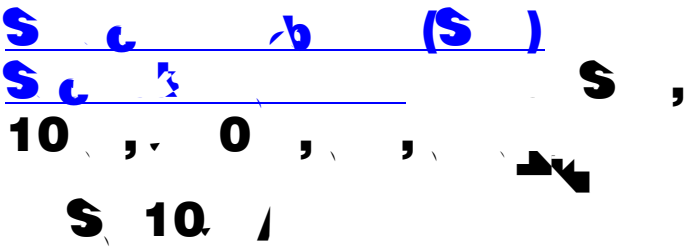


Silicon Carbide (SiC) Schottky Diodes use a completely new technology that provides superior switching performance and higher reliability compared to Silicon. No reverse recovery current, temperature independent switching characteristics, and excellent thermal performance sets Silicon Carbide as the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

Max Junction Temperature 175 C
Avalanche Rated 49 mJ
High Surge Current Capacity
Positive Temperature Coefficient

(T_C = 25 C unless otherwise noted)

V_{RRM}	Peak Repetitive Reverse Voltage		650	V
E_{AS}	Single Pulse Avalanche Energy (Note 1)		49	mJ
I_F	Continuous Rectified Forward Current @ T_C < 150 C		10	A
	Continuous Rectified Forward Current @ T_C < 135 C		13.5	
$I_{F, Max}$	Non-Repetitive Peak Forward Surge Current	T_C = 25 C, 10 μs	650	A
		T_C = 150 C, 10 μs	570	A
$I_{F,SM}$	Non-Repetitive Forward Surge Current T_C = 25 C	Half-Sine Pulse, t_p = 8.3 ms	45	A
Ptot	Power Dissipation	T_C = 25 C	98	W
		T_C = 150 C	16	W
T_J, T_{STG}	Operating and Storage Temperature Range		−55 to +175	C
	TO−247 Mounting Torque, M3 Screw		60	Ncm

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.

1. E_{AS} of 49 mJ is based on starting T_J = 25 C, L = 0.5 mH, I_{AS} = 14 A, V = 50 V.

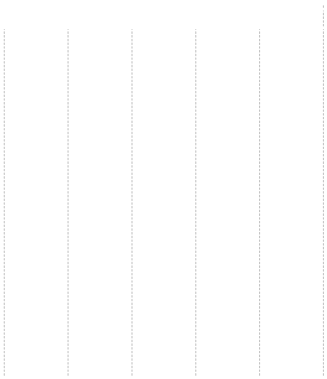
$R_{\theta JC}$	Thermal Resistance, Junction to Case, Max	1.53	C/W

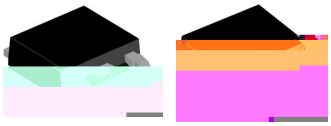
(T_C = 25 C unless otherwise noted)

V_F	Forward Voltage	I_F = 10 A, T_C = 25 C	−	1.38	1.7	V
		I_F = 10 A, T_C = 125 C	−	1.6	2.0	
		I_F = 10 A, T_C = 175 C	−	1.72	2.4	
I_R	Reverse Current	V_R = 650 V, T_C = 25 C	−	0.5	40	μA
		V_R = 650 V, T_C = 125 C	−	1	80	
		V_R = 650 V, T_C = 175 C	−	2	160	
Q_C	Total Capacitive Charge	V = 400 V	−	25	−	nC
C	Total Capacitance	V_R = 1 V, f = 100 kHz	−	424	−	pF
		V				

(T_J = 25

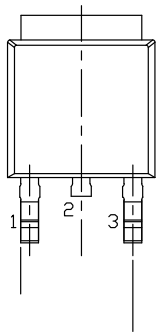
(T_J = 25 C UNLESS OTHERWISE NOTED)

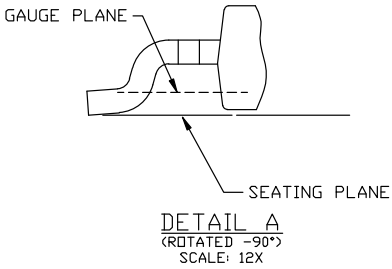




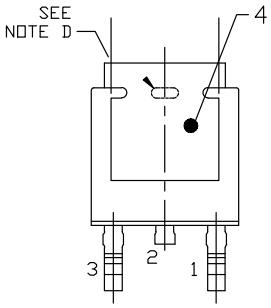
DPAK3 6.10x6.54x2.29, 4.57P
CASE 369AS
ISSUE B

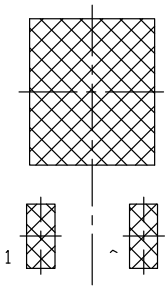
DATE 20 DEC 2023





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