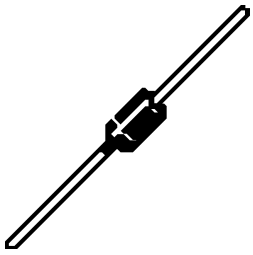
Data Sheet

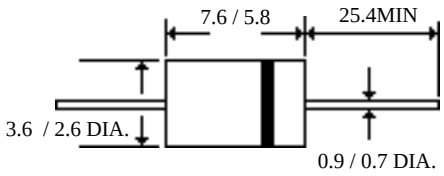
# THYRISTOR SURGE PROTECTOR
# AXIAL LEAD TYPE

**DESCRIPTION**



DO-15

**MECHANICAL DIMENSION**




Dimension in MM

FEATURES

- ☐ UL94V-0 Flammability Classification
- ☐ ESD Protection >40k Voltage
- ☐ ,High Surge Current Capability
- ☐ Peak Off-State voltage from 58~300V
- ☐ Meet IEC100-4-4 & -5 Industry requirement
- ☐ Low Capacitance for T1/E1 Trunk and Line Card Application
- ☐ Provides Protection in Accordance with FCC part 68, UL1459, Bellcore 1089, ITU-TK. 20& K.21

| Part No | CODE | Repetitive Peak Off Stage Vdrm (V) | Switching Vol@100 V/uS Vs (V) | Minimum Holding Current dI/dt=1A/ms Ipp (mA) | Switching Current Is (mA) | Urge Rating Ipp@ 10/1000us (A) | On-stage Current IT (A) | Typical Capacitance @50V .@1MHz (pF) |
|---|---|---|---|---|---|---|---|---|
| TSP110AL | GF | 90 | 130 | 150 | 800 | 50 | 1 | 60 |
| TSP130AL | GG | 120 | 160 | 150 | 800 | 50 | 1 | 40 |
| TSP150AL | GH | 140 | 180 | 150 | 800 | 50 | 1 | 40 |
| TSP180AL | GI | 160 | 220 | 150 | 800 | 50 | 1 | 40 |
| TSP230AL | GJ | 190 | 260 | 150 | 800 | 50 | 1 | 30 |
| TSP260AL | GK | 220 | 300 | 150 | 800 | 50 | 1 | 30 |
| TSP310AL | GL | 275 | 350 | 150 | 800 | 50 | 1 | 30 |
| TSP350AL | GM | 300 | 400 | 150 | 800 | 50 | 1 | 30 |
| TSP110BL | GS | 90 | 130 | 150 | 800 | 75 | 1 | 100 |
| TSP130BL | GT | 120 | 160 | 150 | 800 | 75 | 1 | 70 |
| TSP150BL | GU | 140 | 180 | 150 | 800 | 75 | 1 | 70 |
| TSP180BL | GV | 160 | 220 | 150 | 800 | 75 | 1 | 70 |
| TSP230BL | GW | 190 | 260 | 150 | 800 | 75 | 1 | 50 |
| TSP260BL | GX | 220 | 300 | 150 | 800 | 75 | 1 | 50 |
| TSP310BL | GY | 275 | 350 | 150 | 800 | 75 | 1 | 40 |
| TSP350BL | GZ | 300 | 400 | 150 | 800 | 75 | 1 | 40 |

- MAX OFF-STATE CURRENT @ VDRM: 5uA; MAX ON-STATE VOL @ IT:5V

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|---|---|---|---|---|---|---|---|---|
| TSP110CL | HF | 90 | 130 | 150 | 800 | 100 | 1 | 100 |
| TSP130CL | HG | 120 | 160 | 150 | 800 | 100 | 1 | 70 |
| TSP150CL | HH | 140 | 180 | 150 | 800 | 100 | 1 | 70 |
| TSP180CL | HI | 160 | 220 | 150 | 800 | 100 | 1 | 70 |
| TSP230CL | HJ | 190 | 260 | 150 | 800 | 100 | 1 | 50 |
| TSP260CL | HK | 220 | 300 | 150 | 800 | 100 | 1 | 50 |
| TSP310CL | HL | 275 | 350 | 150 | 800 | 100 | 1 | 40 |
| TSP350CL | HM | 300 | 400 | 150 | 800 | 100 | 1 | 40 |

