

# TPMOV<sup>®</sup> Technology

Thermally Protected Metal Oxide Varistor

**SURGE PROTECTIVE DEVICE**

**COMPONENT SPD FOR OEM DESIGN AND BUILD**



Mersen's patented TPMOV technology eliminates common failure modes that occur in the field with standard metal oxide varistors. Internally the TPMOV is comprised of a voltage clamping device and a disconnecting apparatus that monitors the status of the metal oxide disk, making the TPMOV a fail-safe device. In the event of an overvoltage breakdown, the metal oxide disc is securely disconnected from the system power by an arc shield. Upon failure, the TPMOV is also equipped with a visual pin indicator as well as a normally open micro-switch, providing remote indication if applicable.

### **TPMOV7: 50% more surge capacity, Same footprint**

The TPMOV7 is rated for **75kA - 8/20 $\mu$ s peak surge current** and is available for maximum continuous operating voltages (MCOV) from 150V to 320VAC.

### **FEATURES AND BENEFITS:**

- Industry-leading, patented TPMOV technology available in 50kA and 75kA surge capacities
- Consistent footprint with 25–40mm MOVs
- Built-in visual/remote indication optional
- Wave solderable
- No additional overcurrent protective device (fuses) required

### **RATINGS:**

- **Volts ( $U_n$ ):** 150-550VAC
- **Nominal Discharge Current Rating ( $I_n$ ):** 20kA
- **Surge Capacity:** 50kA, 75kA
- **Short-Circuit Current Rating (SCCR):** 200kA

### **APPROVALS:**

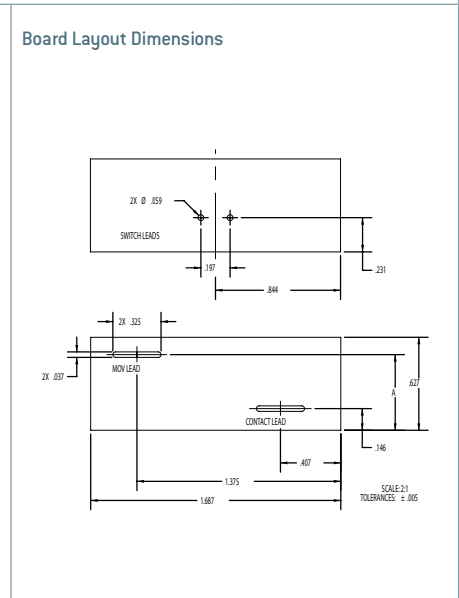
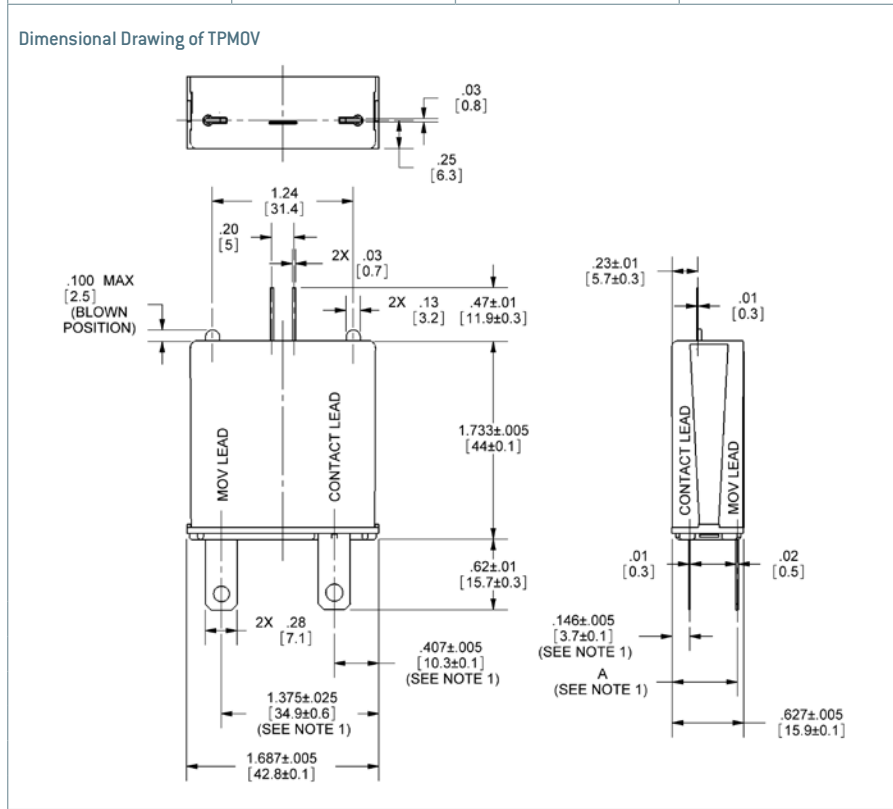
- ANSI/UL 1449  
4th Edition, Type 1  
Component Assembly  
SPD, File E210793
- RoHS Compliant



