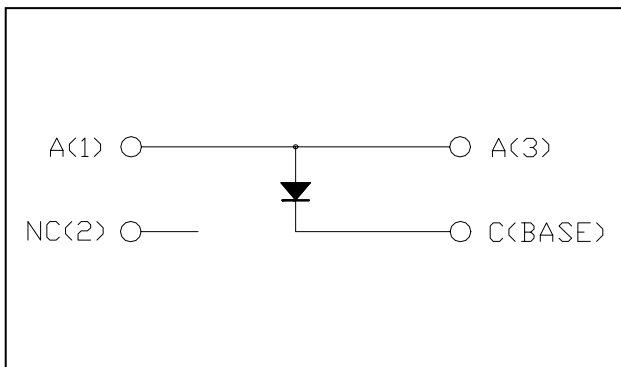


Outline Drawing

Schematic



Description:

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

Features:

- Non-Isolated Package
- Molybdenum Mounting Plate

Applications:

- Snubber Circuits
- Free Wheeling
- Switching Power Supplies

Maximum Ratings, T_j=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 ² t (for Fusing), 8.3 milliseconds	I ² t	1900	A ² sec
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, T_j=25°C unless otherwise specified

Characteristic	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Reverse Leakage Current, Peak	I _{RRM}	V _{rrm} = 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 V _r = 1/2 V _{RM}	-	230	-	nS
Reverse Recovery Charge	Q _{rr}	I _{FM} =67A di/dt = -800 A/μS V _r = 1/2 V _{RM}	-	11	-	μC

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

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

Characteristic	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal Resistance, Junction to Case	R _{θJC}	Diode	-	.08	.12	°C/W