

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

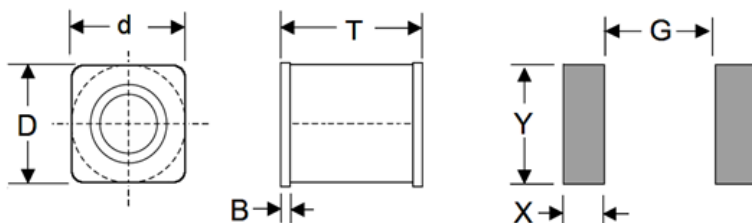


ELECTRICAL CHARACTERISTICS

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	Digit	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

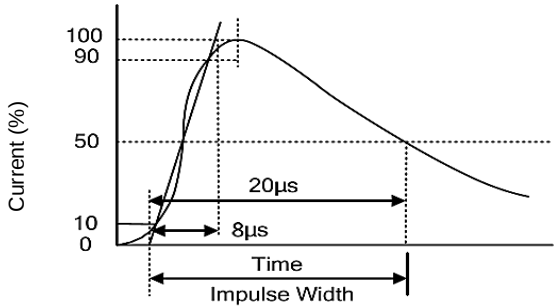
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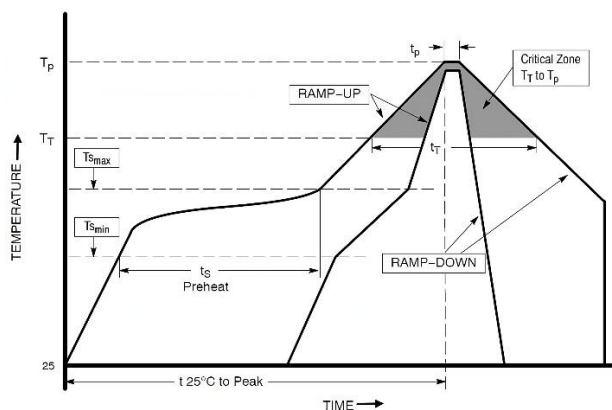
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RELIABILITY AND TEST CONDITON

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	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 $\pm 25\%$ 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.	

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.

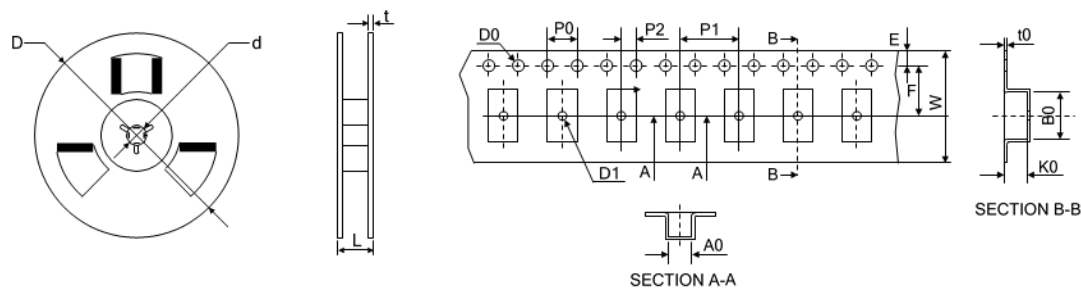


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PACKAGING SPECIFICATION



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.