DATA SHEET www.onsemi.com



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Features

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- Typ. $R_{DS(on)} = 40 \text{ m}\Omega$
- Ultra Low Gate Charge (Q_{G(tot)} = 106 nC)
- High Speed Switching with Low Capacitance (Coss = 137 pF)
- 100% Avalanche Tested
- T_J = 175°C
- This Device is Halide Free and RoHS Compliant with exemption 7a, Pb Free 2LI (on second level interconnection)
- **Typical Applications**
- UPS
- DC-DC Converter
- Boost Inverter

MAXIMUM RATINGS (T_J = 25° C unless otherwise noted)

Parameter

Symbol

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Table 1. THERMAL RESISTANCE MAXIMUM RATINGS

Parameter	Symbol	Max	Unit
Junction-to-Case - Steady State (Note 2)	$R_{\theta JC}$	0.47	°C/W
Junction-to-Ambient - Steady State (Notes 1, 2)	$R_{\theta JA}$	40	

Table 2. ELECTRICAL CHARACTERISTICS (T_J = 25° C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Тур	Max	Unit	
OFF CHARACTERISTICS							

Drain-to-Source Breakdown Voltage	V _{(BR)DSS}	$V_{GS} = 0 V, I_D = 1 mA$	1200	-	-	V
Drain-to-Source Breakdown Voltage Temperature Coefficient	$V_{(BR)DSS}/T_J$	$I_D = 1 \text{ mA}$, referenced to 25°C	-	0.45	-	V/∘C

Zero Gate Voltage Drain Current

Table 2. ELECTRICAL CHARACTERISTICS (T_J = 25° C unless otherwise specified) (continued)

Parameter	Symbol	Test Condition	Min	Тур	Max	Unit							
DRAIN-SOURCE DIODE CHARACTERISTICS													
Reverse Recovery Energy	E _{REC}	$V_{GS} = -5/20 \text{ V}, I_{SD} = 47 \text{ A},$	-	8.4	-	μJ							
Peak Reverse Recovery Current	I _{RRM}	$di_{S}/dt = 1000 A/\mu s$	-	10.4	-	А							
Charge Time	Та		-	12.4	-	ns							
Discharge Time	Tb		-	11.6	-	ns							

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

TYPICAL CHARACTERISTICS



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TYPICAL CHARACTERISTICS (CONTINUED)

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TYPICAL CHARACTERISTICS (CONTINUED)



Figure 13. Junction-to-Ambient Thermal Response

			TO-247- CASE 34 ISSUE	4LD 0CJ A	DA	ATE 16 SEP 2019
A	E	Α	B A2	E1	Øp1 D2	
		Q				
E/2		D	Ø		D1	
			L1			
b2			A1			
b1 (3X)		L				
1		4				
e1	,	b(4X)	С			
+ 0.254	` 4 (М) в А (Л					

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