

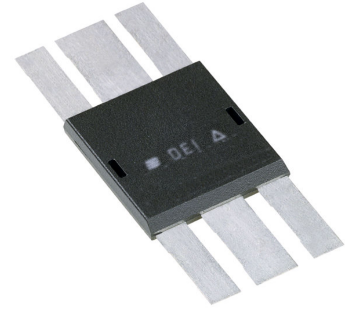
Silicon Carbide Schottky Diode

$V_{RRM} = 1200 \text{ V}$

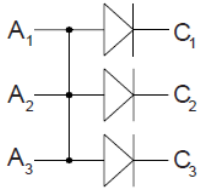
$I_{F(AVG)} = 5 \text{ A}$

$C_J = 65 \text{ pF}$

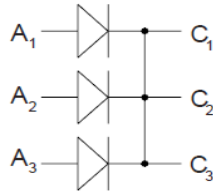
Part Number	V_{RRM} (V)	$I_{F(AVG)}$ (A)	Configuration
SS275TA12205	1200	5	Triple Common Anode
SS275TC12205	1200	5	Triple Common Cathode
SS275TI12205	1200	5	Triple Independent



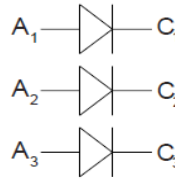
Triple Anode (TA)



Triple Cathode (TC)



Triple Independent (TI)



A = Anode C = Cathode

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	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	$T_J = 175^\circ\text{C}$	5	A
I_{FRM}	Repetitive Peak Forward Surge Current	$T_{VJ} = 45^\circ\text{C}$, $t_p = 8 \text{ ms}$ Half Sine Wave $D = 0.3$	12	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}	$T_C = 25^\circ\text{C}$ (10 W/device)		30	W

Symbol	Parameter	Test Conditions	Characteristic Values		
			Typ.	Max.	Units
$T_J = 25^\circ\text{C}$ unless otherwise specified					
V_F	Forward Voltage	$I_F = 5 \text{ A}$, $T_J = 25^\circ\text{C}$ $T_J = 175^\circ\text{C}$	1.6 2.6	1.8 3	V
I_R	Reverse Current	$V_R = 1200 \text{ V}$, $T_J = 25^\circ\text{C}$ $T_J = 175^\circ\text{C}$	50 100	200 1000	μA
C_J	Junction Capacitance	$f = 1 \text{ MHz}$, $V_R = 0 \text{ V}$ $V_R = 200 \text{ V}$ $V_R = 1200 \text{ V}$	450 85 65		pF
R_{THJC}	Thermal Resistance		5		$^\circ\text{C/W}$
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		>2000 >1700		V_{RMS}
Weight			2		g

