

Gas Discharge Tube

5.0x5.0mm 2 Poles Square End

MGT5-2ST Series

MERITEK

FEATURE

- Ultra-Fast Surge Response
- High Surge Current Capability
- High Holder Voltage, High Insulation Resistance
- Low capacitance ($\leq 1\text{pF}$), Micro-Gap Design
- Applications: Repeaters, Modems, Telephone Interface, Line Cards, Data Communication Equipment, Line Test Equipment
- UL Safety Approved Certification No: E223045

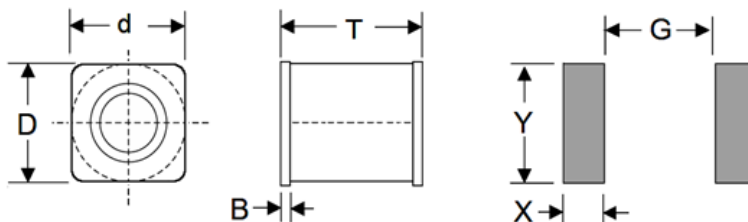


ELECTRICAL CHARACTERISTICS

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
5.0x5.0mm	(V)	(V)	(KA)	(A)	(Times)	(V_{DC})	(G Ω)	(pF)
MGT5L090MCB2ST	90 $\pm$ 20%	650	5	5	300	50	1	1
MGT5L150MCB2ST	150 $\pm$ 20%	700	5	5	300	100	1	1
MGT5L230MCB2ST	230 $\pm$ 20%	700	5	5	300	100	1	1
MGT5L250MCB2ST	250 $\pm$ 20%	700	5	5	300	100	1	1
MGT5L300MCB2ST	300 $\pm$ 20%	900	5	5	300	100	1	1
MGT5L350MCB2ST	350 $\pm$ 20%	900	5	5	300	100	1	1
MGT5L400MCB2ST	400 $\pm$ 20%	1000	5	5	300	100	1	1
MGT5L470MCB2ST	470 $\pm$ 20%	1100	5	5	300	250	1	1

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

DIMENSIONS AND RECOMMENDATION PAD



Unit: mm

Series	D	d	T	B	G	X	Y
MGT5-2ST	5.0 $\pm$ 0.2	5.0 $\pm$ 0.1	5.0 $\pm$ 0.3	0.5 $\pm$ 0.1	3.4	1.1	5.0

PART NUMBERING SYSTEM

MGT (1) **5** (2) **L** (3) **090M** (4) **CB2S** (5)

No	Item	Code	Description	
(1)	Product Code	MGT	Gas Discharge Tube series	
(2)	Size Code	5	5.0mm Diameter	DxT: 5.0x5.0mm
(3)	Discharge Current	L	L: 5KA	8/20 μs , 10 times
(4)	DC Spark Over Voltage	090M	90V $\pm$ 20%(M)	DC Spark Over Voltage, 100V/s
(5)	Series Code	CB2ST	CB2S: 2 Poles Square End	Internal Control Reference

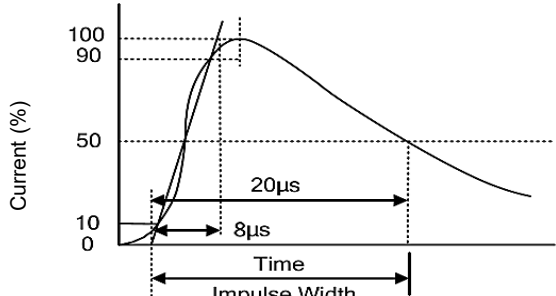
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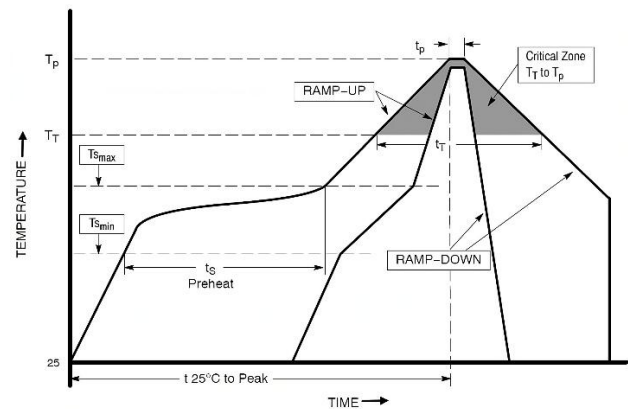
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ELECTRICAL RATING

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 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. $IR > 10^5 \Omega$	
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.	

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.

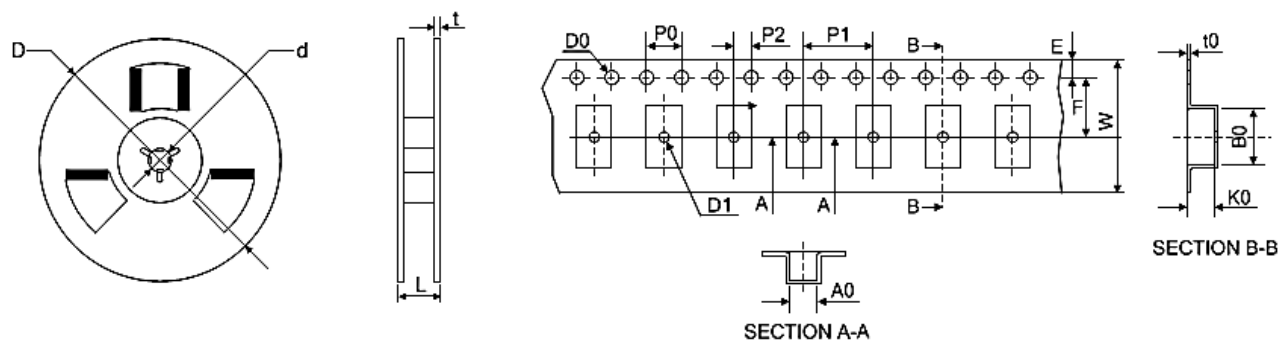


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PACKAGING SPECIFICATION



Unit: mm

Package	D ±1.0	d ±0.5	L ±2.0	t ±0.2	W ±0.2	P0 ±0.1	P1 ±0.1	P2 ±0.1	D0 ±0.1	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	12.0	4.0	8.0	2.0	1.55	1.75	5.5	5.4	5.4	5.4	0.4	800