

Gas Discharge Tube

5.5x6.0mm 2 Poles Round End

MGT5-2 Series

MERITEK

FEATURE

- Ultra-Fast Surge Response
- High Surge Current Capability
- High Holder Voltage, High Insulation Resistance
- Low capacitance ($\leq 1.5\text{pF}$), Micro-Gap Design
- Applications: Repeaters, Modems, Telephone Interface, Line Cards, Data Communication Equipment, Line Test Equipment
- UL Safety Approved Certification No: E223045



ELECTRICAL CHARACTERISTICS

Part Number	DC Spark-over Voltage	Impulse Spark-over Voltage	Impulse Discharge Current	Alternating Discharge Current	Impulse Life	Minimum Insulation Resistance		Maximum Capacitance
	100V/s	1KV/ μs	8/20 μs , 10times	50Hz, 1sec	10/1K μs , 100A	V_T	IR	1MHz/1V
5.5x6.0mm	(V)	(V)	(KA)	(A)	(Times)	(V_{DC})	(G Ω)	(pF)
MGT5L070MCB2	70 $\pm 20\%$	800	5	5	300	25	1	1.5
MGT5L075MCB2	75 $\pm 20\%$	800	5	5	300	25	1	1.5
MGT5L090MCB2	90 $\pm 20\%$	700	5	5	300	50	1	1.5
MGT5L120MCB2	120 $\pm 20\%$	700	5	5	300	50	1	1.5
MGT5L145MCB2	145 $\pm 20\%$	700	5	5	300	100	1	1.5
MGT5L150MCB2	150 $\pm 20\%$	700	5	5	300	100	1	1.5
MGT5L230MCB2	230 $\pm 20\%$	700	5	5	300	100	1	1.5
MGT5L250MCB2	250 $\pm 20\%$	700	5	5	300	100	1	1.5
MGT5L300MCB2	300 $\pm 20\%$	900	5	5	300	100	1	1.5
MGT5L350MCB2	350 $\pm 20\%$	900	5	5	300	100	1	1.5
MGT5L400MCB2	400 $\pm 20\%$	1000	5	5	300	100	1	1.5
MGT5L470MCB2	470 $\pm 20\%$	1100	5	5	300	250	1	1.5
MGT5L600MCB2	600 $\pm 20\%$	1500	5	5	300	250	1	1.5
MGT5L800MCB2	800 $\pm 20\%$	1700	5	5	300	250	1	1.5
MGT5M070MCB2	70 $\pm 20\%$	600	10	5	500	25	1	1.5
MGT5M075MCB2	75 $\pm 20\%$	600	10	5	500	25	1	1.5
MGT5M090MCB2	90 $\pm 20\%$	600	10	10	500	50	1	1.5
MGT5M120MCB2	120 $\pm 20\%$	600	10	10	500	50	1	1.5
MGT5M145MCB2	145 $\pm 20\%$	700	10	10	500	100	1	1.5
MGT5M150MCB2	150 $\pm 20\%$	700	10	10	500	100	1	1.5
MGT5M230MCB2	230 $\pm 20\%$	700	10	10	500	100	1	1.5

Note: Operating Temperature: $-40^\circ\text{C} \sim +85^\circ\text{C}$

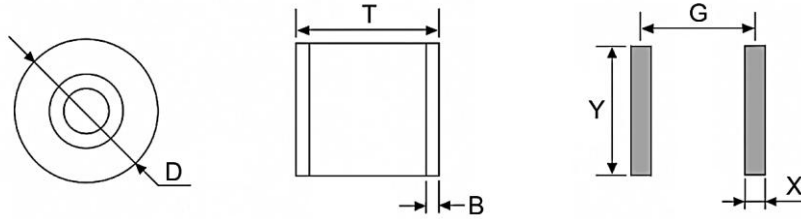
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DIMENSIONS AND RECOMMENDATION PAD



Unit: mm

Series	D	T	B	G	X	Y
MGT5-2	5~5.8	5.5~6.3	0.5±0.1	6.0	1.5	5.5

PART NUMBERING SYSTEM

MGT **5** **L** **070M** **CB2**
 (1) (2) (3) (4) (5)

No	Item	Code	Description
(1)	Product Code	MGT	Gas Discharge Tube series
(2)	Size Code	5	5.5mm Diameter DxT: 5.5x6.0mm
(3)	Discharge Current	L	L: 5KA, 8/20μs, 10 times K: 3KA; M: 10KA
(4)	DC Spark Over Voltage	070M	70V ±20%(M) DC Spark Over Voltage, 100V/s
(5)	Series Code	CB2	CB2: 2 Poles Round type Internal Control Reference

