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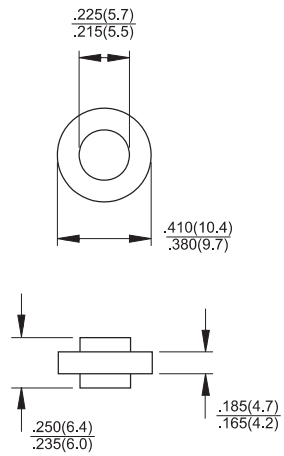
TAR5025

50.0 AMPS. Load Dump Rectifiers

Voltage Range
24 to 30 Volts
Current
50.0 Amperes

AR



Dimensions in inches and (millimeters)

Features

- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-O
- ✧ Low cost construction utilizing void-free molded plastic technique
- ✧ Low cost
- ✧ Diffused junction
- ✧ Low leakage
- ✧ High surge capability
- ✧ High temperature soldering guaranteed: 260°C for 10 seconds

Mechanical Data

- ✧ Case: Molded plastic case
- ✧ Terminals: Plated terminals, solderable per MIL-STD-202, Method 208
- ✧ Polarity: Color ring denotes cathode end
- ✧ Weight: 0.07 ounce, 1.8 grams
- ✧ Mounting position: Any

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	TAR5025		Units
Maximum Recurrent Peak Revere Voltage	V_{RRM}	22		V
Working Peak Reverse Voltage	V_{RMS}			
Maximum DC Blocking Voltage	V_{DC}			
Reverse Zener Voltage (Note 1)	V_Z	24 Min	30 Max	V
Maximum Clamping Voltage VC (Note 2)	V_C	35		V
Maximum Average Forward Rectified Current @ Tc = 100℃	I_F	50		A
Non-Repetitive Peak Forward Surge Current, (half wave, single phase, 60 Hz sine applied to rated load)	I_{FSM}	720		A
Repetitive Peak Reverse Surge Current (Time Constant = 10 mSec Duty Cycle <1.0%, TC=25℃	I_{RSM}	130		A
Maximum Instantaneous Forward Voltage (IF=100A @ 400uSec pulse, Tc=25℃)	V_F	1.08		V
Maximum DC Reverse Current (at V_{WM} = 22V @ Tc=25℃)	I_R	500		nA
Maximum Thermal Resistance, Junction to Case (Note 3)	$R\theta_{JC}$	0.6		℃/W
Operating and Storage Temperature Range	T_J, T_{STG}	-50 to +175		℃

Notes: 1. Reverse Zener Voltage Test Conditions: IR=5mA, TC=25℃, PW=30mS.
2. VC Test Conditions: IR=100A, TC=25℃, PW=100uS.
3. Single Side Cooled.

RATINGS AND CHARACTERISTIC CURVES (TAR5025)

FIG.1- POWER DERATING CURVE

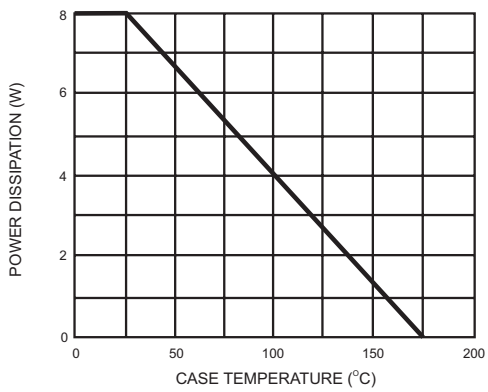


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVES

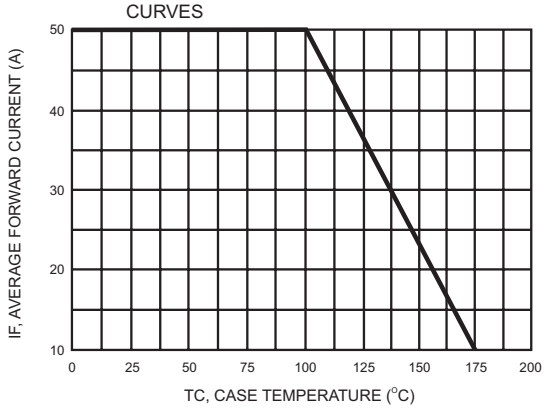


FIG.3- PULSE WAVEFORM

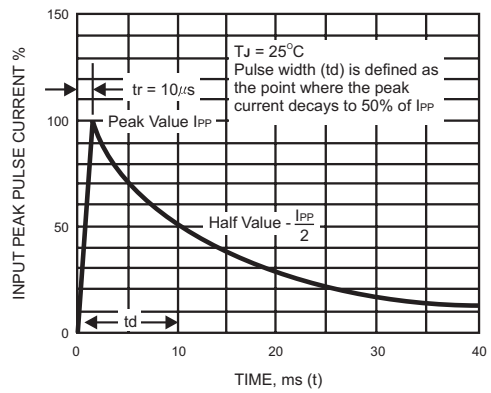


FIG.4- REVERSE POWER DERATING