

Silicon Carbide Schottky Diode

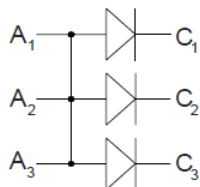
$$V_{RRM} = 600 \text{ V}$$

$$I_{F(AVG)} = 10 \text{ A}$$

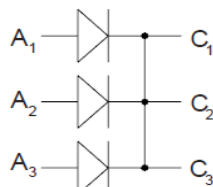
$$C_J = 120 \text{ pF}$$

Part Number	V_{RRM} (V)	$I_{F(AVG)}$ (A)	Configuration
SS150TA60110	600	10	Triple Common Anode
SS150TC60110	600	10	Triple Common Cathode
SS150TI60110	600	10	Triple Independent

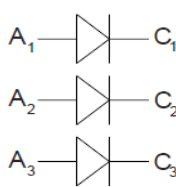
Triple Anode (TA)



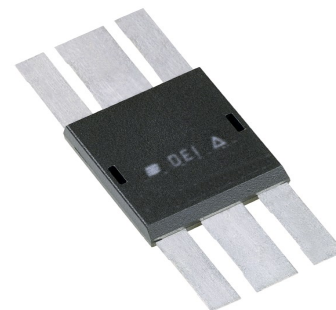
Triple Cathode (TC)



Triple Independent (TI)



A = Anode C = Cathode



Symbol	Parameter per diode	Test Conditions	Maximum Ratings
V_{RRM}	Repetitive Peak Reverse Voltage		600 V
V_{RSM}	Repetitive Surge Reverse Voltage		600 V
V_{DC}	DC Blocking Voltage		600 V
$I_{F(AVG)}$	Average Forward Current	$T_J = 175^\circ\text{C}$	10 A
I_{FRM}	Repetitive Peak Forward Surge Current	$T_C = 25^\circ\text{C}$, $t_p = 10 \text{ ms}$ Half Sine Wave	67 A
I_{FSM}	Non-Repetitive Peak Forward Surge Current	$T_C = 25^\circ\text{C}$, $t_p = 10 \mu\text{s}$ Pulse	250 A
T_{VJ}	Operating Virtual Junction Temperature		-55 to +175 $^\circ\text{C}$
T_{STG}	Storage Temperature		-55 to +175 $^\circ\text{C}$
P_{TOT}	$T_C = 25^\circ\text{C}$ (30 W/ per diode)		90 W

Features

- 600 V SiC Schottky Diode
- Surface Mount Package
- Zero Reverse Recovery
- Zero Forward Recovery
- High Frequency Operation
- Temperature Independent Behavior
- Positive Temperature Coefficient for V_F

Applications

- MHz Switch Mode Power Supplies
- High Frequency Converters
- Resonant Converters
- Rectifier Circuits

Symbol	Parameter	Test Conditions	Characteristic Values		
$T_J = 25^\circ\text{C}$ unless otherwise specified			Typ.	Max.	Units
V_F	Forward Voltage	$I_F = 5 \text{ A}$, $T_J = 25^\circ\text{C}$ $T_J = 175^\circ\text{C}$	1.7 2.2	2 2.5	V
I_R	Reverse Current	$V_R = 600 \text{ V}$, $T_J = 25^\circ\text{C}$ $T_J = 175^\circ\text{C}$	10 20	50 200	μA
C_J	Junction Capacitance	$f = 1 \text{ MHz}$, $V_R = 0 \text{ V}$ $V_R = 200 \text{ V}$ $V_R = 600 \text{ V}$	600 130 120		pF
Q_C	Capacitive Charge	$V_R = 600 \text{ V}$	72		nC
R_{THJC}	Thermal Resistance		1.7		$^\circ\text{C/W}$
T_L	Lead Soldering Temperature	1.6 mm (0.063 in) from case for 10 s	300		$^\circ\text{C}$
Isolation	Pin to Substrate Pin to Pin		>1800 >1500		V_{RMS}
Weight			2		g

