

Gas Discharge Tube

8.0x10.0mm 3 Poles Square End

MGT8-3SS Series

MERITEK

FEATURE

- Ultra-Fast Surge Response
- High Surge Current Capability
- High Holder Voltage, High Insulation Resistance
- Low capacitance ($\leq 2\text{pF}$), 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
8.0x10.0mm	(V)	(V)	(KA)	(A)	(Times)	(V _{DC})	(G Ω)	(pF)
MGT8M075MCB3SS	75 $\pm 20\%$	700	10	10	300	25	1	2
MGT8M090MCB3SS	90 $\pm 20\%$	700	10	10	300	50	1	2
MGT8M150MCB3SS	150 $\pm 20\%$	700	10	10	300	100	1	2
MGT8M200MCB3SS	200 $\pm 20\%$	700	10	10	300	100	1	2
MGT8M230MCB3SS	230 $\pm 20\%$	800	10	10	300	100	1	2
MGT8M350MCB3SS	350 $\pm 20\%$	900	10	10	300	100	1	2
MGT8M400MCB3SS	400 $\pm 20\%$	1000	10	10	300	100	1	2
MGT8M470MCB3SS	470 $\pm 20\%$	1100	10	10	300	250	1	2
MGT8M600MCB3SS	600 $\pm 20\%$	1300	10	10	300	250	1	2
MGT8M800MCB3SS	800 $\pm 20\%$	1600	10	10	300	250	1	2
MGT8P075MCB3SS	75 $\pm 20\%$	700	20	20	300	25	1	2
MGT8P090MCB3SS	90 $\pm 20\%$	700	20	20	300	50	1	2
MGT8P150MCB3SS	150 $\pm 20\%$	700	20	20	300	100	1	2
MGT8P200MCB3SS	200 $\pm 20\%$	700	20	20	300	100	1	2
MGT8P230MCB3SS	230 $\pm 20\%$	800	20	20	300	100	1	2
MGT8P350MCB3SS	350 $\pm 20\%$	900	20	20	300	100	1	2
MGT8P400MCB3SS	400 $\pm 20\%$	1000	20	20	300	100	1	2
MGT8P470MCB3SS	470 $\pm 20\%$	1100	20	20	300	250	1	2
MGT8P600MCB3SS	600 $\pm 20\%$	1300	20	20	300	250	1	2
MGT8P800MCB3SS	800 $\pm 20\%$	1600	20	20	300	250	1	2

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

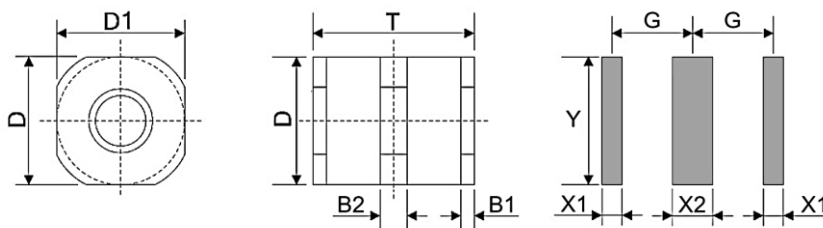
Gas Discharge Tube

8.0x10.0mm 3 Poles Square End

MGT8-3SS Series

MERITEK

DIMENSIONS AND RECOMMENDATION PAD



Unit: mm

Series	D	D1	T	B	B1	G	Y	X1	X2
MGT8-3SS	7.2~8.2	7.9±0.2	10.0±0.5	0.5±0.1	1.5±0.2	5.0	8.0	1.5	3.0

PART NUMBERING SYSTEM

MGT (1) **8** (2) **M** (3) **075M** (4) **CB3SS** (5)

No	Item	Code	Description
(1)	Product Code	MGT	MGT: Gas Discharge Tube series
(2)	Size Code	8	8.0mm Diameter DxT: 8.0x10.0mm
(3)	Discharge Current	M	M: 10KA, 8/20μs, 10times P: 20KA
(4)	DC Spark Over Voltage	075M	75V ±20%(M) DC Spark Over Voltage, 100V/s
(5)	Series Code	CB3SS	CB3SS: 3 Poles Square End Internal Control Reference

