

Gas Discharge Tube

8.0x6.0mm 2 Poles Round End

MGT8-2 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
8.0x6.0mm	(V)	(V)	(KA)	(A)	(Times)	(V _{DC})	(G Ω)	(pF)
MGT8M075MCB2	75 \pm 20%	600	10	10	500	25	1	1.5
MGT8M090MCB2	90 \pm 20%	600	10	10	500	50	1	1.5
MGT8M120MCB2	120 \pm 20%	600	10	10	500	50	1	1.5
MGT8M145MCB2	145 \pm 20%	700	10	10	500	100	1	1.5
MGT8M150MCB2	150 \pm 20%	700	10	10	500	100	1	1.5
MGT8M230MCB2	230 \pm 20%	700	10	10	500	100	1	1.5
MGT8M250MCB2	250 \pm 20%	800	10	10	500	100	1	1.5
MGT8M300MCB2	300 \pm 20%	900	10	10	500	100	1	1.5
MGT8M350MCB2	350 \pm 20%	900	10	10	500	100	1	1.5
MGT8M400MCB2	400 \pm 20%	1000	10	10	500	100	1	1.5
MGT8M470MCB2	470 \pm 20%	1100	10	10	500	250	1	1.5
MGT8M600MCB2	600 \pm 20%	1300	10	10	500	250	1	1.5
MGT8M800MCB2	800 \pm 20%	1500	10	10	500	250	1	1.5
MGT8P075MCB2	75 \pm 20%	600	20	20	500	25	1	1.5
MGT8P090MCB2	90 \pm 20%	600	20	20	500	50	1	1.5
MGT8P120MCB2	120 \pm 20%	600	20	20	500	50	1	1.5
MGT8P145MCB2	145 \pm 20%	700	20	20	500	100	1	1.5
MGT8P150MCB2	150 \pm 20%	700	20	20	500	100	1	1.5
MGT8P230MCB2	230 \pm 20%	700	20	20	500	100	1	1.5
MGT8P250MCB2	250 \pm 20%	800	20	20	500	100	1	1.5
MGT8P300MCB2	300 \pm 20%	900	20	20	500	100	1	1.5
MGT8P350MCB2	350 \pm 20%	900	20	20	500	100	1	1.5
MGT8P400MCB2	400 \pm 20%	1000	20	20	500	100	1	1.5
MGT8P470MCB2	470 \pm 20%	1100	20	20	500	250	1	1.5
MGT8P600MCB2	600 \pm 20%	1300	20	20	500	250	1	1.5
MGT8P800MCB2	800 \pm 20%	1500	20	20	500	250	1	1.5

Note: Operating Temperature: -40°C ~ +85°C

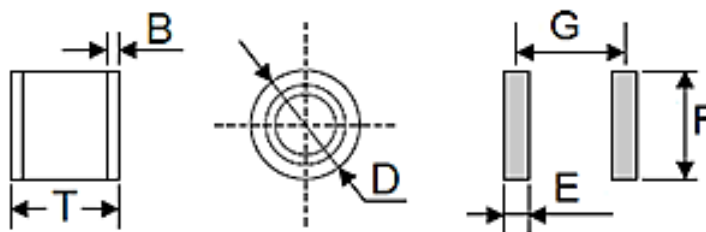
Gas Discharge Tube

8.0x6.0mm 2 Poles Round End

MGT8-2 Series

MERITEK

DIMENSIONS AND RECOMMENDATION PAD



Unit: mm

Series	D	T	B	G	E	F
MGT8-2	7.5~8.3	5.5~6.3	0.5±0.1	6.0	1.5	8.0

PART NUMBERING SYSTEM

MGT **8** **M** **075M** **CB2**
 (1) (2) (3) (4) (5)

No	Item	Digit	Description	
(1)	Product Code	MGT	Gas Discharge Tube series	
(2)	Size Code	8	8.0mm Diameter	DxT: 8.0x6.0mm
(3)	Discharge Current	M	M: 10KA, 8/20μs, 10 times	P: 20KA
(4)	DC Spark Over Voltage	075M	75V ±20%(M)	DC Spark Over Voltage, 100V/s
(5)	Series Code	CB2	CB2: 2 Poles Round type	Internal Control Reference

RELIABILITY AND TEST CONDITON

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	<p>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.</p> <p>Crest Value</p> <p>The graph shows a typical 8/20 μs surge current waveform. The y-axis is Current (%) from 0 to 100. The x-axis is Time. The current rises to a peak of 100% at 8 μs. The time to reach 50% of the peak current is 20 μs. The total duration of the impulse is labeled as Impulse Width.</p>	To meet the specified value
Alternating Discharge Current	Rated RMS value of AC current at 50Hz, 1 second for 10 times with interval time 3 minutes. DC spark-over voltage shall not be changed more than ±25% from its initial value. $IR > 10^8 \Omega$ (-20%, +30% for 70~90V).	To meet the specified value
Insulation Resistance	The resistance of gas tube shall be measured between two electrodes.	To meet the specified value
Capacitance	The capacitance of gas tube shall be measured between two electrodes.	

Gas Discharge Tube

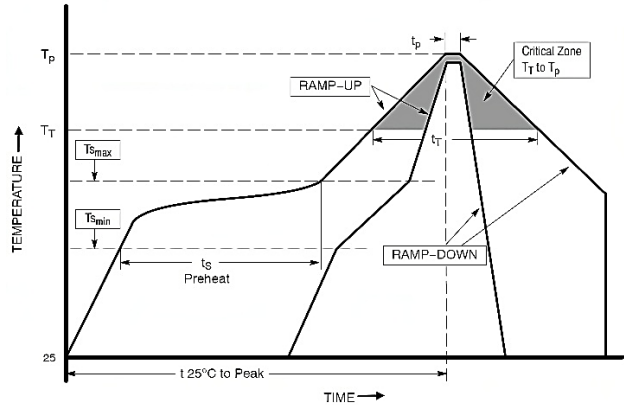
8.0x6.0mm 2 Poles Round End

MGT8-2 Series

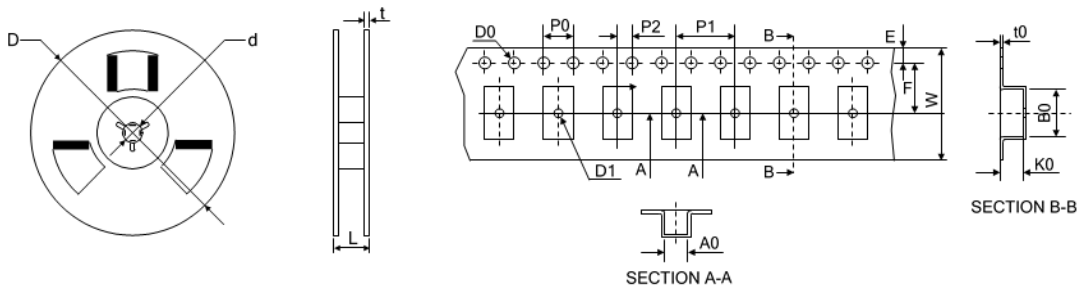
MERITEK

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



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	8.20	8.50	7.50	0.5	500

Unit: mm

*Specifications subject to change without notice.