Fig. 1

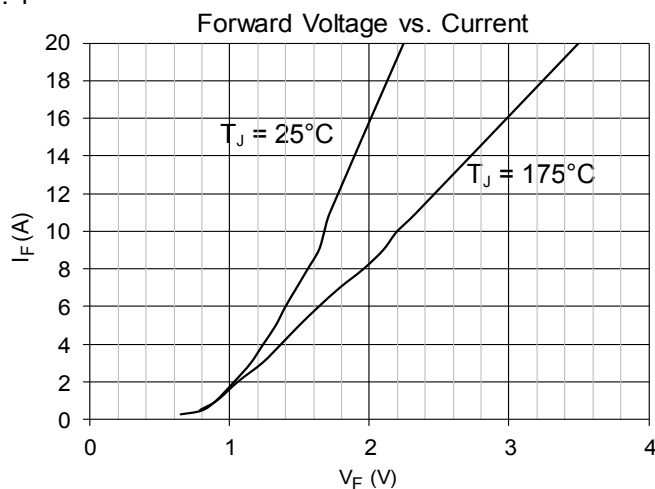


Fig. 2

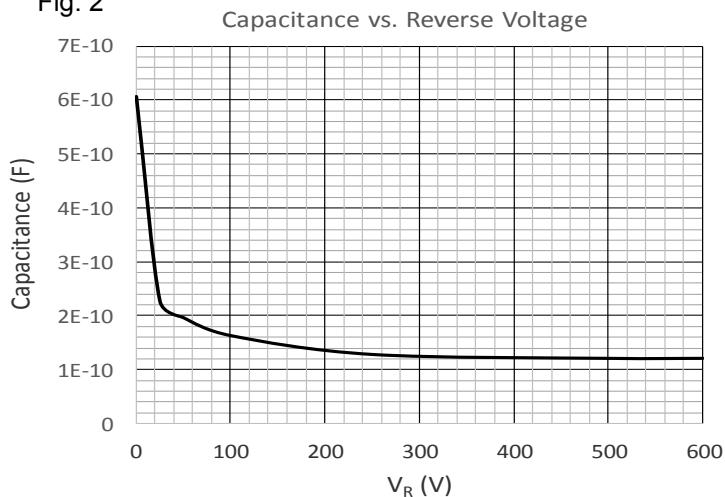


Fig. 3

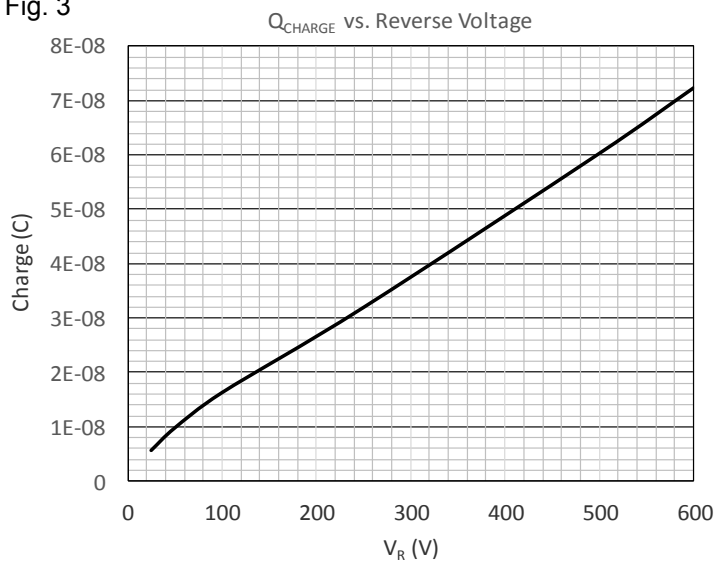


Fig. 4

