

## FEATURES

- Low cost
- Ex-stock Available
- 3 pins
- Lead Free available
- Available package in Tape/Reel & AMNO-pack

## APPLICATIONS

- Microprocessor Systems
- Data Communications
- Consumer Electronics
- Automotive Electronics

## SPECIFICATION \*

Parameters	Product	Option Code
	ZTT	CRT
Frequency Range:	2.0000~50.0MHz	△
Frequency Accuracy at 25°C:	±0.5%	▲
Temp. Stability at -20°C~80°C:	±0.3%	▲
Load Capacitance C1,C2:		
MG& MT:	30pF±20%	▲
MX:	30pF (12.10~19.99MHz)	▲
	15pF (20.00~25.99MHz)	▲
	5pF (26.00~50.00MHz)	▲
Operating Temp. Range:	-20°C~+80°C	▲
Storage Temp. Range:	-40°C~+85°C	▲
Equivalent Series Resistance (ESR):		
	80 Ω Max. (2.000~2.99MHz)	▲
	50 Ω Max. (3.000~3.49MHz)	▲
	30 Ω Max. (3.500~8.00MHz)	▲
	25 Ω Max. (8.010~12.0MHz)	▲
	30 Ω Max. (12.01~50.0MHz)	▲
Supply Voltage V <sub>DD</sub> :	MT & MX: +5V MG: +12V	▲
Withstanding Voltage(5Sec Max.):	100V DC	▲
Insulation Resistance(Ω):	5X10 <sup>8</sup> Ω (+10V DC)	▲
Aging Over 10 years:	±0.3ppm	▲
Design Mode:	See Table 1	△
Applicable IC:		
	MT & MG: 1/6CD4069UBE	△
	MX: 1/6TC74HCU04	△
Package	AMNO-Pack	△
	Bulk	△
	Tape/Reel	△
Other Values:	Lead Free	△

▲ Standard \* Specifications Subject to Change Without Notice  
 △ Optional: please specify required code when inquiring or ordering

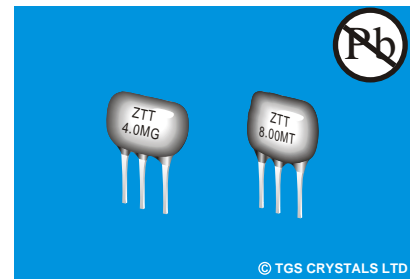
## PACKAGE

- Standard package in bulk: 500pcs/bag, 10 bags/inner box, 10 box/carton
- Available on T/R & AMNO-Pack - 2000pcs per reel.  
See page 90 for detail dimensions

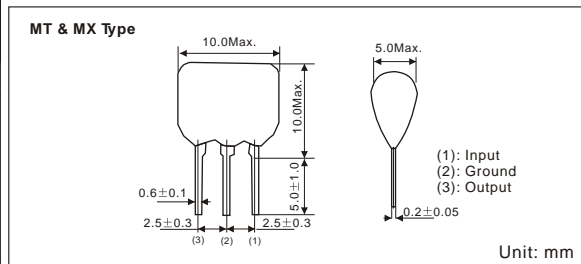
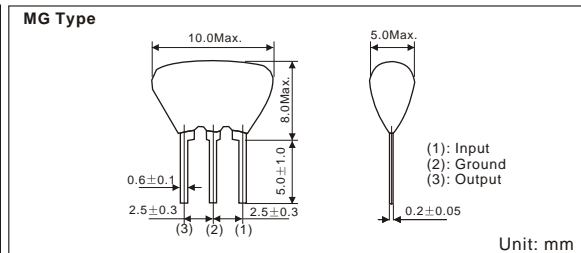
## PART NUMBER GUIDE

TGS	CR	T	3.58M	G	B
Mark	Ceramic Resonator	With built-in capacitance	Freq. Range	Design Mode	Package

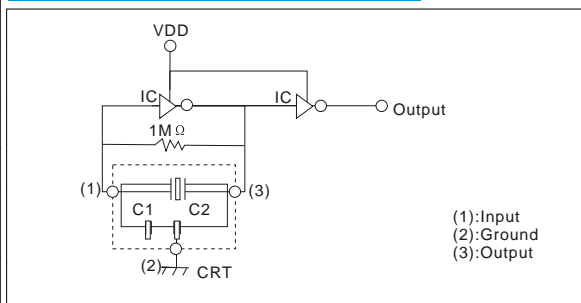
e.g. Full P/N.: TGS CRT 3.58M MG B



## DIMENSIONS



## TEST CIRCUIT FOR MT ,MT& MX TYPES



## STANDARD FREQUENCIES

Frequency in MHz

2.000000	3.680000	8.000000	16.00000
2.040000	4.000000	8.380000	16.93000
2.500000	4.190000	10.00000	
3.580000	5.380000	12.00000	
3.640000	6.000000	14.73000	

Table 1

Design Mode	Freq. Range	Option Code
Thickness Shear Mode	1.860 ~ 6.00MHz	G
Thickness Expander Mode	6.010 ~ 13.0MHz	T
Thickness Expander Mode (3rd Overtone)	13.01 ~ 50.0Mhz	X