THE DATASHEET OF

SS275TI12205

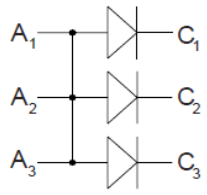
SS275TA12205, SS275TC12205, SS275TI12205

Silicon Carbide Schottky Diode

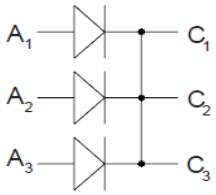
V_{RRM} = 1200 V
$I_{F(AVG)}$ = 5 A
C_J = 90 pF

Part Number	V_{RRM} (V)	$I_{F(AVG)}$ (A)	Configuration
SS275TA12205	1200	5	Triple Common Anode
SS275TC12205	1200	5	Triple Common Cathode
SS275TI12205	1200	5	Triple Independent

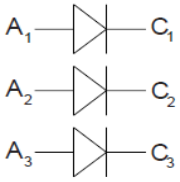
Triple Anode (TA)



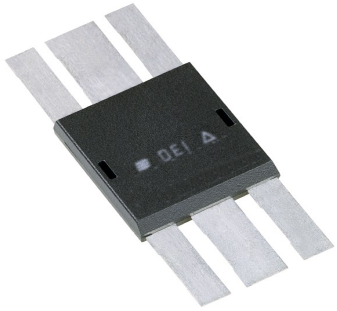
Triple Cathode (TC)



Triple Independent (TI)



A = Anode C = Cathode



Symbol	Parameter per diode	Test Conditions	Maximum Ratings	
V_{RRM}	Repetitive Peak Reverse Voltage		1200	V
V_{RSM}	Repetitive Surge Reverse Voltage		1200	V
V_{DC}	DC Blocking Voltage		1200	V
$I_{F(AVG)}$	Average Forward Current	T_J = 175°C	5	A
I_{FRM}	Repetitive Peak Forward Surge Current	T_C = 25°C, t_P = 8 ms Half Sine Wave	30	A
I_{FSM}	Non-Repetitive Peak Forward Surge Current	T_C = 25°C, t_P = 10 µs Pulse	100	A
T_{VJ}	Operating Virtual Junction Temperature		-55 to +175	°C
T_{STG}	Storage Temperature		-55 to +175	°C
P_{TOT}	T_C = 25 °C (33.3 W per diode)		100	W

Features

- 1200 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 per diode	Test Conditions	Characteristic Values		
T_J = 25°C unless otherwise specified			Typ.	Max.	Units
V_F	Forward Voltage	I_F = 5 A, T_J = 25°C T_J = 175°C	1.5 2.5	1.8 3	V
I_R	Reverse Current	V_R = 1200 V, T_J = 25°C T_J = 175°C	50 100	200 1000	µA
C_J	Junction Capacitance	f = 1 MHz, V_R = 0 V V_R = 200 V V_R = 1200 V	575 120 90		pF
Q_C	Capacitive Charge	V_R = 1200 V	108		nC
R_{THJC}	Thermal Resistance		1.5		°C/W
T_L	Lead Soldering Temperature	1.6 mm (0.063 in) from case for 10 s	300		°C
Isolation	Pin to Substrate Pin to Pin		>2000 >1700		V_{RMS}
Weight			2		g