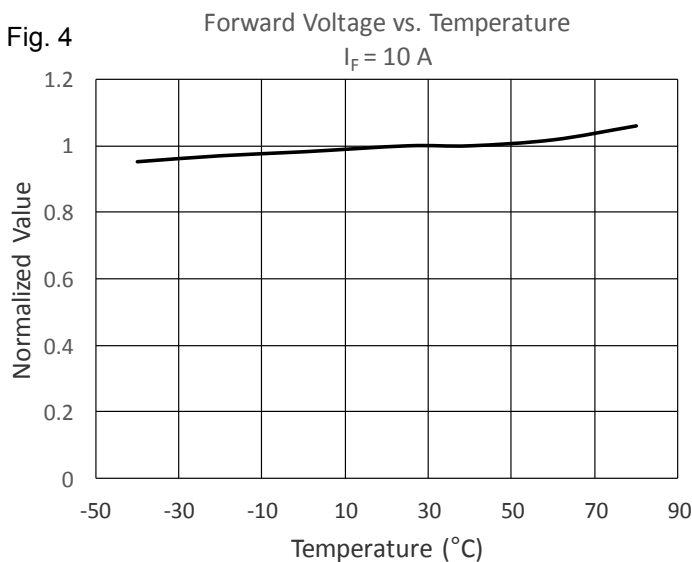


Fig. 5

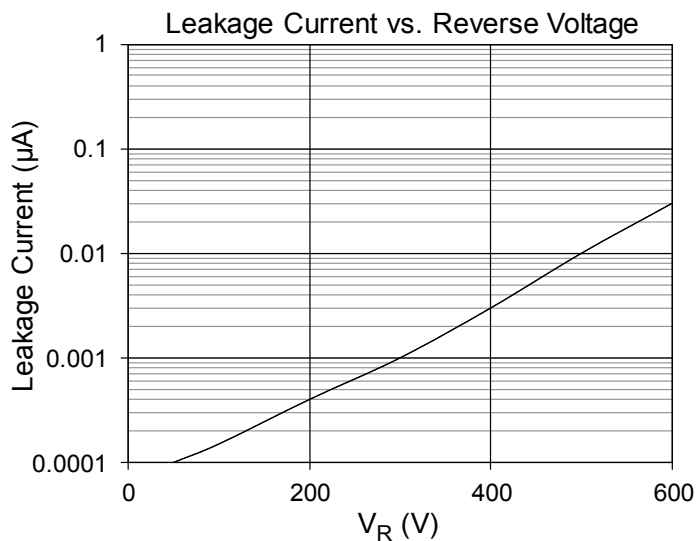


Fig. 6

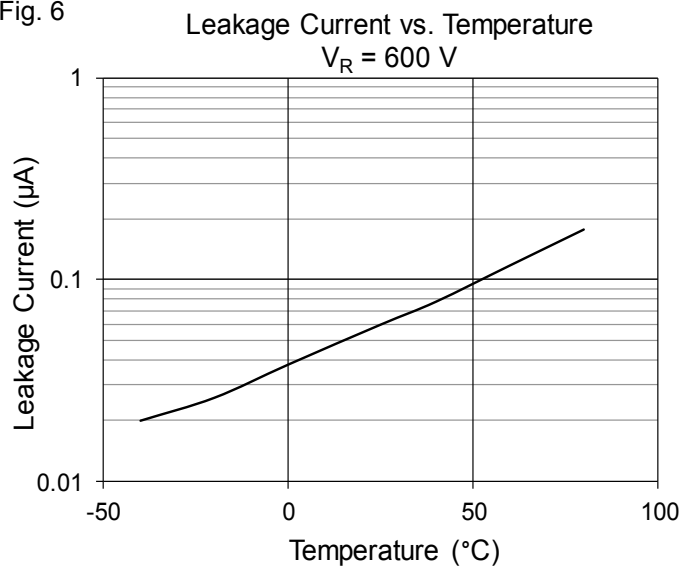


Fig. 7 Package Diagram

