



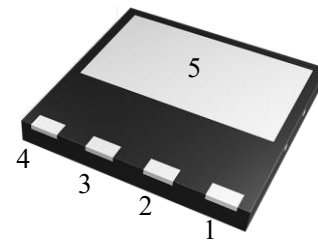
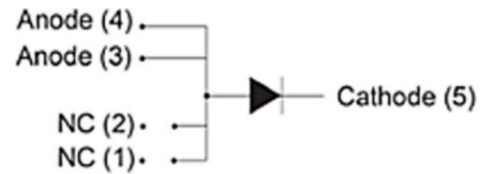
SiC Schottky Barrier Diode

Features

- 650V Schottky Diode
- Zero Reverse Recovery/Zero Forward Recovery
- High Efficiency Operation
- Extremely Fast Switching
- Temperature Independent Switching Behavior

Applications

- Switch mode power supply
- Power factor correction Solar Invertor
- Solar inverter
- Uninterruptible power supply



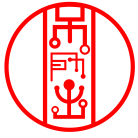
DFN8*8

Absolute Maximum Ratings ($T_C=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	650	V
DC Blocking Voltage	V_{DC}	650	
Maximum Average Forward Rectified Current@ $T_C=150^{\circ}\text{C}$	$I_{F(AV)}$	8	A
Non-Repetitive Peak Forward Surge Current $t_p=10\text{ms}$, Half Sine Pulse	I_{FSM}	40	A
Total Power Dissipation	P_D	150	W
Operating Junction and Storage Temperature	T_J, T_{STG}	$-40\sim+175$	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	1	$^{\circ}\text{C/W}$

Electrical Characteristics($T_J=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test condition	Min	Typ	Max	Units
Forward Voltage	V_F	$I_F=8\text{A}, T_J=25^{\circ}\text{C}$		1.35	1.65	V
		$I_F=8\text{A}, T_J=175^{\circ}\text{C}$		1.75		
Reverse Current	I_R	$V_R=650\text{V}, T_J=25^{\circ}\text{C}$		3.5	40	μA
		$V_R=650\text{V}, T_J=175^{\circ}\text{C}$		8		
Total Capacitive Charge	Q_C	$V_R=400\text{V}$		20.5		nC
Total Capacitance	C	$V_R=0\text{V}, f=1\text{MHz}$		360		pF
		$V_R=200\text{V}, f=1\text{MHz}$		40		
		$V_R=400\text{V}, f=1\text{MHz}$		38		



