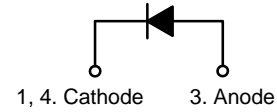


Silicon Carbide (SiC) Schottky Diode – EliteSiC, 6 A, 650 V, D2, DPAK



FFSD0665B

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.

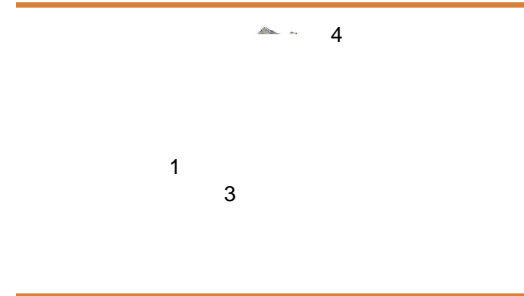
- Max Junction Temperature 175 C
- Avalanche Rated 24.5 mJ
- High Surge Current Capacity
- Positive Temperature Coefficient
- Ease of Paralleling
- No Reverse Recovery/No Forward Recovery
- These Devices are Pb Free, Halogen Free/BFR Free and are RoHS Compliant

General Purpose
SMPS, Solar Inverter, UPS
Power Switching Circuits

($T_J = 25$ Repetitive Peak Forward
Surge Current)

	$T_C = 25$ C, $t_p = 10$ μ s	I_{FM}	493	A
	$T_C = 150$ C, $t_p = 10$ μ s		442	
Non-Repetitive Forward Surge Current (Half-Sine Pulse)	$T_C = 25$ C $t_p = 8.3$ ms	I_{FSM}	28	A
Power Dissipation	$T_C = 25$ C	P_{tot}	75	W
	$T_C = 150$ C		12.5	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55 to +175	C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



AYWWZZ
FFS
D0665B

A = Assembly Plant Code
YWW = Date Code (Year & Week)
ZZ = Lot Code
FFSD0665B = Specific Device Code

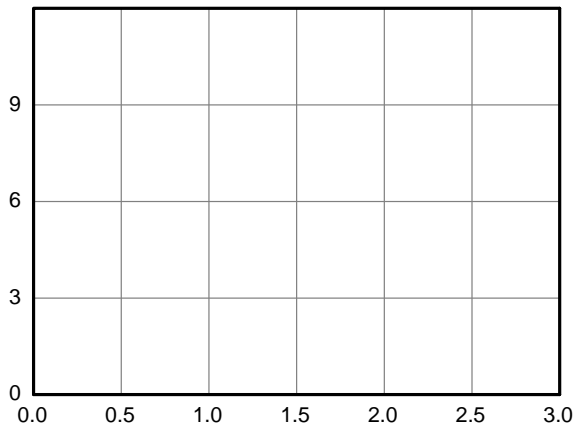
See detailed ordering and shipping information on page 2 of this data sheet.

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

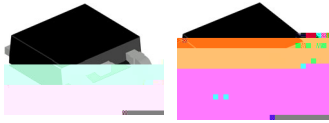
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V_F	Forward Voltage	$I_F = 6.0 \text{ A}, T_J = 25 \text{ C}$		1.38	1.7	V
		$I_F = 6.0 \text{ A}, T_J = 125 \text{ C}$		1.53	2.0	
		$I_F = 6.0 \text{ A}, T_J = 175 \text{ C}$		1.67	2.4	
I_R	Reverse Current	$V_R = 650 \text{ V}, T_J = 25 \text{ C}$		0.5	40	μA
		$V_R = 650 \text{ V}, T_J = 125 \text{ C}$		1.0	80	
		$V_R = 650 \text{ V}, T_J = 175 \text{ C}$		2.0	160	

Q_C	Total Capacitive Charge	$V_C = 400 \text{ V}$		16		nC
C_{tot}		$V_R = 1 \text{ V}, f = 100 \text{ kHz}$		259		pF
		$V_R = 200 \text{ V}, f = 100 \text{ kHz}$		29		

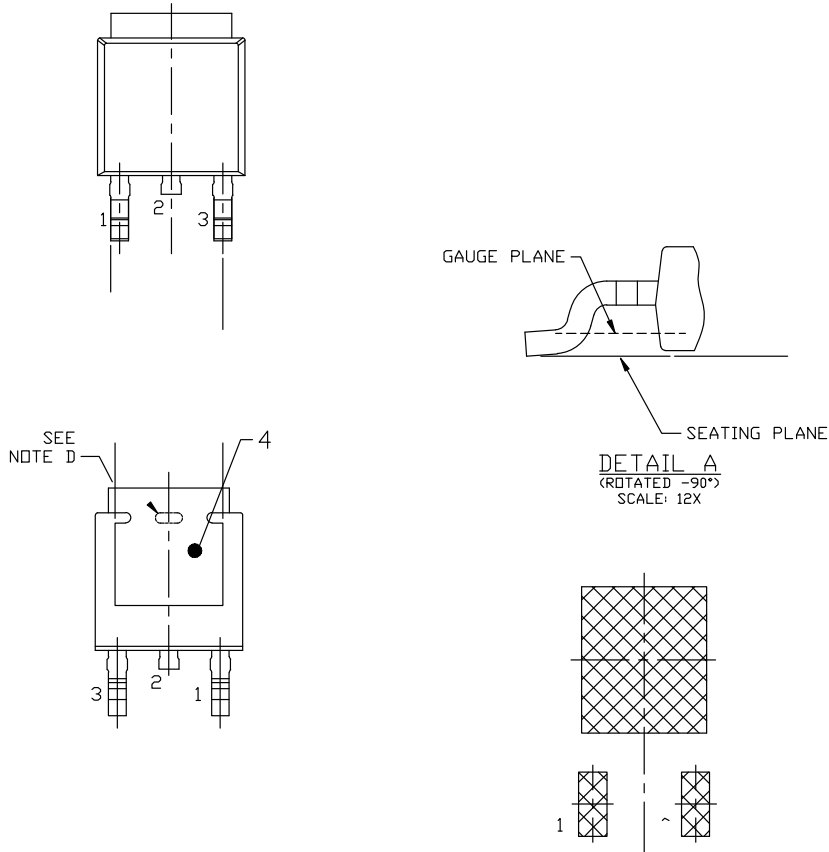






DPAK3 6.10x6.54x2.29, 4.57P
CASE 369AS
ISSUE B

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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