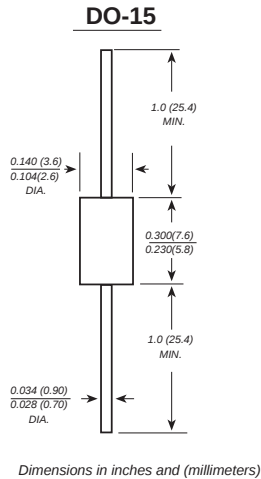


# TPA62 THRU TPA270

## SOLID STATE TELECOMMUNICATION PROTECTION ARRESTOR

Breakdown Voltage - 62 to 270 Volts Holding Current - 150 Milliampere



### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Bidirectional crowbar protection
- ◆ Fast response
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-15 molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Mounting Position:** Any  
**Weight:** 0.014 ounce, 0.40 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

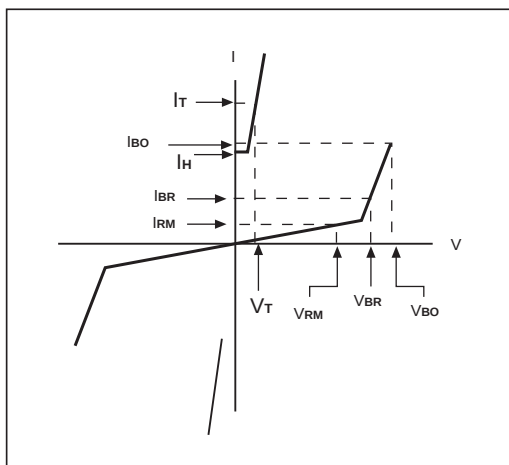
|                                                      | SYMBOLS   | TPA 62      | TPA 68 | TPA 100 | TPA 120 | TPA 130 | TPA 180 | TPA 200 | TPA 220 | TPA 240 | TPA 270 | UNITS   |
|------------------------------------------------------|-----------|-------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Breakdown voltage ( $I_R=1mA$ )                      | $V_{BR}$  | 62          | 68     | 100     | 120     | 130     | 180     | 200     | 220     | 240     | 270     | VOLTS   |
| Maximum breakover voltage ( $I_{BO}=800mA$ )         | $V_{BO}$  | 82          | 90     | 133     | 160     | 173     | 240     | 267     | 293     | 320     | 360     | VOLTS   |
| Maximum off-state voltage                            | $V_{RM}$  | 56          | 61     | 90      | 108     | 117     | 162     | 180     | 198     | 216     | 243     | VOLTS   |
| Maximum on-state current ( $I_T=1A$ )                | $V_T$     | 2           | 4      |         |         |         |         |         |         |         |         | VOLTS   |
| Maximum off-state current @ $V_{RM}$                 | $I_{RM}$  | 2           |        |         |         |         |         |         |         |         |         | $\mu A$ |
| Minimum holding current                              | $I_H$     | 150         |        |         |         |         |         |         |         |         |         | mA      |
| Maximum peak pulse current (10/1000ms)               | $I_{PP}$  | 50          |        |         |         |         |         |         |         |         |         | A       |
| Maximum surge current (50 Hz)                        | $I_{TSM}$ | 25          |        |         |         |         |         |         |         |         |         | A       |
| Minimum critical off-state voltage rise rate         | $dV/dt$   | 2           |        |         |         |         |         |         |         |         |         | KV/mS   |
| Typical junction capacitance (Note 1)                | $C_J$     | 150         | 100    |         |         |         |         |         |         |         |         | pF      |
| Junction teperature                                  | $T_J$     | -40 to +150 |        |         |         |         |         |         |         |         |         | °C      |
| Storage temperature                                  | $T_{STG}$ | -40 to +150 |        |         |         |         |         |         |         |         |         | °C      |
| Junction to leads on infinite heatsink               | $R_{qJL}$ | 60          |        |         |         |         |         |         |         |         |         | °C/W    |
| Junction to ambient on printed circuit L(lead)=10mmA | $R_{qJA}$ | 100         |        |         |         |         |         |         |         |         |         | °C/W    |

Note 1: F=1MHz  $V_R=1V$

## RATINGS AND CHARACTERISTIC CURVES TPA62 THRU TPA270

### NOTE1:MEANING OF PARAMETERS

| Symbol   | Parameter          |
|----------|--------------------|
| $V_{RM}$ | Stand-off voltage  |
| $V_{BR}$ | Breakdown voltage  |
| $V_{BO}$ | Breakover voltage  |
| $I_H$    | Holding current    |
| $V_T$    | On-state voltage   |
| $I_{BO}$ | Breakover current  |
| $I_{PP}$ | Peak pulse current |