Fig. 1

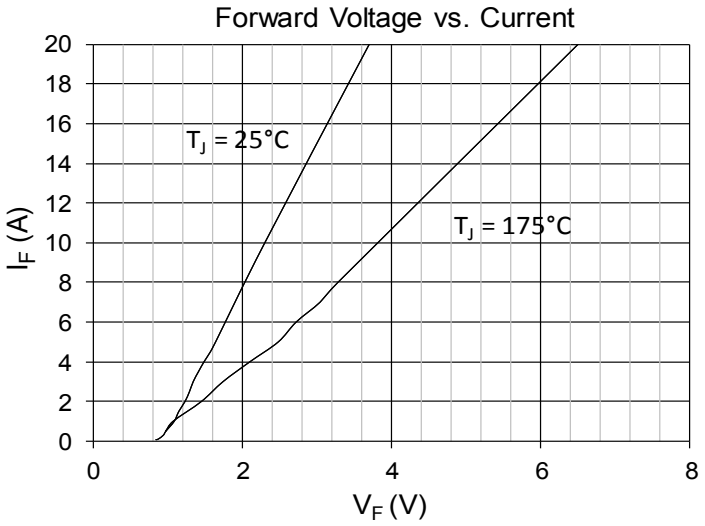


Fig. 2

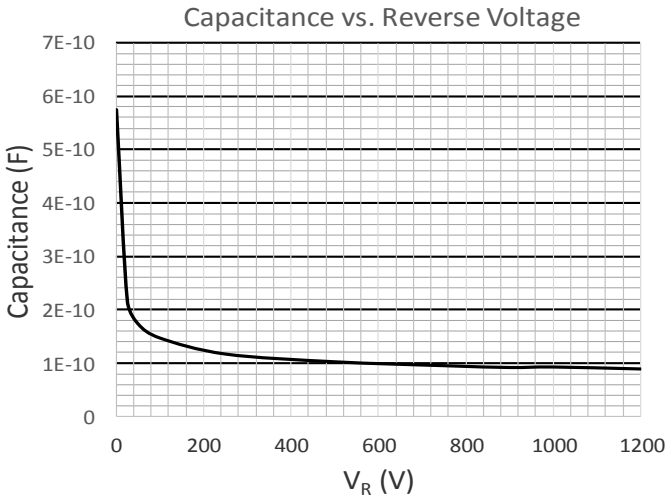


Fig. 3

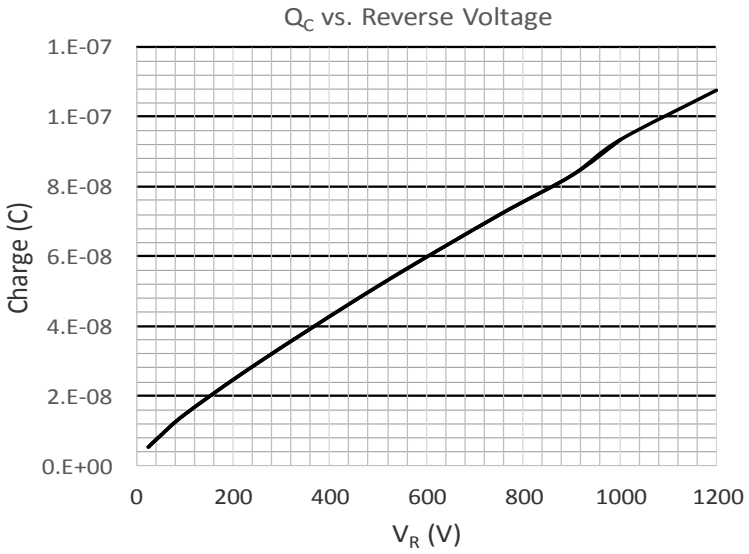


Fig. 4

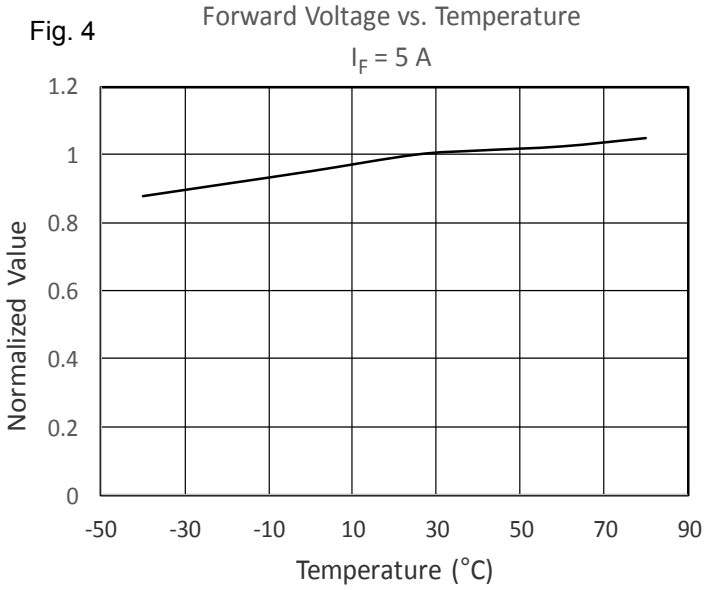


Fig. 5

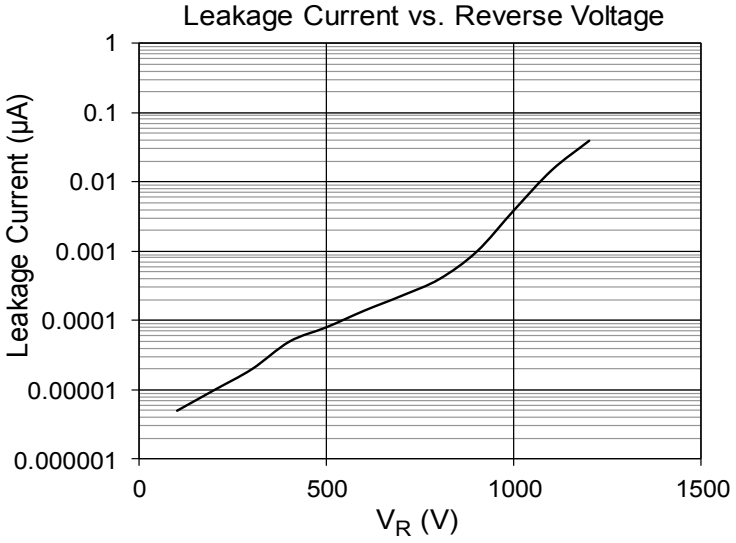


Fig. 6

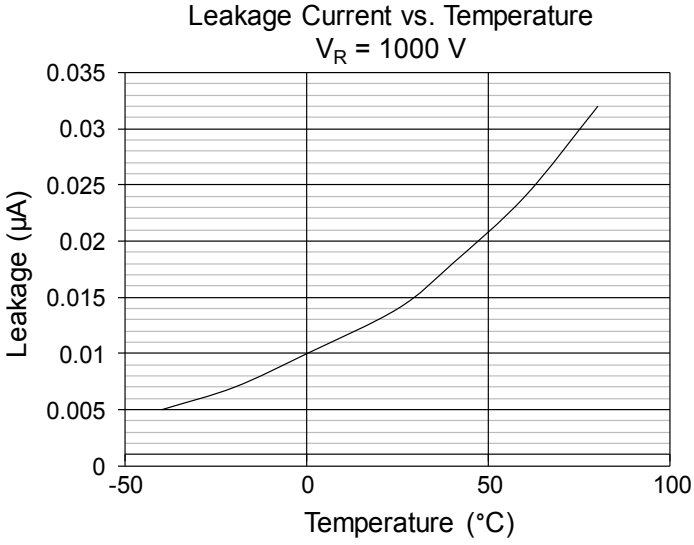
