

AEC-Q101-qualified STripFET™ F7 power MOSFETs



New gate structure technology ensures excellent dynamic behavior for our new automotive-grade STripFET™ F7 low-voltage power MOSFETs

Delivering excellent body diode performance and a low C_{rss}/C_{iss} ratio, our automotive-grade STripFET™ F7 low-voltage power MOSFETs are less sensitive to the Miller effect; lowering EMI issues and down-scaling the passive filtering components. Furthermore, the lower $R_{DS(on)}$ improves the power density.

Meeting stringent automotive requirements, these AEC-Q101-qualified power MOSFETs are available in a wide range of package options including DPAK, H²PAK-2, H²PAK-6, single/double island and DSC* PowerFLAT™ (5x6mm) with wettable flanks, LFPAK, TO-220 and bare die.

(*) Dual Side Cooling

APPLICATIONS

Automotive power conversion and motor control with special focus on high-current systems in power-train, body & chassis, safety and HEV/EV segments

KEY FEATURES

- AEC-Q101 qualified
- Low on-resistance
- Excellent figure of merit (FoM)
- Low C_{rss}/C_{iss} ratio for EMI immunity
- High avalanche ruggedness



STH410N4F7-6AG

Housed in H²PAK-6, this N-channel Power MOSFET offers an extremely low on-resistance (less than 1.1 mΩ), a very efficient intrinsic body diode and an optimized capacity ratio and softness.

MOSFET SELECTION GUIDELINES

- Best on-resistance/thermal resistance trade-off based on voltage class
- High current capability
- Low thermal resistance packages

HEV/EV



PRODUCT SELECTOR

Part number	V _{DSS} (V)	Drain Current (Dc) (A) max	Typ. Total Gate Charge (nC)	Max. R _{DS(on)} (@VGS = 10 V) (mΩ)	Max. R _{DS(on)} (@4.5 or 5V) (mΩ)	Package (mm)
STH315N10F7-6	100	180	180	2.3	-	H ² PAK-6/H ² PAK-2
STP315N10F7	100	180	180	2.7	-	TO-220
STD105N10F7AG	100	80	61	8	-	DPAK
STD100N10LF7AG	100	80	73	9	11	DPAK
STL92N10F7AG	100	16	45	9.5	-	PowerFLAT™ 5x6 WF
STD85N10F7AG	100	70	45	10	-	DPAK
STH80N10LF7-2AG	100	80	28	10	16	H ² PAK-2
STD47N10F7AG	100	45	25	16	-	DPAK
STH275N8F7-6AG	80	180	193	2.1	-	H ² PAK-6/H ² PAK-2
STL135N8F7AG	80	130	103	3.6	-	PowerFLAT™ 5x6 WF
STH145N8F7-2AG	80	90	96	4	-	H ² PAK-2
STL225N6F7AG	60	120	100	1.4	-	PowerFLAT™ 5x6 WF
STH272N6F7-6AG	60	180	170	1.5	-	H ² PAK-6
STL38DN6F7AG	60	10	9	27	-	PowerFLAT™ 5x6 D.I.WF
STH410N4F7-6AG	40	200	141	1.1	-	H ² PAK-6/H ² PAK-2
STL285N4F7AG	40	120	67	1.1	-	PowerFLAT™ 5x6 WF
STLD257N4F7AG	40	120	150	1.1	-	PowerFLAT™ 5x6 WF DSC
STK224N4F7AG	40	100	50	1.5	-	LFAK 5x6
STL210N4F7AG	40	120	43	1.6	-	PowerFLAT™ 5x6 WF
STL190N4F7AG	40	120	41	2	-	PowerFLAT™ 5x6 WF
STK184N4F7AG	40	100	35	2	-	LFAK 5x6
STL140N4F7AG	40	120	29	2.5	-	PowerFLAT™ 5x6 WF
STL117N4LF7AG	40	119	33	3.5	5	PowerFLAT™ 5x6 WF
STL110N4F7AG	40	108	15	4	-	PowerFLAT™ 5x6 WF
STL105N4LF7AG	40	105	26	4.5	8	PowerFLAT™ 5x6 WF
STL105DN4LF7AG	40	40	24	4.5	8	PowerFLAT™ 5x6 WF
STL76DN4LF7AG	40	40	17	6	12	PowerFLAT™ 5x6 D.I.WF
STL64N4F7AG	40	64	17	8.5	-	PowerFLAT™ 5x6 WF
STL64DN4F7AG	40	40	17	8.5	-	PowerFLAT™ 5x6 D.I.WF
STL52DN4LF7AG	40	18	12	16	20	PowerFLAT™ 5x6 D.I.WF



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



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