

Gas Discharge Tube

4.2x4.0mm 2 Poles Square End

MGT4-2S 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

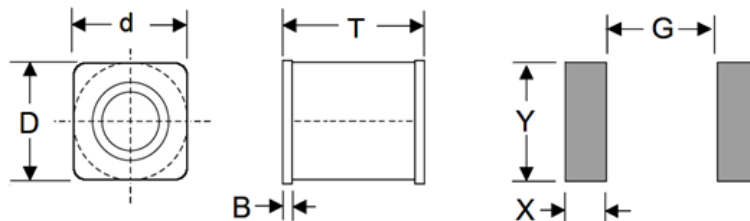


ELECTRICAL CHARACTERISTICS

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
4.2x4.0mm	(V)	(V)	(KA)	(A)	(Times)	(V _{DC})	(G Ω)	(pF)
MGT4K075MCB2S	75 $\pm 20\%$	800	3	3	300	25	1	1
MGT4K090MCB2S	90 $\pm 20\%$	800	3	3	300	50	1	1
MGT4K145MCB2S	145 $\pm 20\%$	800	3	3	300	100	1	1
MGT4K230MCB2S	230 $\pm 20\%$	700	3	3	300	100	1	1
MGT4K250MCB2S	250 $\pm 20\%$	700	3	3	300	100	1	1
MGT4K300MCB2S	300 $\pm 20\%$	800	3	3	300	100	1	1
MGT4K350MCB2S	350 $\pm 20\%$	850	3	3	300	100	1	1
MGT4K400MCB2S	400 $\pm 20\%$	900	3	3	300	100	1	1
MGT4K470MCB2S	470 $\pm 20\%$	1000	3	3	300	250	1	1
MGT4K600MCB2S	600 $\pm 20\%$	1200	3	3	300	250	1	1
MGT4K800MCB2S	800 $\pm 20\%$	1400	3	3	300	250	1	1
MGT4K102MCB2S	1000 $\pm 20\%$	1600	3	3	300	500	1	1
MGT4K122MCB2S	1200 $\pm 20\%$	1900	3	3	300	500	1	1

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

DIMENSIONS AND RECOMMENDATION PAD



Unit: mm

Series	D	d	T	B	G	X	Y
MGT4-2S	4.2 $\pm$ 0.5	4.2 $\pm$ 0.5	4.0 $\pm$ 0.4	0.4 $\pm$ 0.1	2.2	1.3	5.0

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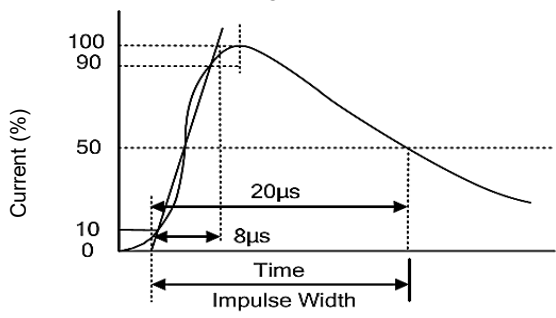
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PART NUMBERING SYSTEM

MGT **4** **K** **075M** **CB2S**
 (1) (2) (3) (4) (5)

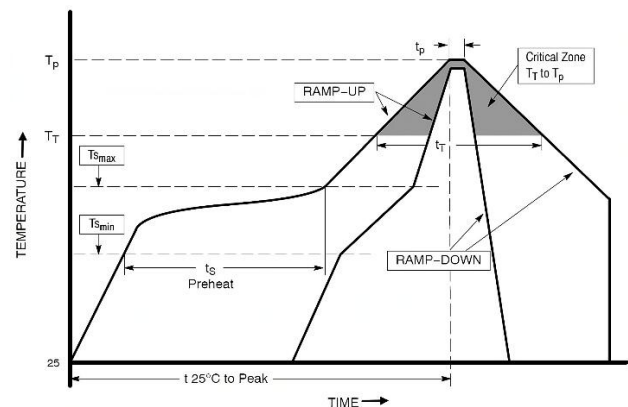
No	Item	Code	Description
(1)	Product Code	MGT	Gas Discharge Tube series
(2)	Size Code	4	4.2mm Diameter
(3)	Discharge Current	K	K: 3KA
(4)	DC Spark Over Voltage	075M	75V ±20%(M)
(5)	Series Code	CB2S	CB2S: 2 Poles Square End

ELECTRICAL RATING

Item	Test Condition	Requirement
DC Spark-over Voltage	The voltage is measured with voltage ramp $dv/dt = 100V/s$.	
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 	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).	
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	

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.

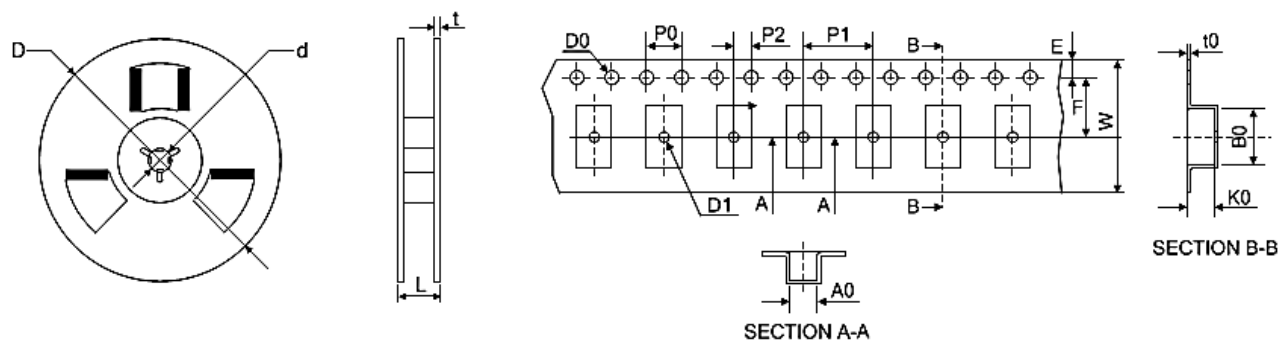


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PACKAGING SPECIFICATION



Unit: mm

Package	D ±2.0	d ±0.50	L ±0.50	t ±0.20	W ±0.20	P0 ±0.10	P1 ±0.20	P2 ±0.10	D0 ±0.05	E ±0.10	F ±0.10	A0 ±0.10	K0 ±0.10	B0 ±0.10	t0 ±0.10	Qty/ Reel
Reel	330	13.0	20.0	2.00	16.0	4.00	12.0	2.00	1.55	1.75	7.50	4.27	5.20	4.45	0.50	900

*Specifications subject to change without notice.