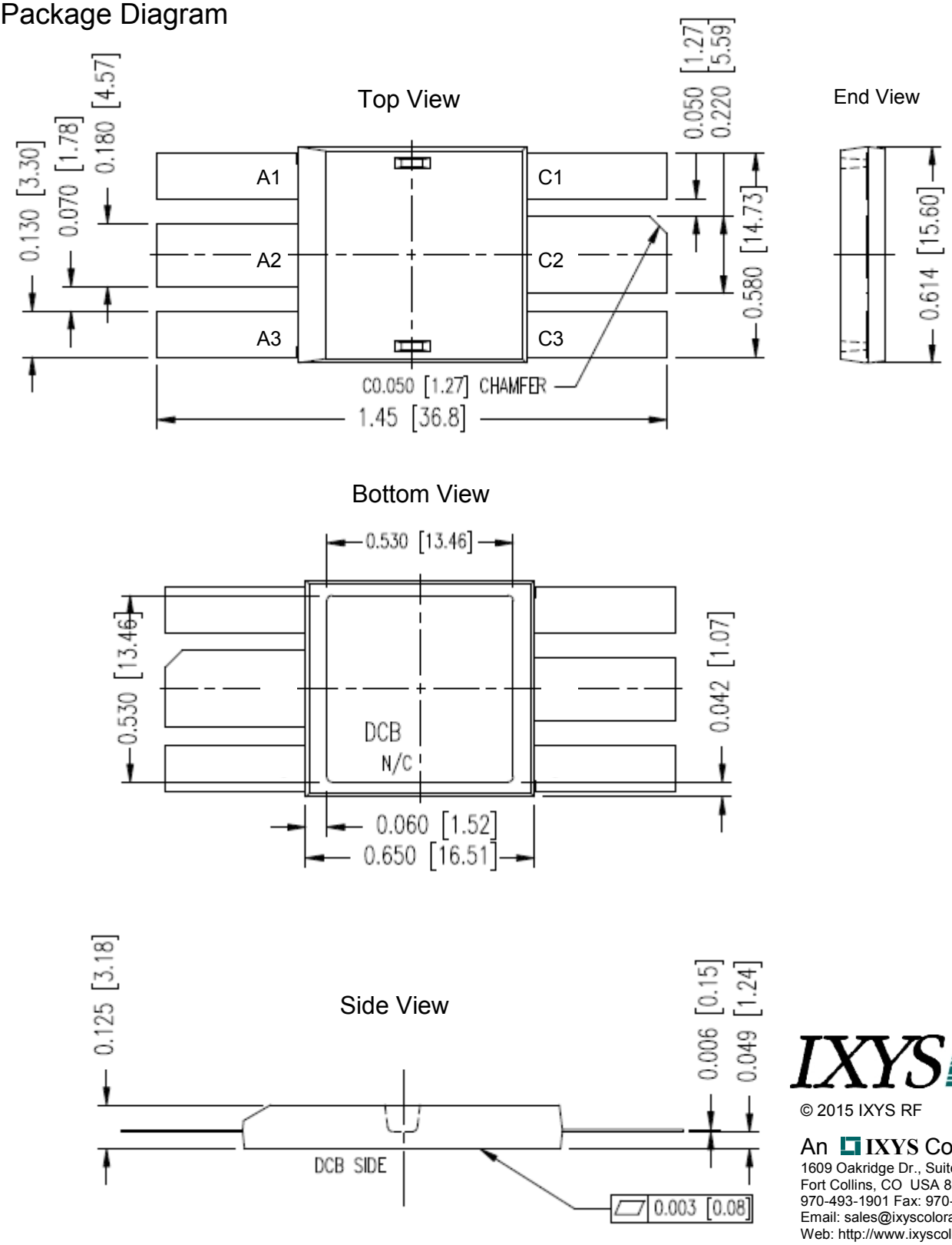


Fig. 7 Package Diagram



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DCB – Direct Copper Bond under Nickel plating on an Aluminum Nitride substrate, electrically isolated from any pin.

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