V_{RRM}	1200V
I_F	2A(T_C=165℃)
Q_C	12nC

1200V SILICON CARBIDE
SCHOTTKY DIODE

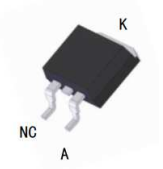
◇Features

- High surge current capability
- No reverse recovery
- Positive Temperature Coefficient
- Specified dv/dt ruggedness
- Halogen-free / RoHS compliant

Halogen Free RoHS COMPLIANT

◇Benefits

- Extremely fast switching
- Low heat dissipation requirements
- Reduce size and cost of the system
- High-reliability
- System efficiency improvement



TO-252-2NC (DPAK)

◇Applications

- Solar inverter
- Power factor correction
- Data Center
- Switch mode power supply
- AC/DC converters

Maximum Ratings （Tc=25℃ unless otherwise noted）

Symbol	Parameter		Value	Unit	Note
V_{RRM}	Repetitisve peak reverse voltage		1200	V	
I_F	Continuous forward current	Tc=25℃	11	A	Figure 3
		Tc=135℃	5	A	
		Tc=165℃	2	A	
I_{FSM}	Non-repetitive forward surge current	Tc=25℃, t_p=10ms,Half sine pulse	19	A	
		Tc=110℃, t_p=10ms,Half sine pulse	14	A	
I_{FRM}	Repetitive Peak Forward Surge Current	Tc=25℃, t_p=10ms,Half sine pulse	18	A	
$\int i^2 dt$	i^2t value	Tc=25℃, t_p=10ms	1.80	A^2S	
		Tc=110℃, t_p=10ms	0.98	A^2S	
P_{tot}	Power Dissipation	Tc=25℃	108	W	Figure 4
		Tc=110℃	47	W	
		Tc=150℃	18	W	
T_j, T_{stg}	Operating and Storage Temperature		-55 to +175	℃	

Electrical Characteristics（Tc=25℃ unless otherwise noted）

Symbol	Parameter	Test Conditions	Value			Unit	Note
			Min.	Typ.	Max.		
V_{DC}	DC blocking voltage		1200	-	-	V	
V_F	Forward voltage	I_F=1A	-	1.17	-	V	Figure 1
		I_F=2A, Tc=25℃	-	1.38	1.60	V	
		I_F=2A, Tc=175℃	-	2.0	-	V	
I_R	Reverse current	V_R=1200V, Tc=25℃	-	1.0	50	uA	Figure 2
		V_R=1200V, Tc=175℃	-	4.0	-	uA	
Q_C	Total capacitive charge	V_R=800V	-	12	-	nC	Figure 6
C	Total capacitance	V_R=1V, f=1MHZ	-	125	-	pF	Figure 5
		V_R=400V, f=1MHZ	-	12	-	pF	
		V_R=800V, f=1MHZ	-	9	-	pF	
E_C	Capacitance Stored Energy	V_R=800V	-	3.70	-	uJ	Figure 7

Thermal Characteristics

Symbol	Parameter	Value		Unit	Note
		Typ.	Max.		
$R_{th(j-c)}$	Thermal resistance (Junction to case)	1.388	-	℃/W	Figure 8

