

Gas Discharge Tube

8.0x8.0mm 2 Poles Round End

MGT8-28 Series

MERITEK

FEATURE

- Ultra-Fast Surge Response
- High Surge Current Capability
- High Holder Voltage, High Insulation Resistance
- Low capacitance ($\leq 1.5\text{pF}$), Micro-Gap Design
- Applications: Repeaters, Modems, Telephone Interface, Line cards, Data Communication Equipment, Line Test Equipment
- UL Safety Approved Certification No: E223045



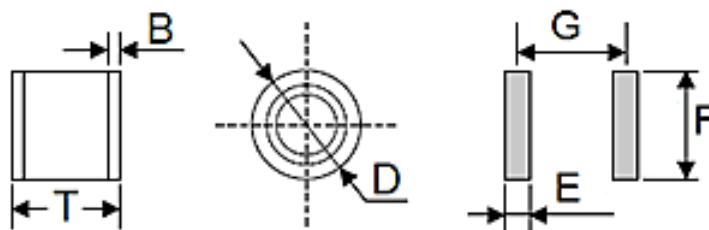
ELECTRICAL CHARACTERISTICS

Part Number	DC Spark-over Voltage	Impulse Spark-over Voltage	Impulse Discharge Current	Alternating Discharge Current	Impulse Life	Minimum Insulation Resistance		Max Cap	AC With-standing Voltage
	100V/s	1KV/ μs	8/20 μs , 10times	50Hz, 1sec	10/1K μs , 100A	V_T	IR	1MHz	
8.0x8.0mm	(V)	(V)	(KA)	(A)	(Times)	(V _{dc})	(G Ω)	(pF)	(1min)
MGT8H142MCB28	1400 $\pm 20\%$	2200	2.5	2.5	100	500	1	1.5	--
MGT8H162MCB28	1600 $\pm 20\%$	2400	2.5	2.5	100	500	1	1.5	--
MGT8H202MCB28	2000 $\pm 20\%$	3000	2.5	2.5	100	500	1	1.5	--
MGT8H252MCB28	2500 $\pm 20\%$	3600	2.5	2.5	100	500	1	1.5	1250
MGT8H272MCB28	2700 $\pm 20\%$	4000	2.5	2.5	300*	1000	1	1.5	1250
MGT8H302MCB28	3000 $\pm 20\%$	4200	2.5	2.5	100	1000	1	1.5	1500
MGT8H352MCB28	3500 $\pm 20\%$	5000	2.5	2.5	100	1000	1	1.5	1800
MGT8H362MCB28	3600 $\pm 20\%$	5200	2.5	2.5	100	1000	1	1.5	1800
MGT8K272MCB28	2700 $\pm 20\%$	4000	3.0	3.0	300*	1000	1	1.5	1250
MGT8K302MCB28	3000 $\pm 20\%$	4200	3.0	3.0	300*	1000	1	1.5	1500
MGT8K352MCB28	3500 $\pm 20\%$	5000	3.0	3.0	100	1000	1	1.5	1800
MGT8K362MCB28	3600 $\pm 20\%$	5200	3.0	3.0	100	1000	1	1.5	1800
MGT8K402MCB28	4000 $\pm 20\%$	5500	3.0	3.0	100	1000	1	1.5	2000
MGT8L102MCB28	1000 $\pm 20\%$	1400	5.0	5.0	100	500	1	1.5	--
MGT8L142MCB28	1400 $\pm 20\%$	2200	5.0	5.0	100	500	1	1.5	--
MGT8L162MCB28	1600 $\pm 20\%$	2400	5.0	5.0	100	500	1	1.5	--
MGT8L202MCB28	2000 $\pm 20\%$	3000	5.0	5.0	100	500	1	1.5	--
MGT8L252MCB28	2500 $\pm 20\%$	3600	5.0	5.0	100	1000	1	1.5	1250

Notes:

1. * Measure with an 8/20 μs waveform, 100A
2. Operating Temperature: -40°C ~ +85°C

