

Gas Discharge Tube

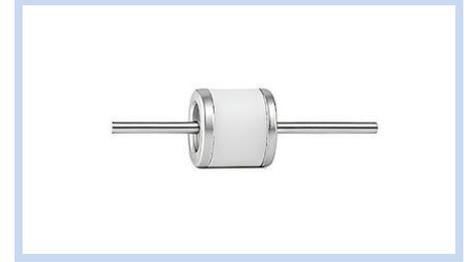
6.0x7.0mm 2 Poles Axial Leaded

MGT6-2Tx Series

MERITEK

FEATURE

- Ultra-Fast Surge Response
- High Surge Current Capability
- High Holder Voltage, High Insulation Resistance
- Low capacitance ($\leq 0.5\text{pF}$), Micro-Gap Design
- Applications: Repeaters, Modems, Telephone Interface, Line Cards, Data Communication Equipment, Line Test Equipment
- UL Safety Approved Certification No: E223045

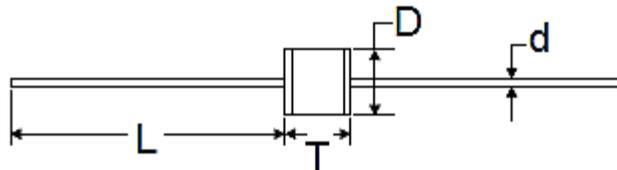


ELECTRICAL CHARACTERISTICS

Part Number	DC Spark-over Voltage	Impulse Spark-over Voltage	Impulse Discharge Current	Impulse Life	Minimum Insulation Resistance		Maximum Capacitance
	100V/s	1KV/ μs	8/20 μs , 10times	10/1K μs , 100A	V_T	IR	1MHz/1V
6.0x7.0mm	(V)	(V)	(KA)	(Times)	(V _{DC})	(G Ω)	(pF)
MGT6K102MCB2T	1000 \pm 20%	2000	3	300	500	1	0.5
MGT6K122MCB2T	1200 \pm 20%	2300	3	300	500	1	0.5
MGT6K142MCB2T	1400 \pm 20%	2500	3	300	500	1	0.5
MGT6K152MCB2T	1500 \pm 20%	2600	3	300	500	1	0.5
MGT6K162MCB2T	1600 \pm 20%	2700	3	300	500	1	0.5
MGT6K202MCB2T	2000 \pm 20%	3000	3	300	500	1	0.5
MGT6K252MCB2T*	2500 \pm 20%	3600	3	300	1000	1	0.5
MGT6K272MCB2T*	2700 \pm 20%	3800	3	300	1000	1	0.5
MGT6K302MCB2T*	3000 \pm 20%	4200	3	300	1000	1	0.5
MGT6K352MCB2T**	3500 \pm 20%	4600	3	300	1000	1	0.5
MGT6K362MCB2T**	3600 \pm 20%	4700	3	300	1000	1	0.5

Note:
 1. Operating Temperature: -40°C ~ +85°C
 2.* AC Withstanding Voltage AC1250V, 1min
 3.** AC Withstanding Voltage AC1800V, 1min

DIMENSIONS



Unit: mm

Series	D	T	d	L
MGT5-2Tx	5.5~6.3	6.5~7.3	0.8 \pm 0.1	30.0 Max

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PART NUMBERING SYSTEM

MGT 6 K 102M CB2T R
 (1) (2) (3) (4) (5) (6)

No	Item	Digit	Description	
(1)	Product Code	MGT	Gas Discharge Tube series	
(2)	Size Code	6	6.0mm Diameter	DxT: 6.0x7.0mm
(3)	Discharge Current	K	K: 3KA, 8/20 μ s, 10 times	L: 5KA ; M:10KA
(4)	DC Spark Over Voltage	102M	1000V \pm 20%(M)	DC Spark Over Voltage, 100V/s
(5)	Series Code	CB2T	CB2T: 2 Poles Round Axial Leaded	Internal Control Reference
(6)	Package Type	R	R: Tape and Reel	Y: Tray and Box

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	<p>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.</p> <p style="text-align: center;">Crest Value</p>	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.	