ELECTRICAL RATING

Item	Test Condition	Requirement
DC Spark-over Voltage	The voltage is measured with voltage ramp $dv/dt = 100V/s$.	To meet the specified value
Maximum Impulse Spark-over Voltage	The voltage is measured with voltage ramp $dv/dt = 1000V/\mu s$.	
Impulse Discharge Current	Maximum 8/20 μs surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time, without causing the DC spark-over voltage to change more than 25% from its initial measured value. Crest Value Current (%) Time Impulse Width	
Alternating Discharge Current	Rated RMS value of AC current at 50Hz, 1 second for 10 times with interval time 3 minutes.	
Insulation Resistance	The resistance of gas tube shall be measured between two electrodes.	
Capacitance	The capacitance of gas tube shall be measured between two electrodes. Test frequency: 1MHz	

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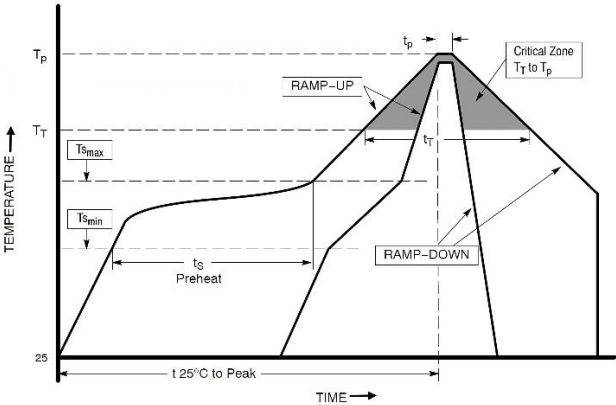
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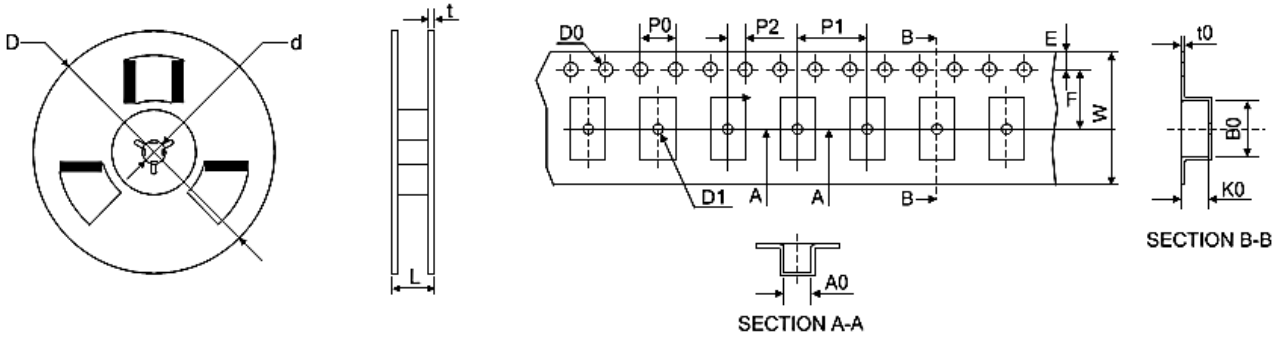
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RECOMMENDED SOLDERING PROFILES

Reflow Soldering Condition		
Pre Heat	Temp. Min $T_{s(min)}$	150°C
	Temp. Max $T_{s(max)}$	200°C
	Time (min. to max.) (t_s)	60~180 sec
Average ramp up rate (T_L) to peak		3°C/sec Max.
$T_{s(max)}$ to T_L (Ramp-up rate)		3°C/sec Max.
Reflow	Temp. (T_L)	217°C
	Time (min. to max.) (t_L)	60~150 sec
Peak Temperature (T_p)		260°C
Time within 5°C of Peak Temp (t_p)		20-40 sec
Ramp-down Rate		6°C/sec Max.
Time (25°C to Peak Temp)		8 mins Max.



PACKAGING SPECIFICATION



Unit: mm

Package	D ±2.0	d ±0.5	L ±2.0	t ±0.2	W ±0.2	P0 ±0.1	P1 ±0.2	P2 ±0.1	D0 ±0.05	E ±0.1	F ±0.1	A0 ±0.1	K0 ±0.1	B0 ±0.1	t0 ±0.1	Qty/ Reel
Reel	330	13.0	20.0	2.0	16	4	12	2	1.55	1.75	7.5	5.85	6.20	7.00	0.5	800

*Specifications subject to change without notice.