

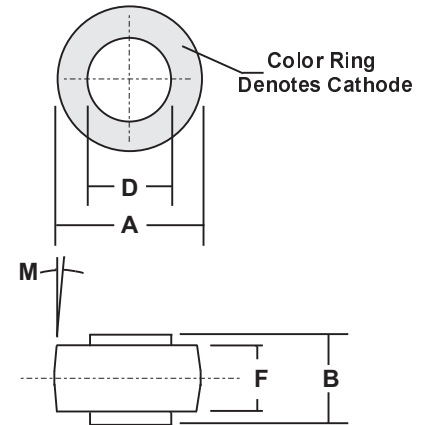
## 50 AMP OVERVOLTAGE TRANSIENT SUPPRESSORS

### FEATURES

- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical  $\leq 2\%$ , Max.  $\leq 10\%$  of Die Area)
- LARGE DIE FOR HIGH POWER HEAVY DUTY PERFORMANCE
- HIGH HEAT HANDLING CAPABILITY WITH VERY LOW THERMAL STRESS
- PROPRIETARY JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- LOW FORWARD VOLTAGE DROP

### MECHANICAL SPECIFICATION

Die Size:  
 0.216" Flat to Flat  
 Hex



### MECHANICAL DATA

- Case: Molded Epoxy (UL Flammability Rating 94V-0)
- Finish: All external surfaces are silver plated for corrosion resistance superior solderability
- Soldering Temperature: 210 °C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.06 Ounces (1.8 Grams)

**RoHS COMPLIANT**

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.78	10.29	0.385	0.405
B	6.05	6.20	0.238	0.244
D	5.54	5.60	0.218	0.220
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

### MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz resistive or inductive load.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS	UNITS
Series Number		TVS5027	
Maximum Recurrent Peak Reverse Voltage	VRRM	23	VOLTS
Working Peak Reverse Voltage	VRWM		
Maximum DC Blocking Voltage	V <sub>DC</sub>		
Breakdown Voltage (I <sub>R</sub> = 100 mA dc, T <sub>c</sub> = 25 °C)	V <sub>(BR)</sub>	24 Min / 32 Max	
Average Forward Rectified Current	I <sub>O</sub>	50	AMPS
Non-repetitive Peak Forward Surge Current (Half wave, single phase, 60 Hz sine applied to rated load)	I <sub>FSM</sub>	800	
Repetitive Peak Reverse Surge Current (Time Constant = 10 mSec Duty Cycle $\leq 1.0\%$ , T <sub>c</sub> = 25 °C)	I <sub>RSM</sub>	140	
Instantaneous Forward Voltage (I <sub>F</sub> = 100A @ 300 $\mu$ Sec pulse, T <sub>c</sub> = 25 °C)	V <sub>F</sub>	1.05	VOLTS
Maximum DC Reverse Current (V <sub>R</sub> = 20V DC, T <sub>c</sub> = 25 °C)		1.00	
Maximum DC Reverse Current (V <sub>R</sub> = 20V DC, T <sub>c</sub> = 25 °C)	I <sub>R</sub>	200	nA
Maximum Thermal Resistance, Junction to Case (Note 1)	R <sub>θJC</sub>	0.8	°C/W
Junction Operating & Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175	°C

Notes: 1) Single Side Cooled

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