

Silicon Carbide (SiC) Schottky Diode – EliteSiC, 6 A, 650 V, D2, DPAK

FFSD0665B-F085

Silicon Carbide (SiC) Schottky Diodes use a completely new technology that provides superior switching performance and higher reliability compared to Silicon. No reverse recovery current, temperature independent switching characteristics, and excellent thermal performance sets Silicon Carbide as the next generation of power semiconductor. System benefits include highest efficiency, faster operating frequency, increased power density, reduced EMI, and reduced system size and cost.

- Max Junction Temperature 175°C
- Avalanche Rated 24.5 mJ
- High Surge Current Capacity
- Positive Temperature Coefficient
- Ease of Paralleling
- No Reverse Recovery / No Forward Recovery
- AEC Q101 Qualified and PPAP Capable
- These Devices are Pb Free, Halogen Free/BFR Free and are RoHS Compliant

- Automotive HEV EV Onboard Chargers
- Automotive HEV EV DC DC Converters

(T_J = 25°C unless otherwise noted)

Peak Repetitive Reverse Voltage	V _{RRM}	650	V
Single Pulse Avalanche Energy (T _J = 25°C, I _{L(pk)} = 9.9 A, L = 0.5 mH, V = 50 V)	E _{AS}	24.5	mJ
Continuous Rectified Forward Current	T _C < 154	I _F	6.0 A
	T _C < 135		9.1
Non-Repetitive Peak Forward Surge Current	T _C = 25°C, t _p = 10 μs T _C = 150°C, t _p	I _{FM}	493 A

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$R_{\theta JC}$	Thermal Resistance, Junction-to-Case	2.0	$^{\circ}C/W$

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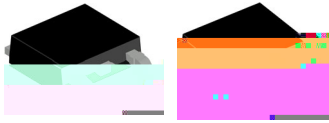
V_F	Forward Voltage	$I_F = 6.0\text{ A}, T_J = 25^{\circ}C$	-	1.38	1.7	V
		$I_F = 6.0\text{ A}, T_J = 125^{\circ}C$	-	1.53	2.0	
		$I_F = 6.0\text{ A}, T_J = 175^{\circ}C$	-	1.67	2.4	
I_R	Reverse Current	$V_R = 650\text{ V}, T_J = 25^{\circ}C$	-	0.5	40	μA
		$V_R = 650\text{ V}, T_J = 125^{\circ}C$	-	1.0	80	
		$V_R = 650\text{ V}, T_J = 175^{\circ}C$	-			



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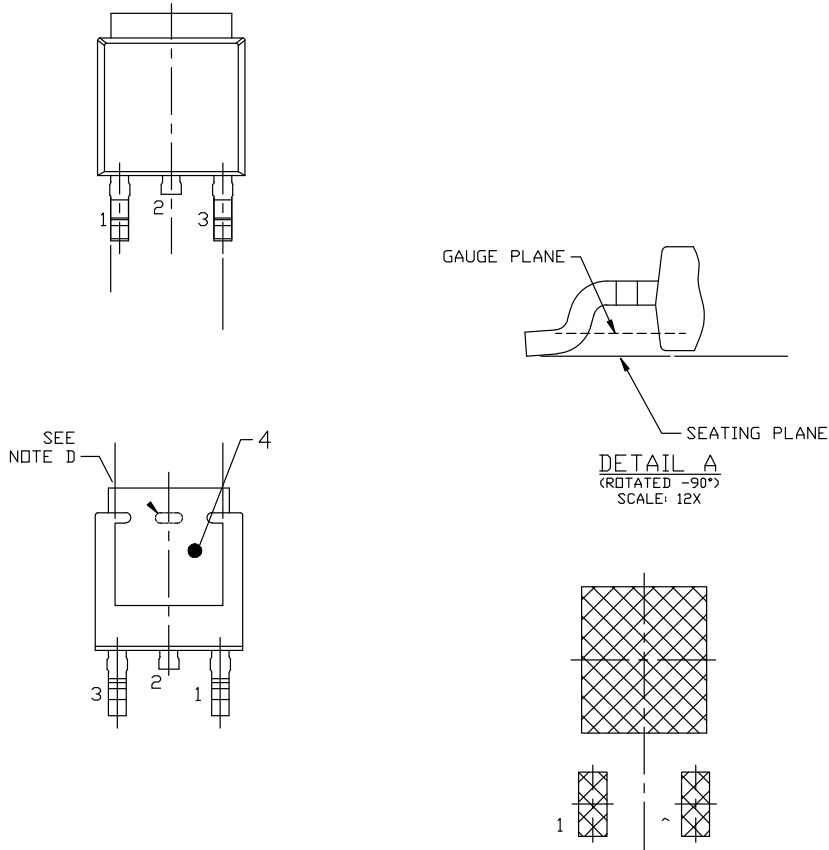
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DPAK3 6.10x6.54x2.29, 4.57P
CASE 369AS
ISSUE B

DATE 20 DEC 2023



LAND PATTERN RECOMMENDATION

GENERIC MARKING DIAGRAM*



*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "•", may or may not be present. Some products may not follow the Generic Marking.

XXXX = Specific Device Code
 A = Assembly Location
 Y = Year
 WW = Work Week
 ZZ = Assembly Lot Code

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