DIMENSIONS AND RECOMMENDATION PAD



Unit: mm

Series	D	T	B	G	E	F
MGT8-28	7.5~8.3	7.9~8.6	0.5 ± 0.4	8.0	1.5	8.0

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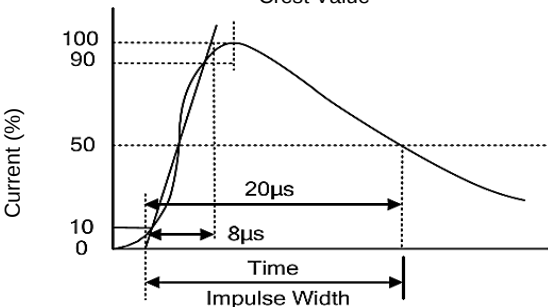
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PART NUMBERING SYSTEM

MGT **8** **H** **142M** **CB28**
 (1) (2) (3) (4) (5)

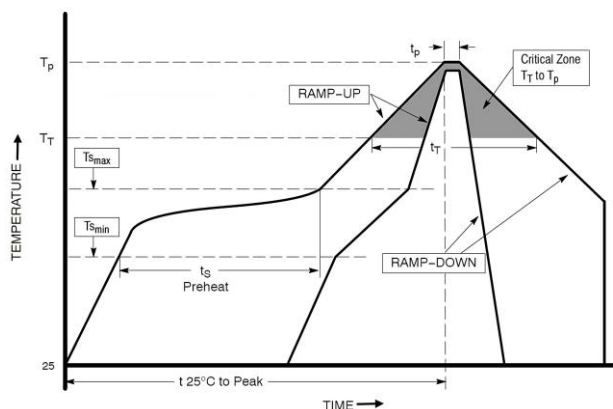
No	Item	Code	Description
(1)	Product Code	MGT	Gas Discharge Tube series
(2)	Size Code	8	8: 8mm Diameter DxT: 8.0x8.0mm
(3)	Discharge Current	H	H: 2.5KA, 8/20μs, 10times K: 3KA, L: 5KA
(4)	DC Spark Over Voltage	142M	1400V ±20%(M) DC Spark Over Voltage, 100V/s
(5)	Series Code	CB28	CB28: 2 Poles Round End Internal Control Reference

RELIABILITY

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 	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.	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.

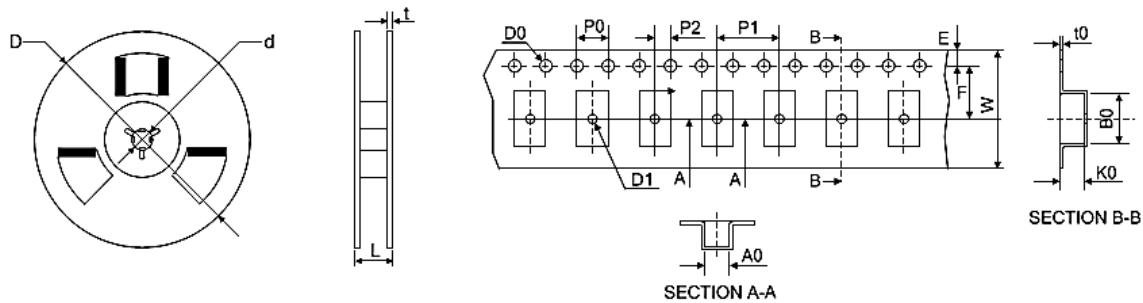


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PACKAGING SPECIFICATION



Unit: mm

Package	D ±2.0	d ±0.5	L ±2.0	t ±0.2	W ±0.2	P0 ±0.1	P1 ±0.2	P2 ±0.1	D0 ±0.10	E ±0.1	F ±0.1	A0 ±0.1	K0 ±0.1	B0 ±0.1	t0 ±0.1	Qty/ Reel
Reel	330	13	20	2	16.0	4.0	12.0	4.0	1.55	1.75	7.5	8.80	8.30	8.30	0.5	500

*Specifications subject to change without notice.