

STPOWER™ STripFET F7 MOSFET for Industrial applications



STripFET F7 is ST's latest leading-edge trench-gate technology with extremely low on-state resistance and capacitances

ST's STripFET F7 MOSFETs, with a voltage ranging from 40V to 100V, deliver among the best on resistance currently available, coupled with minimal capacitances and gate charge. The resulting devices help to simplify final designs and reduce equipment size and cost by allowing system power and efficiency targets to be met using fewer devices in small package sizes.

APPLICATIONS

- Telecom
- Computing systems
- Solar inverter
- Industrial motor control
- Power tools

KEY FEATURES

- Extremely low $R_{DS(on)}$
- Minimal $R_{DS(on)} \times Q_g$
- Low input capacitances
- High avalanche ruggedness

STL220N6F7

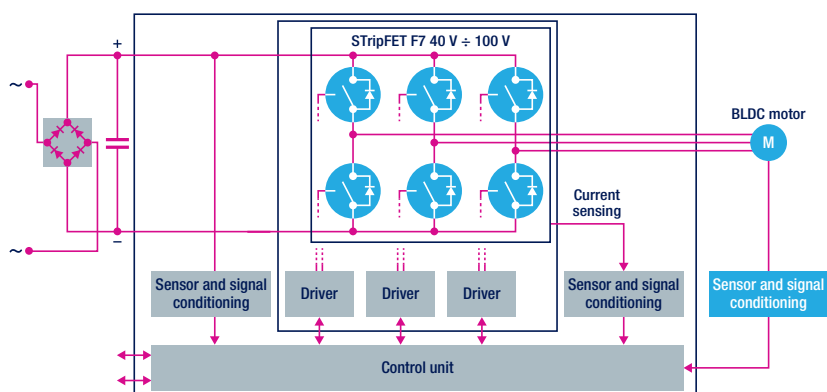
Among the best in class on-state resistance (1.2 mOhm typ) in a PowerFLAT 5x6 package.

MOSFET SELECTION GUIDELINES

- Best trade off On-resistance/thermal resistance based on voltage class
- High current capability
- Low thermal resistance packages
- Optimized capacitances and reverse recovery diode



MOTOR CONTROL BLOCK DIAGRAM



PRODUCT SELECTOR

VDSS	Part number	Package	$R_{DS(on)}$ (@VGS = 10 V) max (Ω)	Qg typ (nC)
100	STX310N10F7	TO-220/H ² PAK-2/H ² PAK-6	0.0023	180
	STX150N10F7	TO-220/TO-220FP/H ² PAK-2/I ² PAK	0.0039	117
	STL110N10F7	PowerFLAT 5x6	0.006	72
	STX100N10F7	TO220/D ² PAK/DPAK/TO-220FP	0.008	61
	STX80N10F7	DPAK/TO-220FP	0.0095	42
	STL8N10F7	PowerFLAT 3.3x3.3	0.02	22
80	STX270N8F7	TO-220/H ² PAK-2/H ² PAK-6	0.0021	193
	STX140N8F7	TO-220/TO-220FP/H ² PAK-2	0.004	96
	STL130N8F7	PowerFLAT 5x6	0.0036	96
60	STL220N6F7	PowerFLAT 5x6	0.0014	100
	STL180N6F7	PowerFLAT 5x6	0.0024	79.5
	STX140N6F7	TO-220/H ² PAK	0.0032	55
45	STL260N45LF7(*)	PowerFLAT 5x6	0.00115	48(**)
40	STL260N4LF7(*)	PowerFLAT 5x6	0.0011	42(**)
	STL260N4F7(*)	PowerFLAT 5x6	0.0011	72
	STL160N4F7	PowerFLAT 5x6	0.0025	29

Note: (*) Under development, (**) Value at 4.5V

For a complete STripFET F7 product portfolio visit www.st.com/stripfet7 or consult the APP ST-MOSFET-Finder



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