Catalog Number (includes suffixes*)	Maximum Continuous Operating Voltage (MCOV)	Voltage Protection Rating (VPR)	Nominal Discharge Current (kA)	Operating Temperature	TPMOV Dimension A (inches)
150TPMOV {7}	150VAC	600	20	-40°C to +85°C	0.485
180TPMOV	180VAC	800	20	-40°C to +85°C	0.485
270TPMOV	275VAC	800	20	-40°C to +85°C	0.495
320TPMOV {7}	320VAC	1000	20	-40°C to +85°C	0.51
420TPMOV	420VAC	1500	20	-40°C to +85°C	0.54
510TPMOV	510VAC	1500	20	-40°C to +85°C	0.54
550TPMOV	550VAC	1500	20	-40°C to +85°C	0.545

**Catalog - Ordering System (TPMOV)**

<p><b>150</b> Maximum Continuous Operating Voltage (MCOV)</p> <p>150: 150VAC 180: 180VAC 270: 275VAC 320: 320VAC 420: 420VAC 510: 510VAC 550: 550VAC</p>	<p><b>TPMOV</b> Model Series</p> <p>TPMOV: Thermally Protected MOV</p>	<p><b>7</b> Surge Capacity</p> <p>BLANK: 50kA 7: 75kA</p>	<p><b>SL</b> Mechanical Options</p> <table border="1"> <thead> <tr> <th>Suffix</th> <th>PCB Leads</th> <th>Tact Switch</th> <th>Visual Tabs</th> <th>Pkg Qty</th> </tr> </thead> <tbody> <tr> <td>Blank</td> <td>No</td> <td>Yes</td> <td>Yes</td> <td>10</td> </tr> <tr> <td>S</td> <td>Yes</td> <td>Yes</td> <td>No</td> <td>10</td> </tr> <tr> <td>SL</td> <td>Yes</td> <td>Yes</td> <td>No</td> <td>500</td> </tr> <tr> <td>ST</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>10</td> </tr> <tr> <td>SLT</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>500</td> </tr> <tr> <td>HV</td> <td>No</td> <td>Yes-HV</td> <td>Yes</td> <td>10</td> </tr> <tr> <td>S-HV</td> <td>Yes</td> <td>Yes-HV</td> <td>Yes</td> <td>10</td> </tr> <tr> <td>SL-HV</td> <td>Yes</td> <td>Yes-HV</td> <td>Yes</td> <td>500</td> </tr> </tbody> </table> <p>*For details regarding HV microswitch please consult factory</p>	Suffix	PCB Leads	Tact Switch	Visual Tabs	Pkg Qty	Blank	No	Yes	Yes	10	S	Yes	Yes	No	10	SL	Yes	Yes	No	500	ST	Yes	Yes	Yes	10	SLT	Yes	Yes	Yes	500	HV	No	Yes-HV	Yes	10	S-HV	Yes	Yes-HV	Yes	10	SL-HV	Yes	Yes-HV	Yes	500
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VOLTAGE	A Dimension
550	0.545
420/510	0.54
320	0.51
270	0.495
150/180	0.485