ELECTRICAL RATING

Item	Test Condition	Requirement
DC Spark-over Voltage	The voltage is measured with voltage ramp $dv/dt = 100V/s$. Test is between each side electrode and center electrode.	To meet the specified value
Maximum Impulse Spark-over Voltage	The voltage is measured with voltage ramp $dv/dt = 1000V/\mu s$. Test is between each side electrode and center electrode.	
Impulse Discharge Current	Maximum surge current that can be applied through center electrode with 8/20μs waveform, for 10 times with 3min interval time, which will be equally divided between each side electrode to center electrode The graph shows the impulse discharge current waveform. The y-axis is Current (%) from 0 to 100. The x-axis is Time (μs) from 0 to 20. The curve starts at 0, rises to a peak of 100% at approximately 8μs, and then decays. The 8μs time constant is marked at the peak, and the 20μs time constant is marked at the 50% current level. The peak is labeled 'Crest Value'.	
Alternating Discharge Current	Rated RMS value of AC current at 50Hz, 1 second for 10 times with interval time 3 minutes. Test is between each side electrode and center electrode.	
Insulation Resistance	The resistance of gas tube shall be measured between each side electrodes and center electrode	
Capacitance	The capacitance of gas tube shall be measured between each side electrodes and center electrode. Test frequency: 1MHz	

Gas Discharge Tube

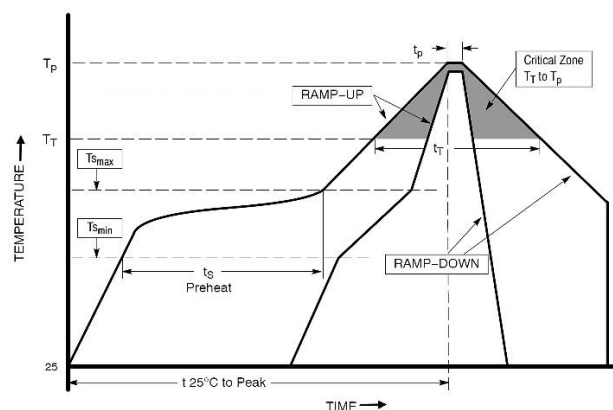
8.0x10.0mm 3 Poles Square End

MGT8-3SS Series

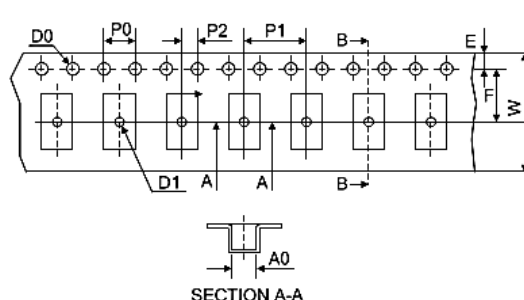
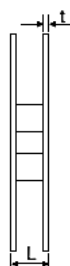
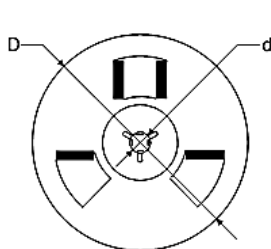
MERITEK

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



SECTION B-B

SECTION A-A

Unit: mm																
Package	D ±2.0	d ±0.5	L ±2.0	t ±0.2	W ±0.2	P0 ±0.1	P1 ±0.1	P2 ±0.1	D0 ±0.05	E ±0.1	F ±0.1	A0 ±0.1	K0 ±0.1	B0 ±0.1	t0 ±0.05	Qty/ Reel
Reel	330	13	20	2	16.0	4.0	16.0	2.0	1.55	1.75	7.5	10.3	8.40	8.40	0.5	300

*Specifications subject to change without notice.