Electrical Characteristic Curves

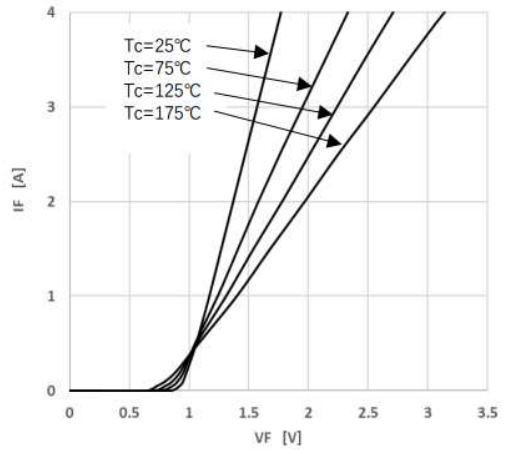


Figure 1 Forward Characteristics

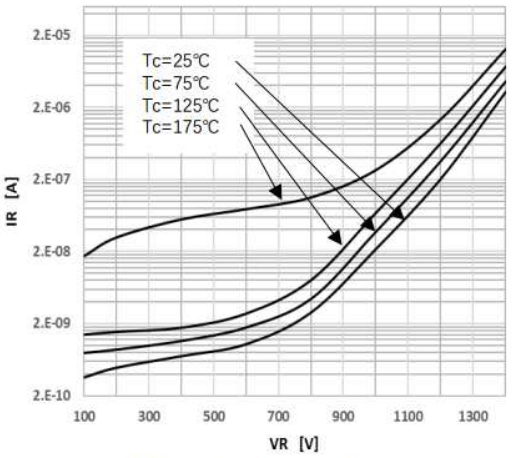


Figure 2 Reverse Characteristics

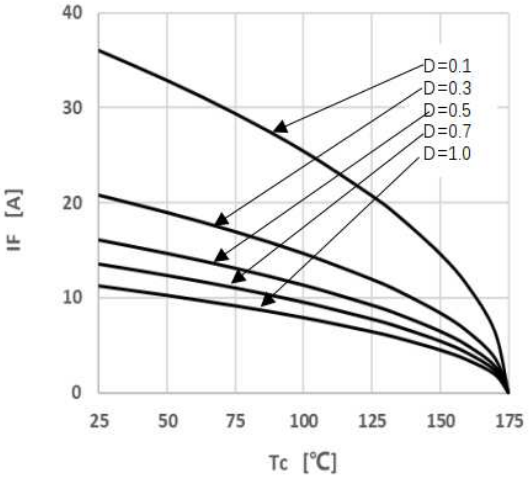


Figure 3 Peak Forward Current Derating

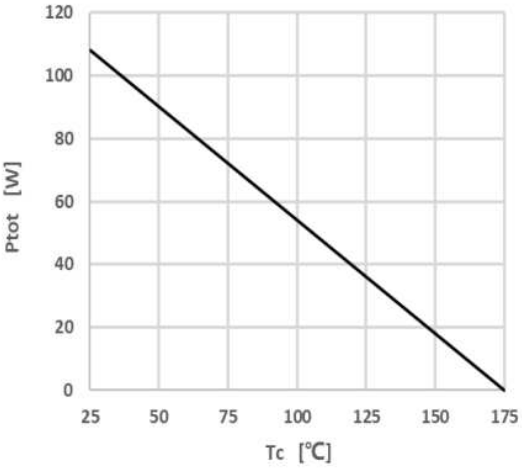


Figure 4 Power Dissipation

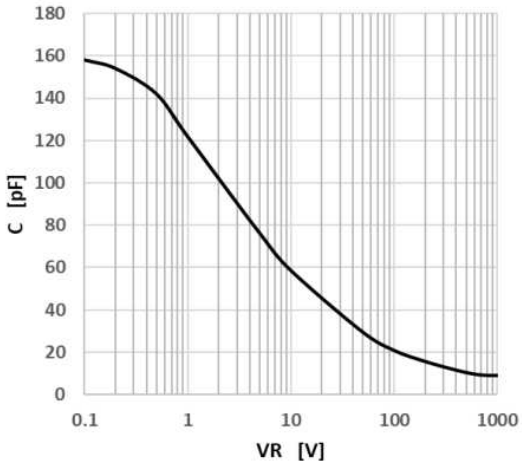


Figure 5 Capacitance vs. Reverse Voltage

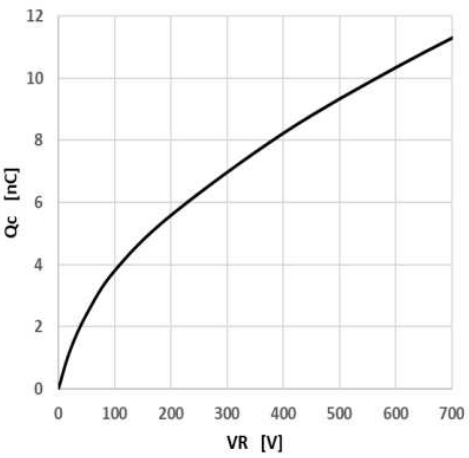


Figure 6 Capacitance Charge vs. Reverse Voltage

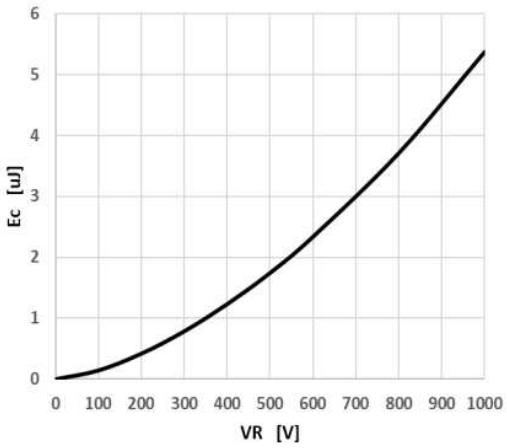


Figure 7 Capacitance Stored Energy

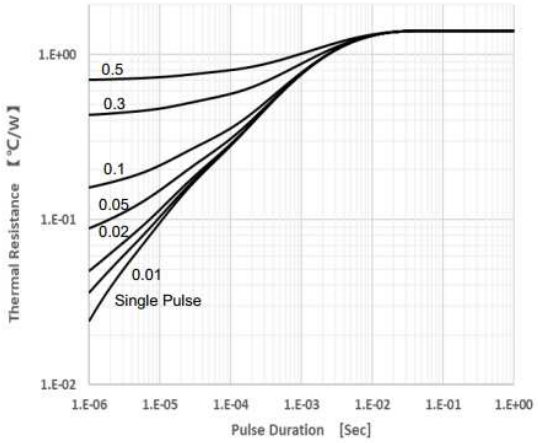
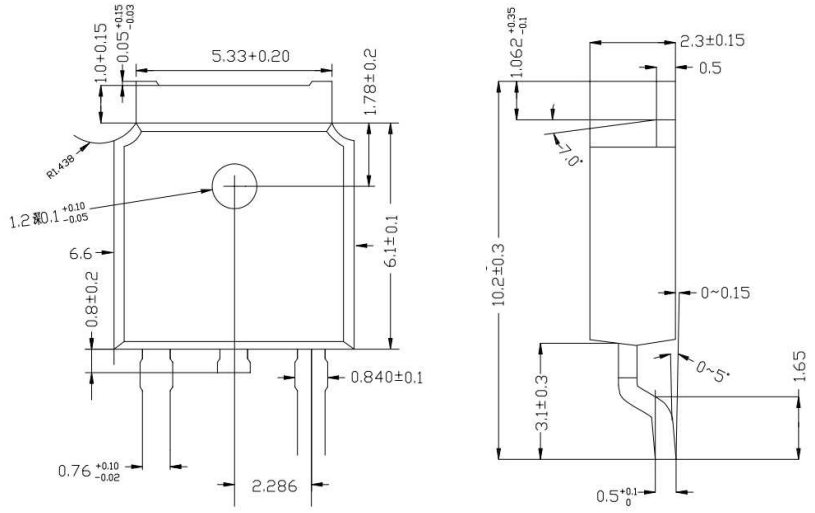


Figure 8 Transient Thermal Impedance

TO-252 (DPAK) Package Dimensions：(Unit : mm)



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