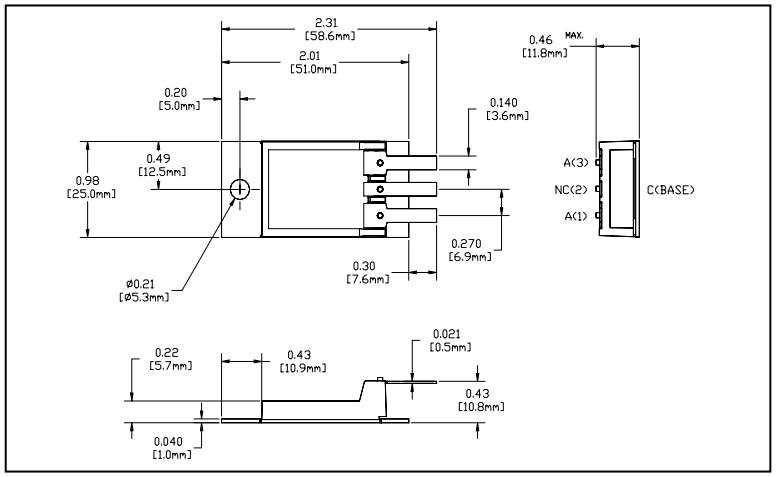
Powerex, Inc., 200 Hillis St., Youngwood 15697 (724) 925-7272

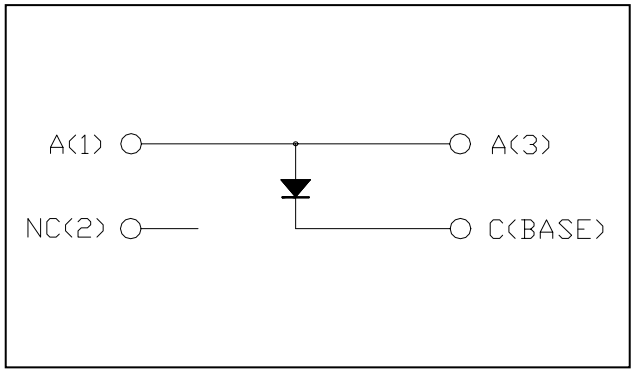
Single Discrete Diode
60 Amperes /4500 Volts



Outline Drawing

Description:
Powerex Single Non-Isolated Discrete is designed specially for customer high voltage applications

Schematic



Features:
- Non-Isolated Package
- Molybdenum Mounting Plate

Applications:
- Snubber Circuits
- Free Wheeling
- Switching Power Supplies

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Maximum Ratings, Tj=25°C unless otherwise specified

Ratings	Symbol	QRS4506001	Units
Peak Reverse Blocking Voltage	V_{RRM}	4500	Volts
Average Current, T_C = 100°C	$I_{F(av)}$	60	Amperes
Peak 3-Cycle Surge (Non-Repetitive) On-State Current (60 Hz)	I_{FSM}	120	Amperes
I^2t (for Fusing), 8.3 milliseconds	I^2t	1900	A^2sec
Operating Temperature	T_j	-55 to 150	°C
Storage Temperature	T_{stg}	-55 to 125	°C
Mounting Torque, M5 Mounting Screws		30	In-lb
Weight (Typical)	-	21	Grams

Electrical Characteristics, Tj=25°C unless otherwise specified

Characteristic	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Reverse Leakage Current, Peak	I_{RRM}	Vrrm = 4500 V	-	-	1.0	mA
Peak On-State Voltage	V_{FM}	I_{FM} = 60A	-	5.6	6.2	Volts
Reverse Recovery Time	t_{rr}	I_{FM}=67A di/dt = -800 A/µS Vr = ½ V_{RM}	-	230	-	nS
Reverse Recovery Charge	Q_{rr}	I_{FM}=67A di/dt = -800 A/µS Vr = ½ V_{RM}	-	11	-	µC

*Pulse width and repetition rate should be such that device junction temperature rise is negligible.

Thermal and Mechanical Characteristics, Tj=25°C unless otherwise specified

Characteristic	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal Resistance, Junction to Case	$R_{\theta JC}$	Diode	-	.08	.12	°C/W