

Gas Discharge Tube

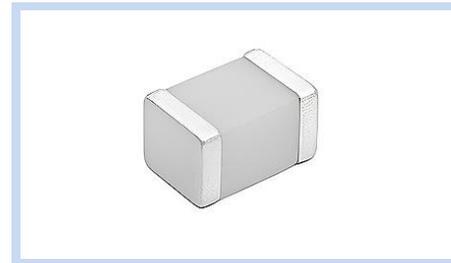
SMD 1812 2 Poles Square End

MGTS-12 Series

MERITEK

FEATURE

- 2KA 8/20 μ s Maximum Surge Current Capacity in accordance with IEC61000-4-5
- 4KV 10/700 μ s Maximum Surge Rating in accordance with ITU-TK.21
- High Holder Voltage, High Insulation Resistance
- Low capacitance (≤ 0.5 pF), Micro-Gap Design
- Applications: Repeaters, Modems, Telephone Interface, Line cards, Data Communication Equipment, Line Test Equipment
- UL Safety Approved Certification No: E223045

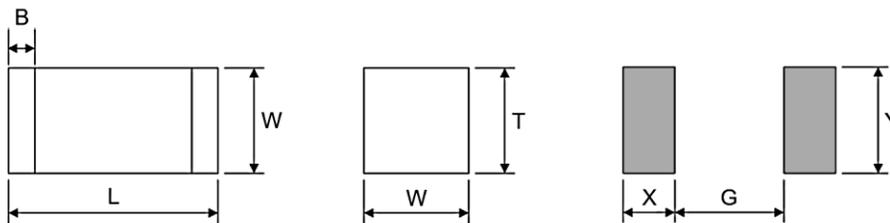


ELECTRICAL CHARACTERISTICS

Part Number	DC Spark-over Voltage	Impulse Spark-over Voltage	Impulse Discharge Current	Impulse Withstanding Voltage Capacity	Minimum Insulation Resistance		Maximum Capacitance
	100V/s	1KV/ μ s	8/20 μ s, 10times	10/700 μ s, 10times	V _T	IR	1MHz
1812	(V)	(V)	(KA)	(KV)	(V _{DC})	(G Ω)	(pF)
MGTSG075NCB12	75 \pm 30%	600	2	4	50	1	0.5
MGTSG090NCB12	90 \pm 30%	700	2	4	50	1	0.5
MGTSG120NCB12	120 \pm 30%	700	2	4	50	1	0.5
MGTSG150NCB12	150 \pm 30%	700	2	4	50	1	0.5
MGTSG200NCB12	200 \pm 30%	750	2	4	100	1	0.5
MGTSG230NCB12	230 \pm 30%	750	2	4	100	1	0.5
MGTSG300NCB12	300 \pm 30%	900	2	4	100	1	0.5
MGTSG350NCB12	350 \pm 30%	900	2	4	100	1	0.5
MGTSG400NCB12	400 \pm 30%	1000	2	4	100	1	0.5
MGTSG420NCB12	420 \pm 30%	1000	2	4	100	1	0.5
MGTSG470NCB12	470 \pm 30%	1000	2	4	100	1	0.5
MGTSG500NCB12	500 \pm 30%	1100	2	4	100	1	0.5
MGTSE600NCB12	600 \pm 30%	1200	1	4	100	1	0.5
MGTSE800NCB12	800 \pm 30%	1600	1	4	100	1	0.5
MGTSE102MCB12	1000 \pm 20%	2400	1	4	100	1	0.5
MGTSE122MCB12	1200 \pm 20%	2600	1	4	100	1	0.5
MGTSE152MCB12	1500 \pm 20%	2800	1	4	100	1	0.5

Note: Operating Temperature: -40°C ~ +90°C

DIMENSIONS AND RECOMMENDATION PAD



Unit: mm

Series	L	W	T	B	G	X	Y
MGTS-12	4.5 \pm 0.3	3.2 \pm 0.3	2.7 \pm 0.3	0.5 \pm 0.1	3.0	1.5	4.2

Gas Discharge Tube

SMD 1812 2 Poles Square End

MGTS-12 Series

MERITEK

PART NUMBERING SYSTEM

MGTS **G** **075N** **CB12**
 (1) (2) (3) (4)

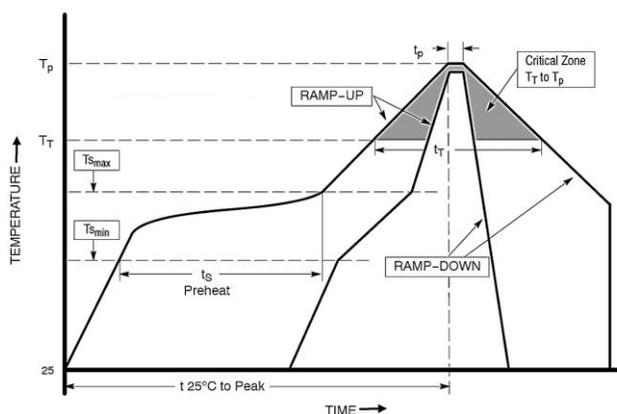
No	Item	Code	Description	
(1)	Product Code	MGTS	Gas Discharge Tube series, Surface Mount 2 Poles Square End type	
(2)	Discharge Current	G	G: 2KA, 8/20 μ s, 10times	E: 1KA
(3)	DC Spark Over Voltage	075N	75V \pm 30%(N)	DC Spark Over Voltage, 100V/s
(4)	Series Code	CB12	CB12: 4.5x3.2mm (EIA 1812)	

ELECTRICAL CHARACTERISTICS

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.	To meet the specified value
Impulse Withstanding Voltage	The maximum 10/700 μs surge that can be applied to the gas tube, 5 positive and 5 negative surges, with 1 minute interval time.	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.



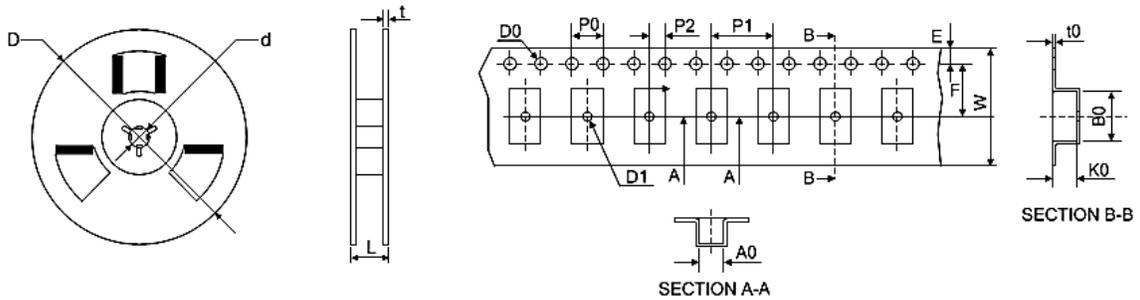
Gas Discharge Tube

SMD 1812 2 Poles Square End

MGTS-12 Series

MERITEK

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 ± 0.1	E ± 0.1	F ± 0.1	A0 ± 0.1	K0 ± 0.1	B0 ± 0.1	t0 ± 0.1	Qty/ Reel
Reel	330	13	16	2.0	12.0	4.0	8.0	2.0	1.55	1.75	5.50	3.80	3.20	4.90	0.4	2500

*Specifications subject to change without notice.