

Gas Discharge Tube

3.5x4.0mm 2 Poles Square End

MGT4-2H 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

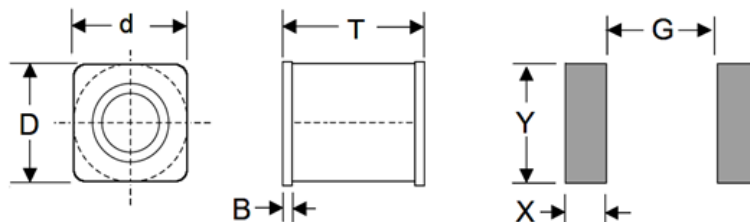


ELECTRICAL CHARACTERISTICS

Part Number	DC Spark-over Voltage	Impulse Spark-over Voltage	Impulse Discharge Current	Alternating Discharge Current	Impulse Discharge Voltage	Minimum Insulation Resistance		Maximum Capacitance
	100V/s	1KV/ μs	8/20 μs , 10times	50Hz, 1sec	10/700 μs , 10times	V_T	IR	1MHz/1V
3.5x4.0mm	(V)	(V)	(KA)	(A)	(KV)	(V _{DC})	(G Ω)	(pF)
MGT4K090NCB2H	90 $\pm$ 30%	650	3	3	6	50	1	0.5
MGT4K150NCB2H	150 $\pm$ 30%	650	3	3	6	100	1	0.5
MGT4K200NCB2H	200 $\pm$ 30%	750	3	3	6	100	1	0.5
MGT4K250NCB2H	250 $\pm$ 30%	750	3	3	6	100	1	0.5
MGT4K300NCB2H	300 $\pm$ 30%	850	3	3	6	100	1	0.5
MGT4K350NCB2H	350 $\pm$ 30%	850	3	3	6	100	1	0.5
MGT4K400NCB2H	400 $\pm$ 30%	900	3	3	6	100	1	0.5
MGT4K470NCB2H	470 $\pm$ 30%	1000	3	3	6	250	1	0.5

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

DIMENSIONS AND RECOMMENDATION PAD



Unit: mm

Series	D	d	T	B	G	X	Y
MGT4-2H	3.5 $\pm$ 0.2	3.5 $\pm$ 0.2	4.0 $\pm$ 0.3	0.4 $\pm$ 0.2	3.0	1.0	4.0

PART NUMBERING SYSTEM

MGT **4** **K** **090N** **CB2H**
 (1) (2) (3) (4) (5)

No	Item	Code	Description	
(1)	Product Code	MGT	Gas Discharge Tube series	
(2)	Size Code	4	3.5mm Diameter	DxT: 3.5x4.0mm
(3)	Discharge Current	K	K:3KA	8/20 μs , 10 times
(4)	DC Spark Over Voltage	090N	90V $\pm$ 30%(N)	DC Spark Over Voltage, 100V/s
(5)	Series Code	CB2H	CB2H: 2 Poles Square End	Internal Control Reference

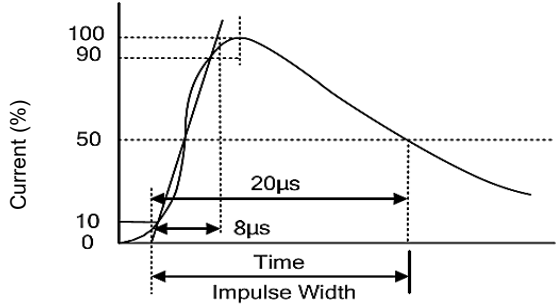
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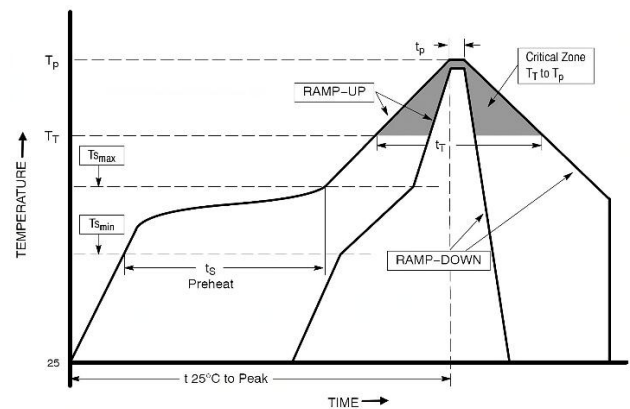
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ELECTRICAL RATING

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, without causing the DC spark-over voltage to change more than 25% from its initial measured value. Crest Value 	
Alternating Discharge Current	Rated RMS value of AC current at 50Hz, 1 second for 10 times with interval time 3 minutes. ($IR > 10^8 \Omega$)	
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. 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.

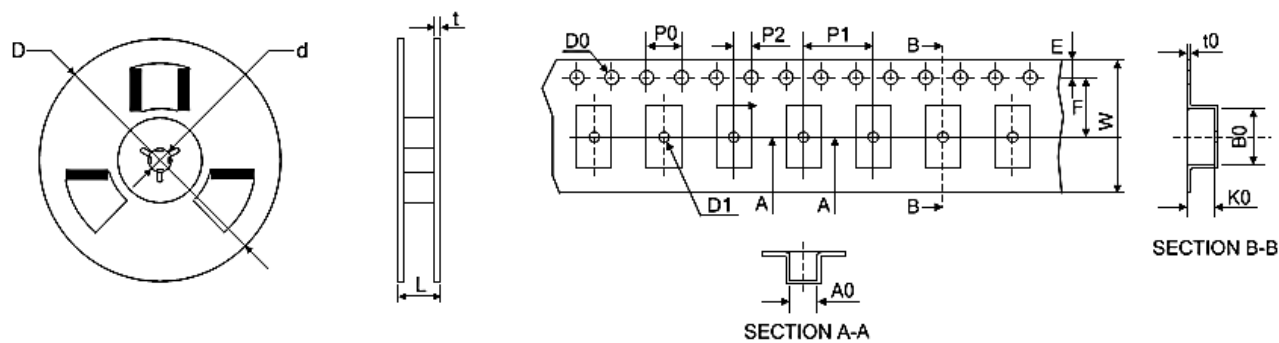


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PACKAGING SPECIFICATION



Unit: mm

Package	D ±2.0	d ±0.50	L ±2.00	t ±0.20	W ±0.20	P0 ±0.10	P1 ±0.20	P2 ±0.10	D0 ±0.1	E ±0.10	F ±0.10	A0 ±0.10	K0 ±0.10	B0 ±0.10	t0 ±0.10	Qty/ Reel
Reel	330	13.0	16.0	2.00	16.0	8.00	4.00	2.00	1.50	1.75	7.50	3.80	3.80	4.30	0.30	2000

*Specifications subject to change without notice.