- MAX OFF-STATE CURRENT @ VDRM: 5uA; MAX ON-STATE VOL @ IT:5V

**Fig.1 Pulse Wave Form Example**

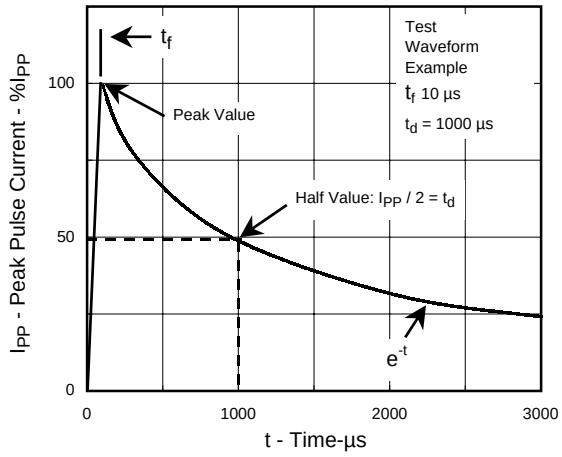


**Fig.2 Typical Peak Off-State Current Vs Junction Temperature**

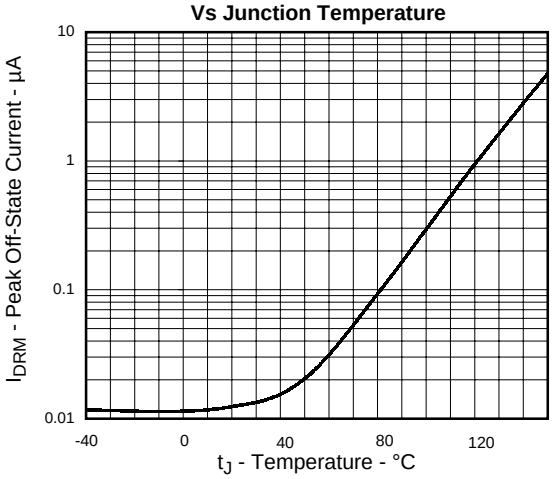


**Fig.3 Typical On-State Current Vs On-State Voltage**

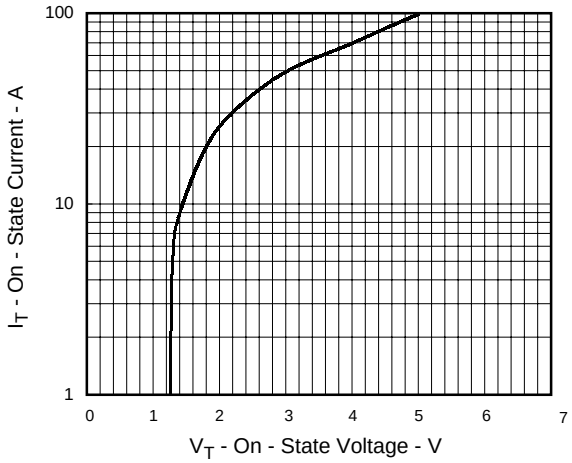


**Fig.4 Typical Holding Current Vs Junction Temperature**

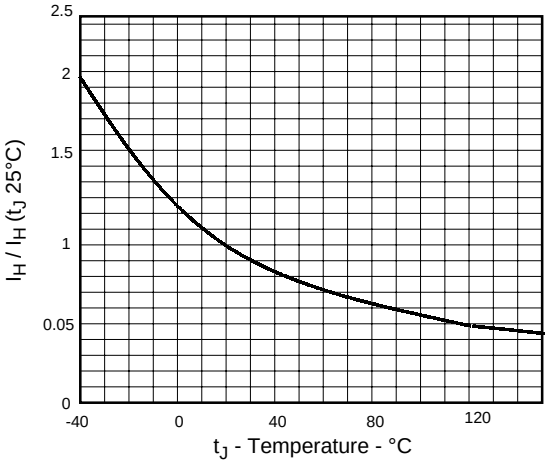


**Fig.5 Typical normalized $V_S$ Vs Junction Temperature**

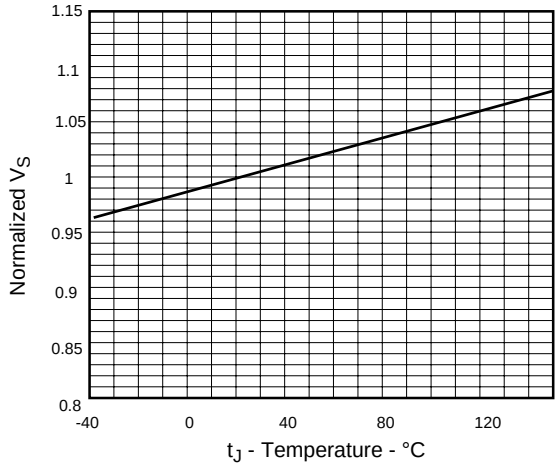


**Fig.6 On-State Current Vs Surge Current Duration**

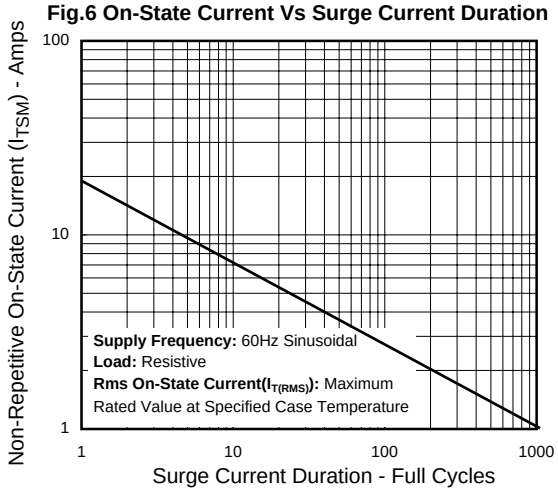


**Fig.7 V - I Characteristics Curve**