Fig. 1 Forward Voltage vs. Current

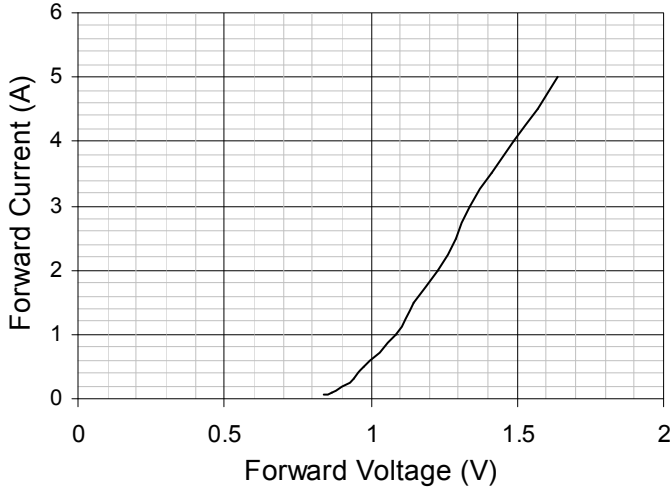


Fig. 2 Capacitance vs. Reverse Voltage

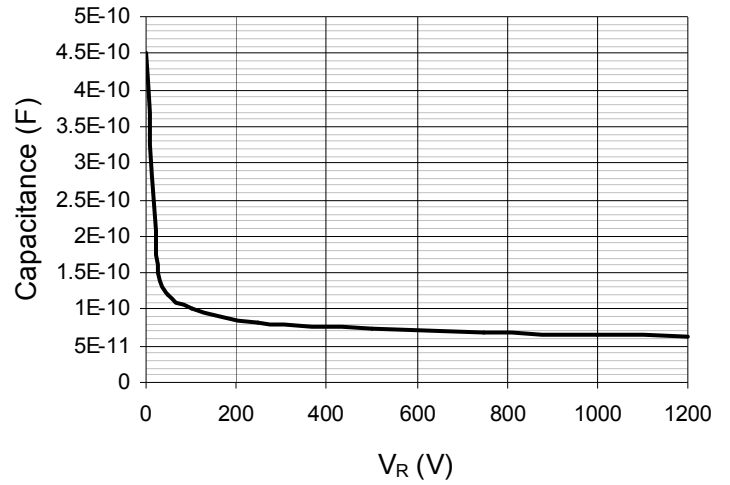


Fig. 3 Leakage Current vs. Reverse Voltage

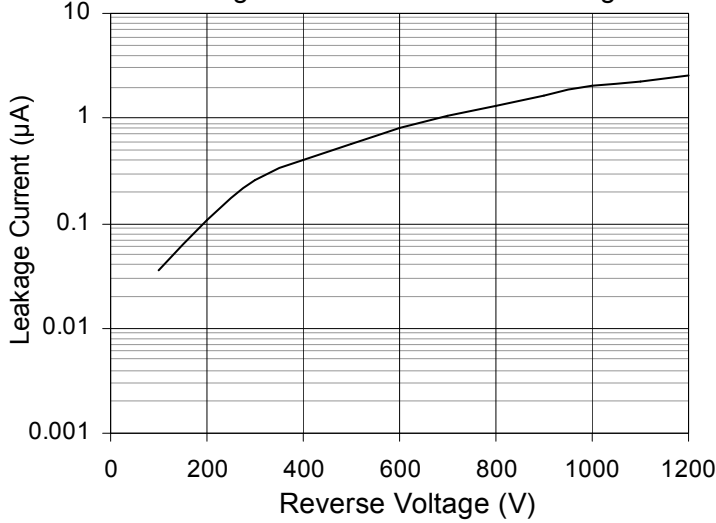


Fig. 4 Forward Voltage vs. Temperature

