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## Composite Surge Protection Device(GMOV)

### Description

The composite surge protector GMOV is a type of surge protector that combines Switch type protective components and Voltage limiting protective components. GMOV achieves high performance as a long life protector with low capacitance and, most importantly, very low leakage. GMOV is ideally suited for any number of AC and DC power applications where a high level of performance is required over time, improving the overall stability of the system.

### Features

- ◆ Wide operating voltages ranging from 50Vrms to 420Vrms(AC)
- ◆ Low leakage
- ◆ Fast response time
- ◆ High energy absorption capability
- ◆ High surge current handling capability
- ◆ Low clamping voltages and no follow current
- ◆ Low capacitance values, providing digital switching circuitry protection
- ◆ High insulation resistance

### Applicable

- ◆ AC Power Protection
- ◆ DC Power Protection
- ◆ Surge protection in consumer electronics
- ◆ Surge protection in industrial electronics
- ◆ Surge protection in electronic home appliances
- ◆ Relay and electromagnetic valve surge absorption

### Part Numbering

10 - D - XXX - K - G - B  
( 1 ) ( 2 ) ( 3 ) ( 4 ) ( 5 ) ( 6 )

(1) Size(mm) : 10mm

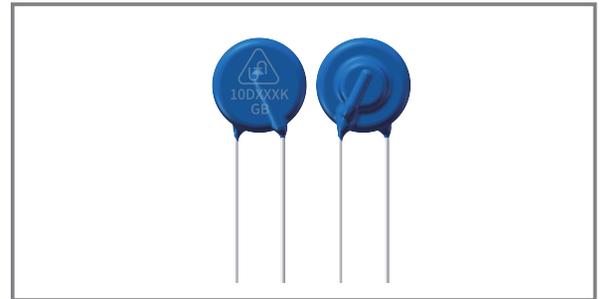
(2) Type : D: Disk

(3) Varistor Voltage : 820( $82 \cdot 10^0 = 82V$ ) , 471( $47 \cdot 10^1 = 470V$ )

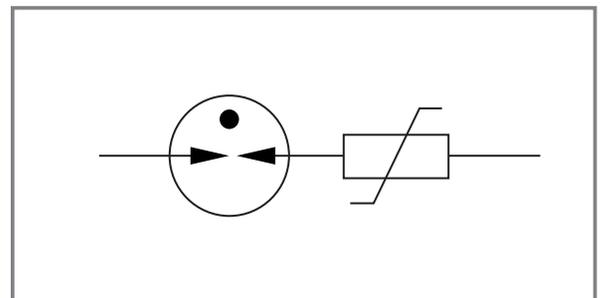
(4) Tolerance :  $K \pm 10\%$

(5) Model Name Abbreviation : G : GMOV

(6) Pin Type : B-Two Pins



### Circuit Diagram



### General Characteristics Definition

- ◆ Operating Temperature:  $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$
- ◆ Storage Temperature:  $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- ◆ Insulation Resistance:  $> 100\text{M}\Omega$
- ◆ Coating (Epoxy Resin): Flame-Retardant to UL 94V-0

Electrical Characteristics (@ 25°C Unless Otherwise Specified )

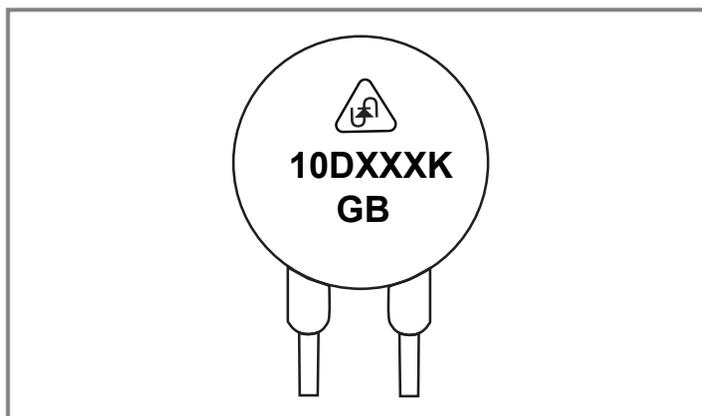
Part Number	Maximum Continuous Operating Voltage MCOV		Maximum Leakage @MCOV	Typical Platform Voltage <sup>(1)</sup>	Typical Impulses Peak Voltage <sup>(2)</sup>	Withstanding Surge Current	Maximum Surge Current @1 time	Maximum Energy	Typical Capacitance (Reference)
	V <sub>AC</sub> (V)	V <sub>DC</sub> (V)	I <sub>R</sub> (μA)	V <sub>p</sub> (V)	V <sub>I</sub> (V)	1.2/50us & 8/20us combination of wave, 4KV/2KA sub 0,90,180, 270 four phases, each phases of positive and negative 5 times Total	I <sub>max</sub> (A)	10/1000μs (J)	@1KHz (pf)
10D820K-GB	50	65	<1	150	700	40	3000	17	5
10D121K-GB	75	100	<1	220	700	40	3000	21	5
10D241K-GB	150	200	<1	435	1200	40	3000	42	5
10D271K-GB	175	225	<1	501	1200	40	3000	49	5
10D331K-GB	210	275	<1	605	1200	40	3000	58	5
10D431K-GB	275	350	<1	781	1200	40	3000	80	5
10D471K-GB	300	385	<1	853	1200	40	3000	85	5
10D511K-GB	320	415	<1	930	1200	40	3000	90	5
10D561K-GB	350	460	<1	1012	1200	40	3000	92	5
10D621K-GB	385	505	<1	1128	1200	40	3000	95	5
10D681K-GB	420	560	<1	1320	1200	40	3000	98	5

Notes:

(1) V<sub>p</sub> is defined as the reference data tested under the condition of I<sub>P</sub>=25A.

(2) V<sub>I</sub> defined as measured with 10% of peak current in accordance with IEC 61051-1.

Part Marking



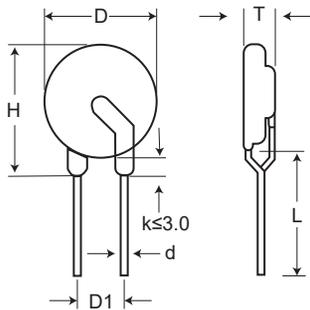
Marking	
Trademark	UN logo
Part No.	10DXXXK
G	GMOV
B	B-Two Pins

Packaging Information

Unit:Pcs

Dimension	Part No.	Bag	Small Carton	Carton
10DXXXK-GB	820K to 681K	500	5000	10000

Package Dimensions Unit: mm



Symbol	Dimension
H(max.)	16.5
L(min.)	20.0
D(max.)	12.5
D1(±0.8)	7.5
T(max.)	TABLE2
d(±0.05)	0.8

Model	T(max.)
820K	7.5
121K	7.5
241K	8.0
271K	8.0
331K	8.0
431K	8.5
471K	8.5
511K	8.5
561K	9.0
621K	9.5
681K	9.5

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