



TAR5025

50.0 AMPS. Load Dump Rectifiers



Voltage Range
24 to 30 Volts
Current
50.0 Amperes

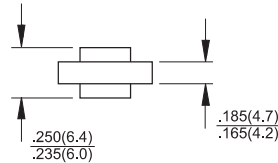
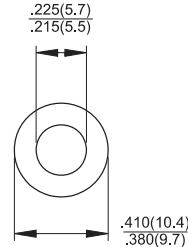
Features

- ✦ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✦ 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

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Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C 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 Reverse 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 @ $T_c = 100^\circ\text{C}$	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%, $T_C=25^\circ\text{C}$)	I_{RSM}	130		A
Maximum Instantaneous Forward Voltage ($I_F=100\text{A}$ @ 400uSec pulse, $T_C=25^\circ\text{C}$)	V_F	1.08		V
Maximum DC Reverse Current (at $V_{WM} = 22\text{V}$ @ $T_C=25^\circ\text{C}$)	I_R	500		nA
Maximum Thermal Resistance, Junction to Case (Note 3)	$R_{\theta JC}$	0.6		$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-50 to +175		$^\circ\text{C}$

Notes: 1. Reverse Zener Voltage Test Conditions: $I_R=5\text{mA}$, $T_C=25^\circ\text{C}$, $PW=30\text{mS}$.

2. VC Test Conditions: $I_R=100\text{A}$, $T_C=25^\circ\text{C}$, $PW=100\mu\text{s}$.

3. Single Side Cooled.

RATINGS AND CHARACTERISTIC CURVES (TAR5025)

FIG.1- POWER DERATING CURVE

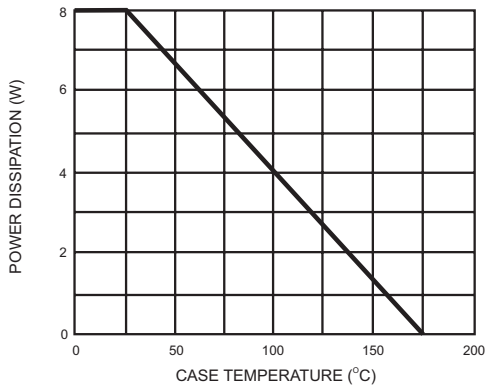


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVES

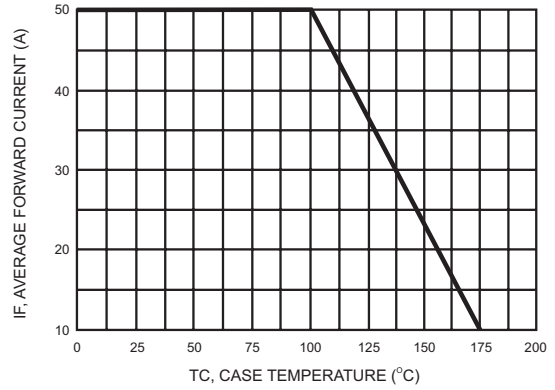


FIG.3- PULSE WAVEFORM

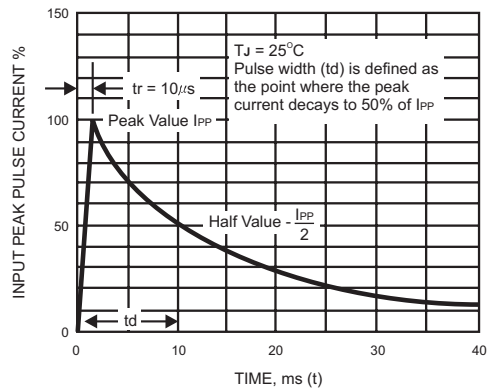


FIG.4- REVERSE POWER DERATING