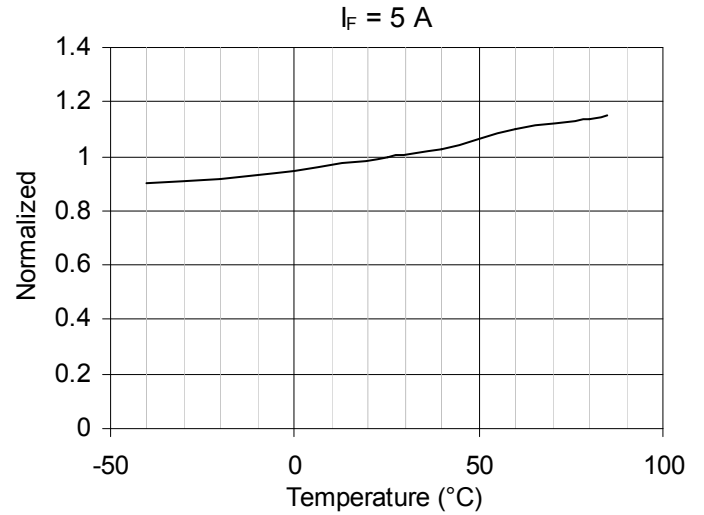


Fig. 5 Leakage Current vs. Temperature

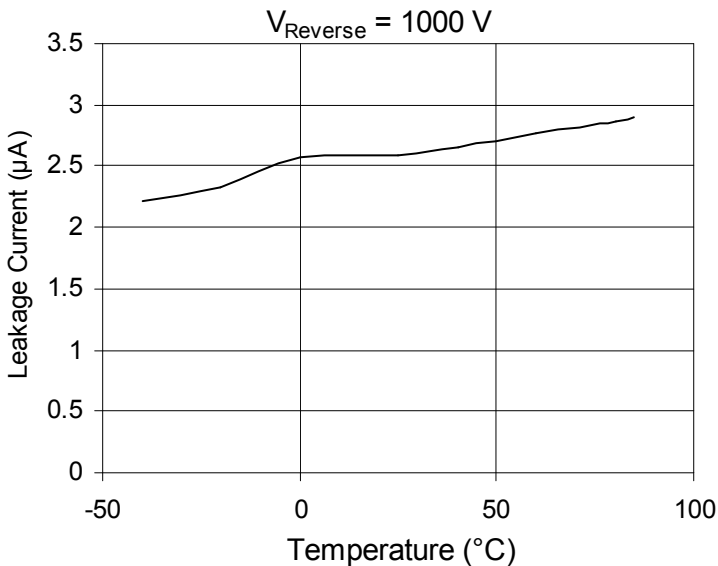
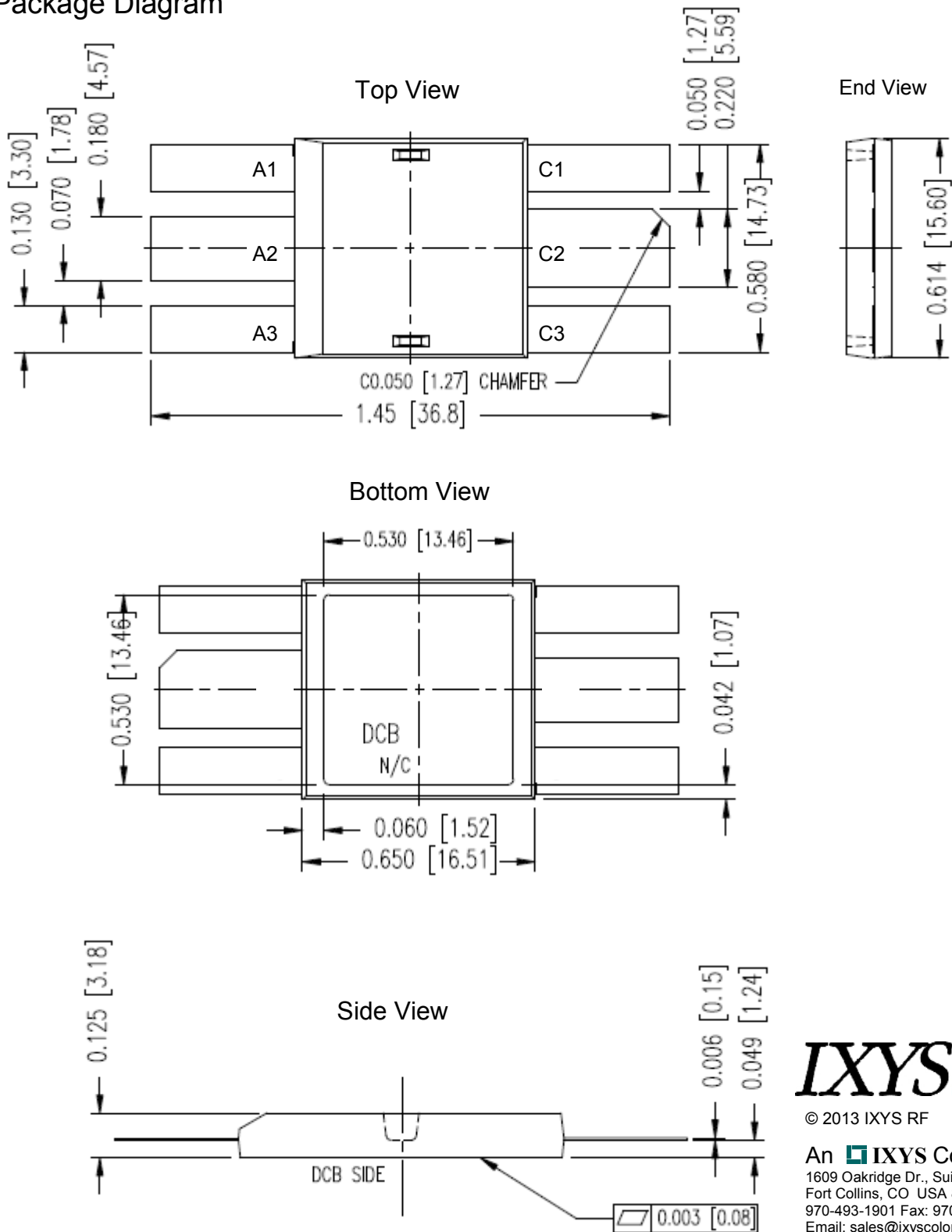


Fig. 6 Package Diagram



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

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