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

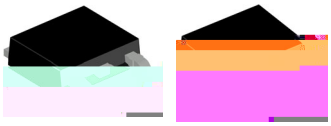
- Automotive HEV EV Onboard Chargers
- Automotive HEV EV DC DC Converters

(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	I_{FM}	493	A
	T_C = 150°C, t_P			

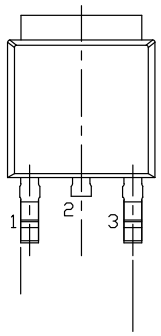
$R_{\theta JC}$	Thermal Resistance, Junction−to−Case	2.0	°C/W

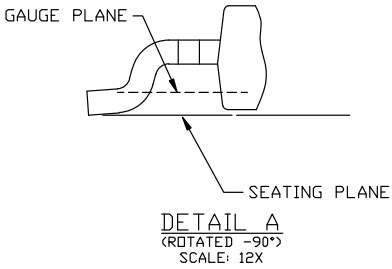
V_F	Forward Voltage	I_F = 6.0 A, T_J = 25°C	−	1.38	1.7	V
		I_F = 6.0 A, T_J = 125°C	−	1.53	2.0	
		I_F = 6.0 A, T_J = 175°C	−	1.67	2.4	
I_R	Reverse Current	V_R = 650 V, T_J = 25°C	−	0.5	40	μA
		V_R = 650 V, T_J = 125°C	−	1.0	80	
		V_R = 650 V, T_J = 175°C	−			



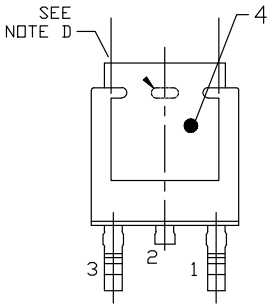
DPAK3 6.10x6.54x2.29, 4.57P
CASE 369AS
ISSUE B

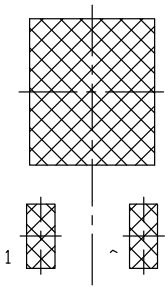
DATE 20 DEC 2023





DETAIL A
(ROTATED -90°)
SCALE: 12X





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