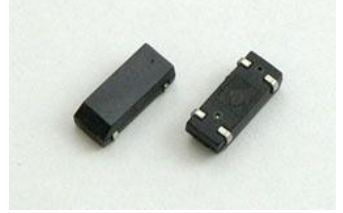


MOLDED SMD PLASTIC PACKAGE CRYSTAL (12.5 x 4.6 x 3.7mm)

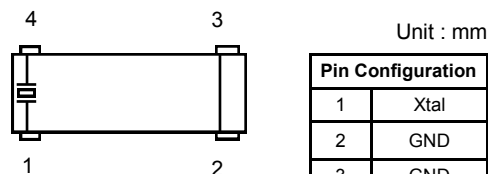
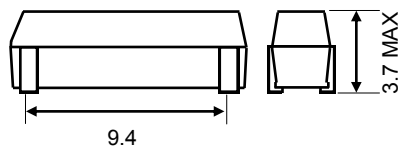
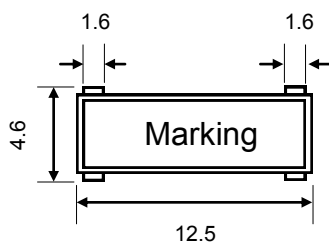
FEATURES:

- HIGH FREQUENCY RANGE
- LOW COST
- LOW PROFILE



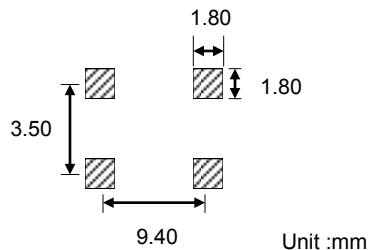
MODEL	TS-SMD
FREQUENCY RANGE	3.579MHz ~ 27.000MHz
FREQUENCY TOLERANCE	± 30ppm (see below for other options)
TEMPERATURE STABILITY	± 50ppm (see below for other options)
OPERATING TEMPERATURE	STD: 0°C to 70°C (see below for other options)
STORAGE TEMPERATURE	-55°C to 125°C
SHUNT CAPACITANCE	5.0pF max.
LOAD CAPACITANCE	STD: 18pF, (see below for other options)
DRIVE LEVEL	100uW max.
AGING	± 5.0ppm / year @ 25°C ± 3°C
INSULATION RESISTANCE	500MΩ min. at 100V _{DC} ± 15V _{DC}
OPERATION MODE	Fundamental
ESR	5.000MHz ~ 7.999MHz: 150Ω max. 8.000MHz ~ 9.999MHz: 100Ω max. 10.000MHz ~ 19.999MHz: 80Ω max. 20.000MHz ~ 27.000MHz: 50Ω max.

PACKAGE DIMENSIONS

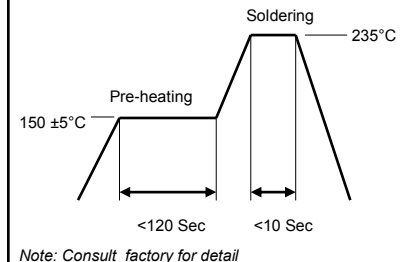


Pin Configuration	
1	Xtal
2	GND
3	GND
4	Xtal

SOLDER PATTERN



REFLOW PROFILE



PART NUMBERING GUIDE

TS-SMD - F - 00 - 00 - HM - 08 - 20.000M - TR

Mode F: Fundamental T: Third overtone	Stability 00: ± 100ppm 50: ± 50ppm 30: ± 30ppm 25: ± 25ppm 15: ± 15ppm 10: ± 10ppm	Load Capacitance 08: 8pF 20: 20pF 10: 10pF 22: 22pF 12: 12pF 24: 24pF 16: 16pF 28: 28pF 18: 18pF 32: 32pF	Other Options TR: Tape and reel
Tolerance @ 25°C 00: ± 100ppm 50: ± 50ppm(standard) 30: ± 30ppm 25: ± 25ppm 10: ± 10ppm	Operating Temperature A: -55 G: -10 P: 80 B: -50 H: 0 Q: 85 C: -40 J: 50 R: 90 D: -35 K: 60 S: 100 E: -30 M: 70 T: 105 F: -20 N: 75 U: 125 X: custom	Frequency M: MHz	

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