

800-1700 V MDmesh™ K5: Very high voltage super-junction Power MOSFET series



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

ST's latest-generation 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. flat panel televisions, metering, weldings), lighting (i.e. LED drivers, HID ballasts), solar inverters, factory automation (i.e. industrial drives).

The 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.

KEY FEATURES

- Extremely good $R_{DS(on)}$ at very high BVdss
- High switching speed
- 800-1700 V BVdss rated

KEY BENEFITS

- High efficiency with lower design complexity
- Especially targeted for flyback LED driver topologies

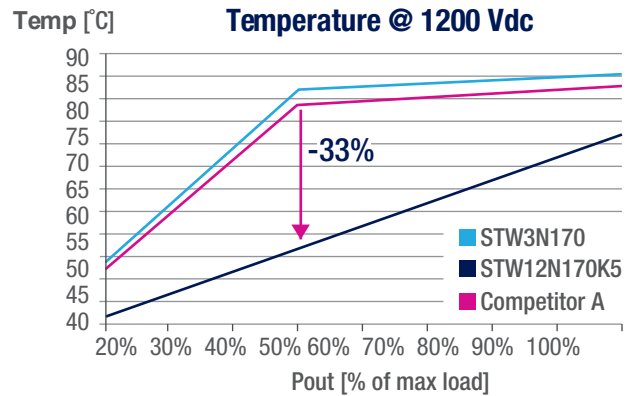
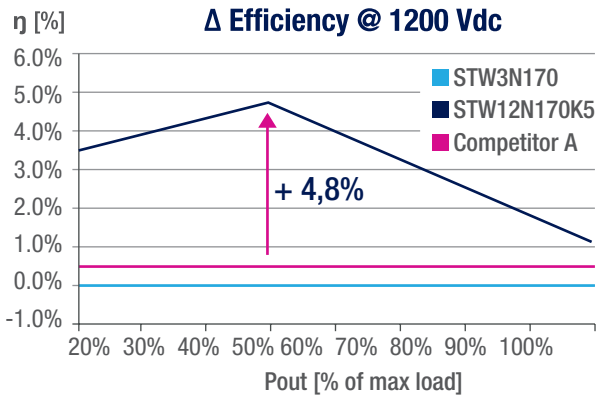
MAIN APPLICATIONS

- 3-phase auxiliary switched-mode power supplies (SMPS)
- Solar inverters
- Factory automation
- Smart Agriculture



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
	3.25	2	2.63	STx3LN80K5	DPAK/IPAK/TO-220FP/ PowerFLAT 5x6 VHV
	2.6	3	3.7	STx4LN80K5	DPAK/TO-220/PowerFLAT 5x6 VHV, IPAK
	1.75	4	5	STx5N80K5	DPAK/TO-220/TO-220FP/D2PAK/I2PAK/I2PAKFP/PowerFLAT 5x6 VHV
	1.6	4.5	7.5	STx6N80K5	DPAK/TO-220/TO-220FP/D2PAK/I2PAK
	1.15	5	12	STx7LN80K5	TO-220/TO-220FP/DPAK, I2PAKFP/IPAK/PowerFLAT 5x6 VHV
	0.9	7	12	STx9N80K5	TO-220/TO-220FP/I2PAKFP/DPAK/IPAK/PowerFLAT 5x6 VHV
	0.63	8	15	STx10LN80K5	DPAK, TO-220, TO-220FP, D2PAK, I2PAKFP, PowerFLAT 5x6 VHV
	0.445	12	22	STx14N80K5	TO-220/TO-220FP/TO-247/D2PAK/I2PAKFP
	0.34	14	26	STx17N80K5	TO-220/TO-220FP/TO-247
900 V	0.28	16	33	STx23N80K5	TO-247/TO-220/TO220-FP/D2PAK
	2.1	3	5.3	STx4N90K5	DPAK/TO-220/TO-220FP
	1.10	6	11	STx6N90K5	DPAK/ IPAK/TO-220/I2PAK/TO-220FP/TO-247
	0.81	7	17.7	STx7N90K5	DPAK/TO-220/FP/TO-247
	0.68	8	11	STx8N90K5	D2PAK/TO-220/TO-220FP/TO-247
	0.33	15	30	STx16N90K5	D2PAK
	0.25	20	40	STx20N90K5	D2PAK/TO-220/TO-220FP/TO-247
950 V	0,099	40	89	STx40N90K5	TO-247/TO-247 LONG LEADS
	5	2	10	STx2N95K5	TO-220FP/DPAK/IPAK
	2.5	3.5	7	STx5N95K5	TO-220FP/DPAK
	1.250	9	13	STx6N95K5	TO-220FP/DPAK/IPAK/TO-247
	0.8	8	20	STx10N95K5	TO-220/TO-220FP/TO-247/D2PAK
	0.5	12	27	STx15N95K5	TO-220/TO-220FP/TO-247
	0.33	17.5	40	STx20N95K5	TO-220/TO-220FP/TO-247/D2PAK
1050 V	0.13	35	80	STW40N95K5	TO-247
	8	1.5	10	STx2N105K5	DPAK/IPAK/TO-220/TO-3PF
	1.3	6	21.5	STx10N105K5	TO-220FP/TO-220/TO-247
	3.5	3	12.5	STx5N105K5	TO-220FP/TO-220
1200 V	2	4	17	STx7N105K5	TO-220FP/TO-247/IPAK/TO-220
	0.69	12	44.2	STx12N120K5	TO-220FP/TO-3PF/H2PAK-2/TO-220/TO-247/TO-247 3L LONG LEADS
1500 V	2	6	13.7	STx8N120K5	TO-220/TO-247/TO-3PF
	1.9	7	47	STW12N150K5	TO-247
1700 V	0.9	14	89	STW21N150K5	TO-247
	2.9	5	37	STW12N170K5	TO-247

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.



© STMicroelectronics - January 2019 - Printed in United Kingdom - All rights reserved
The STMicroelectronics corporate logo is a registered trademark of the STMicroelectronics group of companies
All other names are the property of their respective owners

