

800-1700 V MDmesh* K5



STPOWER MOSFET very high voltage super-junction series



STPOWER MOSFET MDmesh K5, ST's best-in-class super-junction VHV MOSFETs technology, boosts efficiency in high-voltage power supplies

STPOWER MOSFET MDmesh K5 series, currently the only very high voltage super-junction technology in the market, ensures the best efficiency and safety margin in the marketplace for SMPS (i.e. metering, weldings, flat panel televisions), lighting (i.e. LED drivers, HID ballasts), solar inverters, factory automation (i.e. industrial drives). These very high voltage power MOSFETs enable designers to meet increasingly strict limits on maximum power consumption and minimum energy efficiency specified by eco-design standards such as Energy Star and the EU's energy-related products (ErP) directive. They are available at 800 V, 900 V, 950 V, 1050 V, 1200 V, 1500 V and 1700 V.

KEY FEATURES & BENEFITS

- Extremely good $R_{DS(on)}$ at very high BV_{dss}
- High switching speed
- 800-1700 BV_{DSS} (V) rated
- High efficiency with lower design complexity
- Especially targeted for flyback LED driver topologies

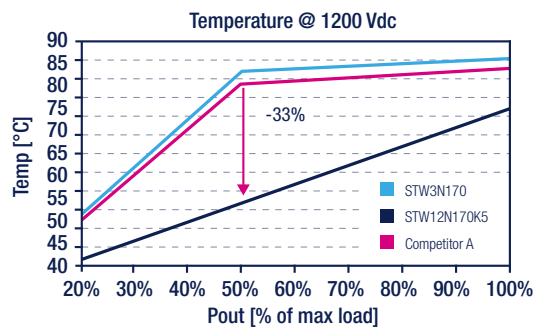
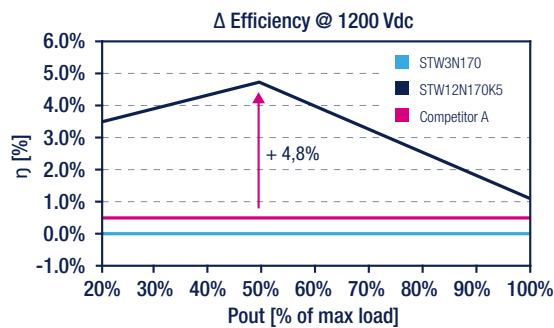
KEY APPLICATIONS

- 3-phase auxiliary switched-mode power supplies (SMPS)
- Solar inverters
- Medical
- Smart Agriculture
- Lighting
- Metering

Note: * is a registered and/or unregistered trademark of STMicroelectronics International NV or its affiliates in the EU and/or elsewhere

1700V TO-247 benchmark

MDmesh™ K5 series shows better efficiency due to the best $R_{DS(on)}$



List of available power transistors belonging to MDmesh K5 series

V_{DSS} (V)	Max $R_{DS(on)}$ (Ω)	Max ID (A)	Qg (nC)	Sales Type	Packages
800 V	4.5	2	3	STx2N80K5	DPAK/TO-220FP/PowerFLAT 5x6 VHV/IPAK/TO-220
	3.25	2	2.63	STx3LN80K5	DPAK/IPAK/TO-220FP/TO-220
	2.6	3	3.7	STx4LN80K5	DPAK/TO-220/PowerFLAT 5x6 VHV/IPAK/TO-220FP
	1.75	4	5	STx5N80K5	DPAK/TO-220/TO-220FP/D ² PAK/I ² PAK/PowerFLAT 5x6 VHV
	1.15	5	12	STx7LN80K5	TO-220/TO-220FP/DPAK/IPAK/PowerFLAT 5x6 VHV
	0.9	7	12	STx9N80K5	TO-220/TO-220FP/DPAK/PowerFLAT 5x6 VHV
	0.63	8	15	STx10LN80K5	DPAK/TO-220/TO-220FP/D ² PAK/PowerFLAT 5x6 VHV
	0.445	12	22	STx14N80K5	TO-220FP/D ² PAK
	0.34	14	26	STx17N80K5	TO-220/TO-220FP/D ² PAK
	0.28	16	33	STx23N80K5	TO-247/D ² PAK
900 V	0.18	24	43	STx30N80K5	TO-220/TO-220FP/D ² PAK/TO-247
	2.1	3	5.3	STx4N90K5	DPAK/TO-220/TO-220FP
	1.10	6	11	STx6N90K5	DPAK/IPAK/I ² PAK/TO-220FP/TO-247
	0.81	7	17.7	STx7N90K5	DPAK/TO-220/TO-220FP/TO-247
	0.68	8	11	STx8N90K5	TO-220/TO-220FP/TO-247
	0.33	15	30	STx16N90K5	D ² PAK/TO-220FP
	0.299	18.5	43	STx21N90K5	TO-220/TO-220FP/D ² PAK/TO-247
	0.25	20	40	STx20N90K5	D ² PAK/TO-220/TO-220FP/TO-247
950 V	0.099	40	89	STx40N90K5	TO-247/TO-247LL
	5	2	10	STx2N95K5	DPAK/IPAK/TO-220/TO-220FP
	2.5	3.5	7	STx5N95K5	TO-220FP/DPAK/IPAK/TO-220
	1.250	9	13	STx6N95K5	TO-220FP/DPAK/IPAK/TO-247/H ² PAK/TO-220
	0.8	8	20	STx10N95K5	TO-220/TO-220FP/TO-247/D ² PAK
	0.5	12	27	STx15N95K5	TO-220/TO-220FP/TO-247
	0.33	17.5	40	STx20N95K5	TO-220/TO-220FP/TO-247/D ² PAK/TO-247LL
1050 V	0.13	38	93	STx40N95K5	TO-247/TO-247LL
	8	1.5	10	STx2N105K5	DPAK/IPAK/TO-220
	1.3	6	21.5	STx10N105K5	TO-220FP/TO-220/TO-247
	3.5	3	12.5	STx5N105K5	TO-220FP/TO-220
	2	4	17	STx7N105K5	TO-220FP/TO-247/IPAK/TO-220
1200 V	1.3	6	21.5	STx10N105K5	TO-220/TO-220FP/TO-247
	0.69	12	44.2	STx12N120K5	TO-220FP/TO-220/TO-247/TO-247 LL
1500 V	2	6	13.7	STx8N120K5	TO-220
	1.9	7	47	STx12N105K5	TO-247
1700 V	0.9	14	89	STx21N105K5	TO-247
	2.9	5	37	STx12N170K5	TO-247

Note: To explore the complete MDmesh K5 product portfolio/ visit www.st.com or download our ST-MOSFET-Finder mobile app directly from Google Play, iTunes, Wandoujia stores.



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