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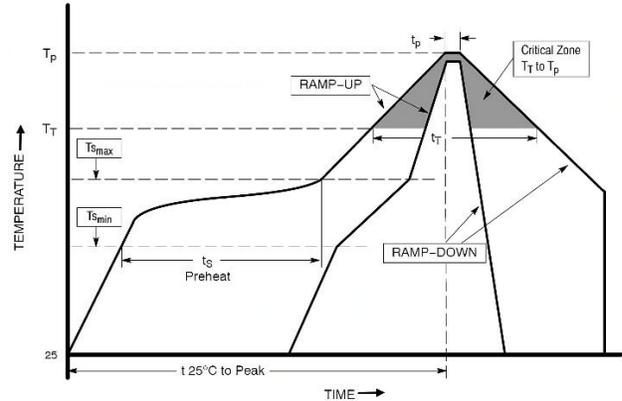
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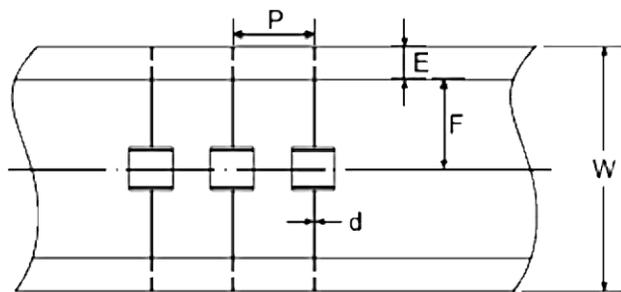
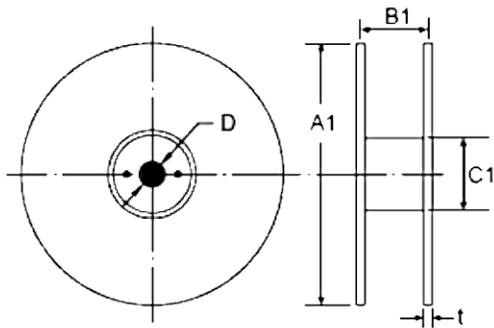
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RECOMMENDED SOLDERING PROFILES

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.

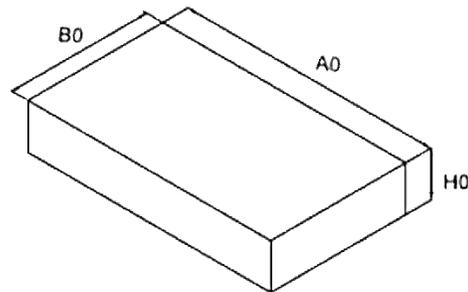
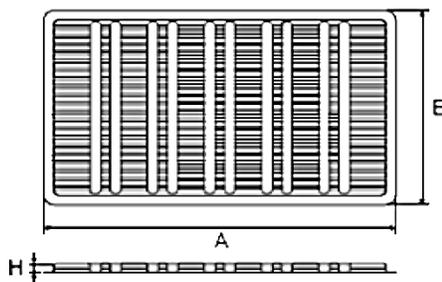


PACKAGING SPECIFICATION



Package	$A1 \pm 2.0$	$B1 \pm 2.0$	$C1 \pm 2.0$	$D \pm 0.5$	$t \pm 0.2$	$P \pm 0.5$	$W \pm 1.0$	$E \pm 0.5$	$F \pm 0.5$	$d \pm 0.1$	Qty
Reel	330	70.0	82.0	25.0	2.0	10.0	65.0	6.0	26.5	0.8	1000

Unit: mm



Package	$A \pm 2.0$	$B \pm 2.0$	$H \pm 5.0$	Qty /Tray	$A0 \pm 2.0$	$B1 \pm 2.0$	$H0 \pm 2.0$	Qty/Box
Tray	267	146	7.2	100	270	150	42	500

Unit: mm

*Specifications subject to change without notice.