and Analysis



600V/650V MDmesh M9 Product Plan



V _{DS} [V]	R _{DS(on)} [mΩ]	I _D [A]	D ² PAK	TO-220	TO-220FP	TO-247	TO-247 long leads	T0247-4	TO-LL	DDPAK	HU3PAK	H ² PAK-7	
600V	180	18		STP60N180M9	STF60N180M9					STD60N180M9			
	110	TBD	STB60N110M9	STP60N110M9	STF60N110M9								
	30	TBD							STO60N030M9				
650V	195	15		STP65N195M9	STF65N195M9					STD65N195M9			
	150	17.5	STB65N150M9	STP65N150M9	STF65N150M9					STD65N150M9			
	120	TBD	STB65N120M9	STP65N120M9	STF65N120M9	STW65N125M9							
	95	36	STB65N095M9	STP65N095M9	STF65N095M9	STW65N095M9							
	62	36		STP65N062M9	STF65N062M9	STW65N062M9							
	45	55	STB65N045M9	STP65N045M9	STF65N045M9	STW65N045M9	STWA65N045M9	STW65N045M9-4	STO65N045M9			STHU65N045M9	STH65N045M9-7
	23	33	TBD				STW65N023M9	STWA65N023M9	STW65N023M9-4	STO65N033M9			

■ mature and full production ■ R_{DS(on)} TO-LL



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