

TPMOV[®] (Thermally Protected MOV)

Thermally Protected Metal Oxide Varistor

SURGE PROTECTION

SELF-PROTECTED MOV UTILIZING THE FASTEST & SAFEST DISCONNECT SYSTEM AVAILABLE FOR DESIGNERS OF SPDs & ELECTRICAL EQUIPMENT



Mersen's TPMOV technology eliminates common failure modes that occur in the field with standard metal oxide varistors. Internally it is comprised of a voltage clamping device and a disconnecting apparatus that monitors the status of the metal oxide disk, making the TPMOV surge suppression component 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 surge suppression component is also equipped with a visual pin indicator as well as a normally open micro-switch, providing remote indication if applicable.

TPMOV7 Series Surge Suppression Component: 50% more surge capacity, Same footprint

The TPMOV7 Series is rated for **75kA - 8/20µs peak surge current** and is available for maximum continuous operating voltages (MCOV) from 150V to 420VAC.

Technical Data Overview	
Volts [U _n]	150-550VAC
Nominal Discharge Current Rating [I _n]	20kA
Surge Capacity	75kA
Short-Circuit Current Rating [SCCR]	200kA
Response Time	Less than 1 nanosecond (one per phase)
Ambient Temperature Rating	-40°C to +85°C

FEATURES/BENEFITS

- Industry-leading 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

APPLICATIONS

- For OEM design and build

APPROVALS/STANDARDS

- ANSI/UL 1449 5th Edition, Type 1 Component Assembly SPD, File E210793
- RoHS Compliant



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**SURGE
PROTECTION**

Catalog Number (includes suffixes*)	Maximum Continuous Operating Voltage (MCOV), (Vac)	Surge Capacity, (kA)	Voltage Protection Rating (VPR), (V)	Nominal Discharge Current (In), (kA)	Operating Temperature, (C)	Dimension A ¹ , (inches)
150TPMOV7	150	75	600	20	-40°-+85°	0.485
180TPMOV7	180	75	800	20	-40°-+85°	0.485
320TPMOV7	320	75	1000	20	-40°-+85°	0.54
420TPMOV7	420	75	1500	20	-40°-+85°	0.54
150TPMOV	150	50	600	20	-40°-+85°	0.485
180TPMOV	180	50	800	20	-40°-+85°	0.485
270TPMOV	270	50	800	20	-40°-+85°	0.495
320TPMOV	320	50	1000	20	-40°-+85°	0.54
420TPMOV	420	50	1500	20	-40°-+85°	0.54
510TPMOV	510	50	1500	20	-40°-+85°	0.54
550TPMOV	550	50	1500	20	-40°-+85°	0.545

Catalog - Ordering System (TPMOV)

<p>150 Maximum Continuous Operating Voltage (MCOV)</p> <p>150: 150VAC 180: 180VAC 270: 275VAC 320: 320VAC 420: 420VAC 510: 510VAC 550: 550VAC</p>	<p>TPMOV Model Series</p> <p>TPMOV: Thermally Protected MOV</p>	<p>7 Surge Capacity</p> <p>BLANK: 50kA 7: 75kA</p>	<p>SL 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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Note1: Dimension A is the space between the TMOV leads as depicted below for mounting on a printed circuit board (PCB).

Dimensional Drawing of TMOV technology protected modules

MOV LEAD
CONTACT LEAD

MOV LEAD
CONTACT LEAD

Board Layout Dimensions

SWITCHLEADS
MOV LEAD
CONTACT LEAD

VOLTAGE	A Dimension
550	0.545
420/510	0.54
320	0.51
2700	.495
150/180	0.485

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