CSR010-120J2

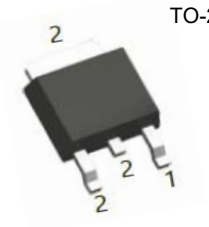
SiC SCHOTTKY DIODE TYPE 10A

Features

- High surge current capability
- No reverse recovery
- Positive Temperature Coefficient
- Easy to paralleling
- Halogen-free / RoHS compliant
- Compliance with EU REACH

- V_{DC} 1200 V
- I_F (T_c=135/148 °C) 13A/10A

TO-252-3L Package



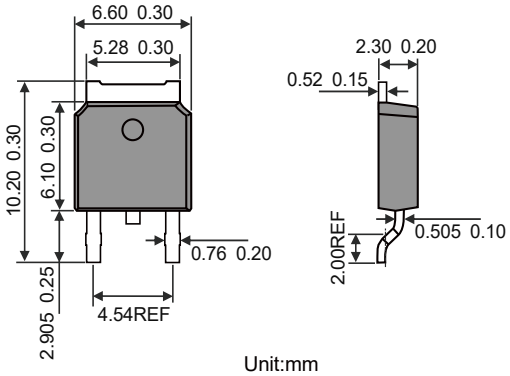
Benefits

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

Applications

- Solar inverter
- Power factor correction
- Data Center
- Switch mode power supply

Package Dimensions



Unit:mm

Maximum Ratings

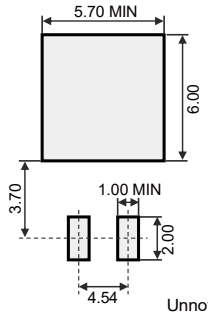
Operating Junction Temperature : -55℃ to +175℃

Storage Temperature : -55℃ to +175℃

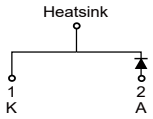
Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum DC Blocking Voltage
CSR010-120J2	1200V	1200V

Maximum Rating	Symbol	Conditions	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	T_J =25 °C	1200	V
Continuous forward current	I_F	T_C=25 °C	25	A
		T_C=135 °C	13	
		T_C=148°C	10	
Non-repetitive peak forward surge current	I_{FSM}	T_C=25 °C, t_p=8.3 ms Half sine wave	90	
Power Dissipationt	P_D	T_C=25 °C	125	W

Suggested Solder Pad Layout



Unnoted Tolerance: 0.05



NOTE :

1.These Dimension Do Not Include Mold protrusion

Electrical Characteristics, at T_C =25 °C, unless otherwise specified.

Static Characteristics	Symbol	Conditions	Values			Unit
			min.	typ.	max.	
DC blocking voltage	V_{DC}	T_J =25°C	1200	-	-	V
Diode forward voltage	V_F	I_F =10A, T_J =25°C	-	1.45	1.8	
		I_F =10A, T_J =175°C	-	2	-	
Reverse current	I_R	V_R =1200V, T_J =25°C	-	8	100	μA
		V_R =1200V, T_J =175°C	-	40	-	

AC Characteristics

Static Characteristics	Symbol	Conditions	Values			Unit
			min.	typ.	max.	
Total capacitive charge	Q_C	V_R=800V, T_J =25°C IF =10A, di/d=200A/μS	-	41	-	nC
Total capacitance	C	V_R=1V, f=1 MHz T_J =25°C	-	550	-	pF
		V_R=400V, f=1 MHz T_J =25°C	-	49	-	
		V_R=800V, f=1 MHz T_J =25°C	-	41	-	

Thermal Characteristics

Static Characteristics	Symbol	Values	Unit
		typ.	
Thermal resistance from junction to case	$R_{\theta JC}$	1.2	°C/W

Typical Device Performance

Fig.1 Forward Characteristics

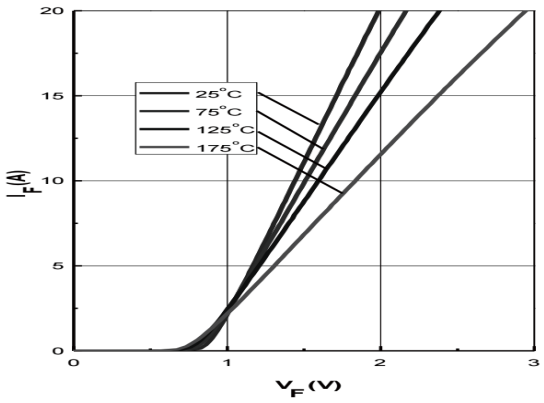


Fig.2 Reverse Characteristics

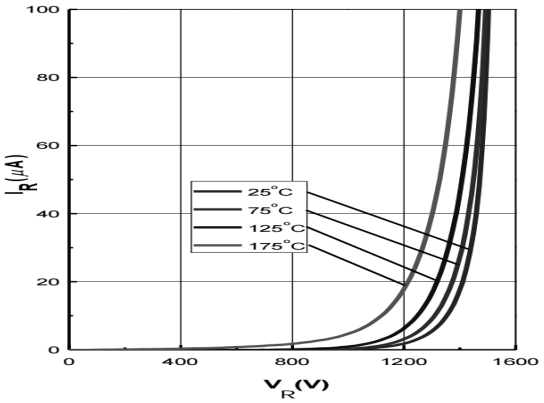


Fig.3 Capacitance vs. Reverse Voltage

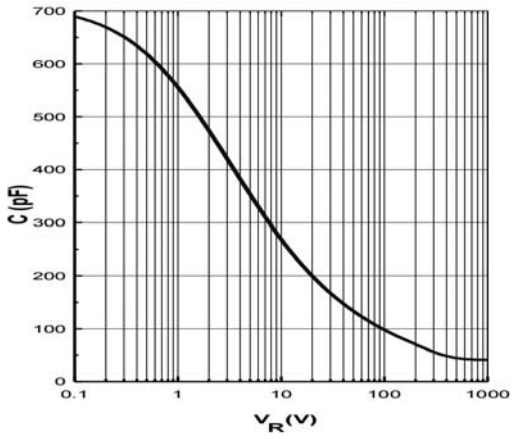
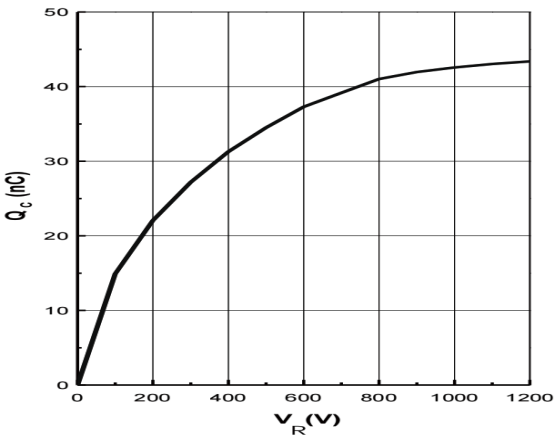


Fig.4 Capacitance Charge vs. Reverse Voltage



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