Typical Characteristics

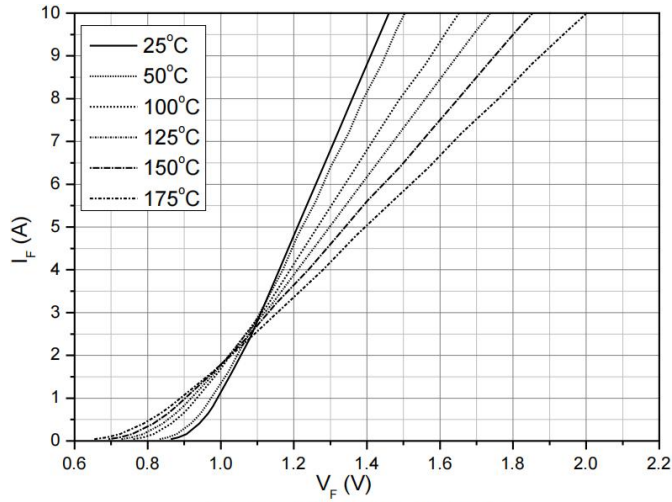


Figure 1. Forward Characteristics

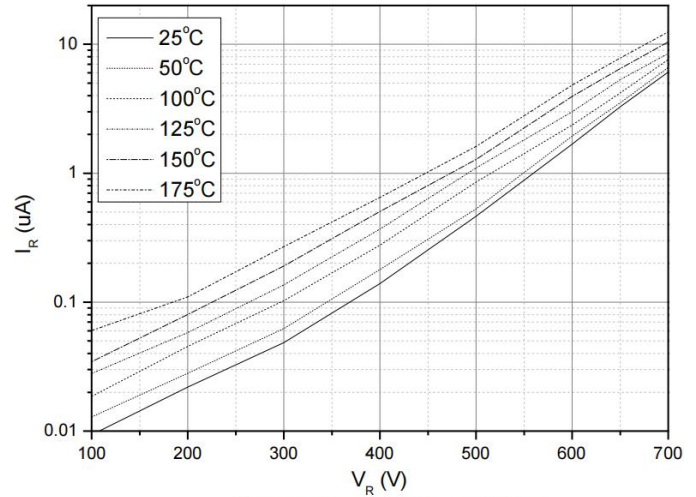


Figure 2. Reverse Characteristics

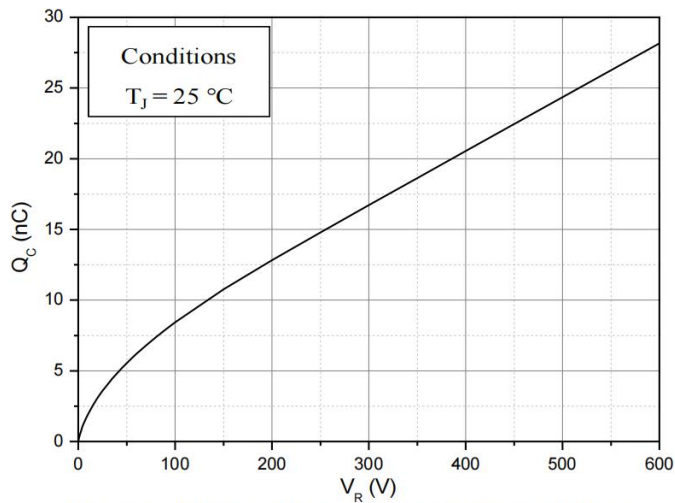


Figure 3. Total Capacitance Charge vs. Reverse Voltage

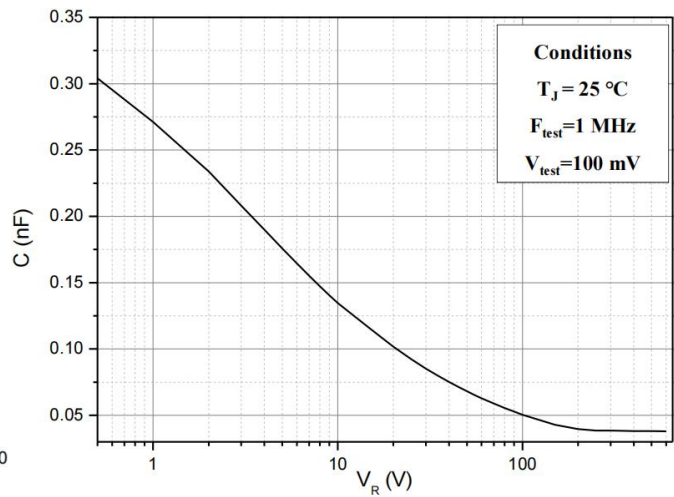


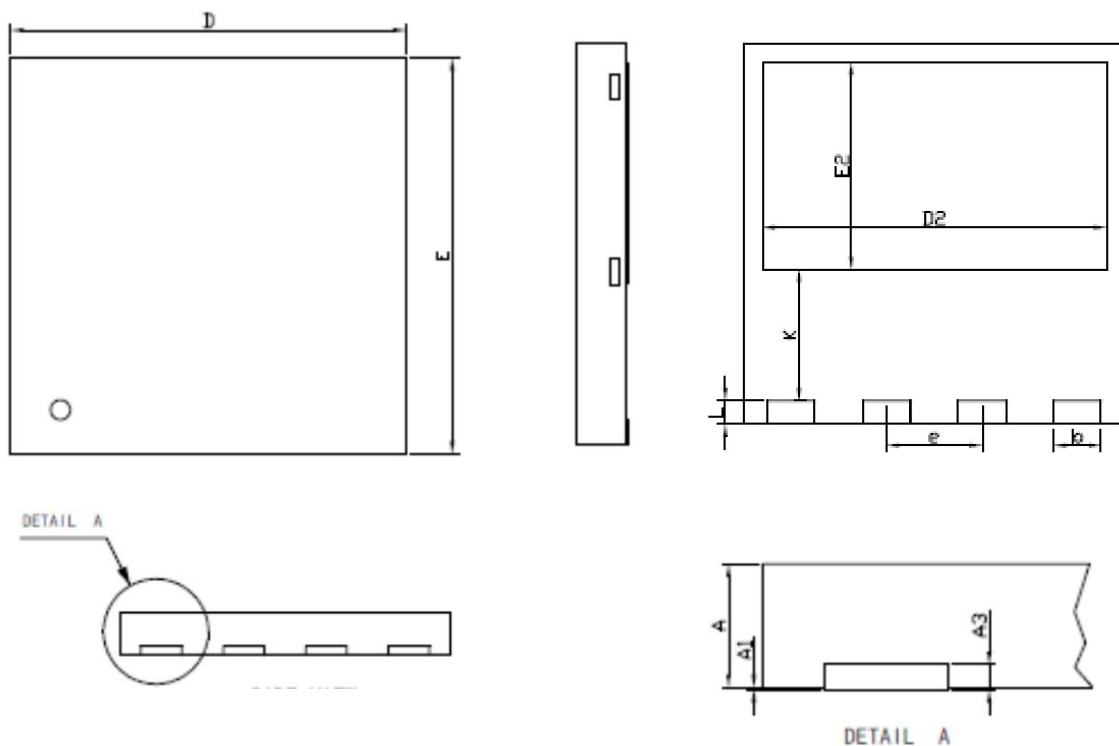
Figure 4. Capacitance vs. Reverse Voltage



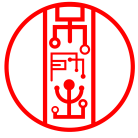
Package Information

DFN8*8

Dimensions in mm



Symbol	Min	Nom	Max
A	0.90	1.00	1.10
A1	0.00	0.02	0.05
A3	-	0.20	-
b	0.90	1.00	1.10
D	7.90	8.00	8.10
E	7.90	8.00	8.10
D2	7.10	7.20	7.30
E2	4.25	4.35	4.45
e	1.90	2.00	2.10
K	2.65	2.75	2.85
L	0.40	0.50	0.60



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