### NOTE2:ALL TPA SERIES MEET THE SURGE REQUIREMENTS OF THE FOLLOWING STANDARDS:

|               |           |       |
|---------------|-----------|-------|
| CCITTK 17-K20 | 10/700ms  | 1.5KV |
|               | 5/310ms   | 38A   |
| VDE0433       | 10/700ms  | 2KV   |
|               | 5/200ms   | 50A   |
| CNET          | 0.5/700ms | 1.5KV |
|               | 0.2/310ms | 38A   |

# RATINGS AND CHARACTERISTIC CURVES TPA62 THRU TPA270

FIG.1-PULSE WAVE FORM(10/1000ms)

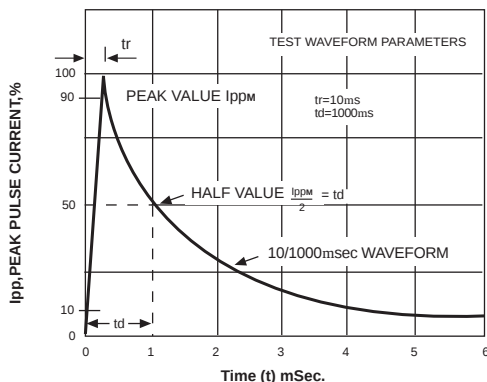


FIG. 2-NORMALIZED DC HOLDING CURRENT VS CASE TEMPERATURE

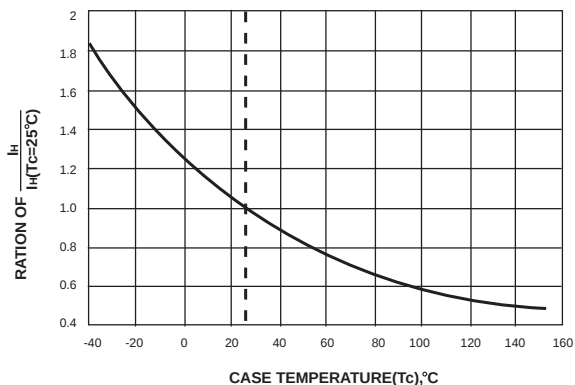


FIG. 3-TYPICAL TRANSIENT THERMAL IMPEDANCE

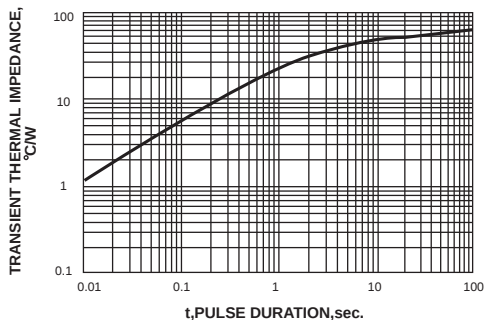


FIG. 4-NORMALIZED  $V_{BO}$  CHANGE VS JUNCTION TEMPERATURE

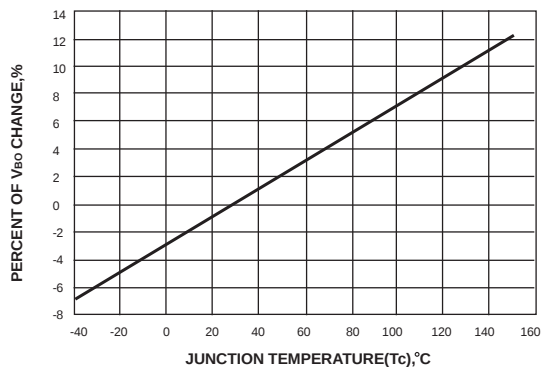


FIG. 5-NON REPETITIVE SURGE PEAK ON-STATE CURRENT VERSUS OVERLOAD DURATION ( $T_J$  INITIAL= $25^\circ C$ )

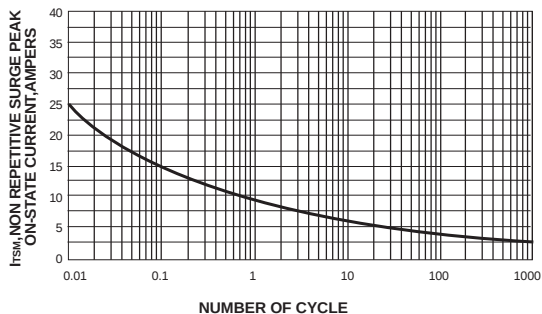


FIG. 6- ON-STATE CURRENT VERSUS ON-STATE VOLTAGE(TYPICAL VALUES).

