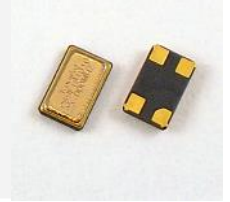


### MINIATURE CERAMIC SMD CRYSTAL (4.0 x 2.5 x 0.75mm)

**FEATURES:**

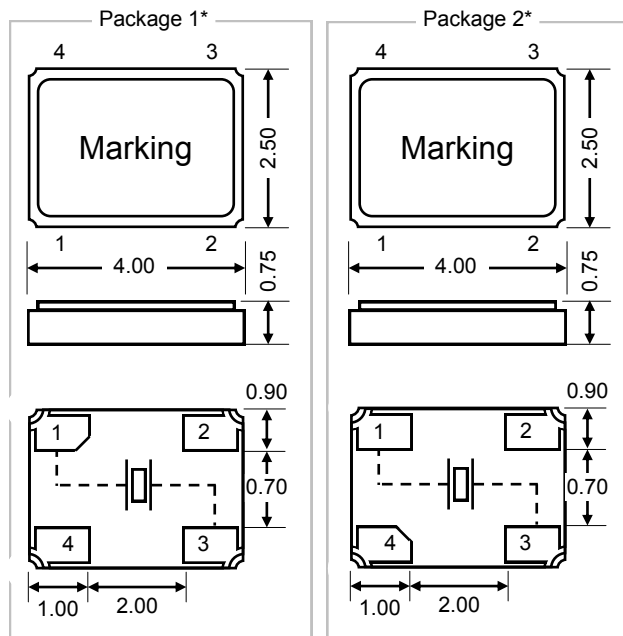
- WIDE FREQUENCY RANGE
- LOW COST SMD PACKAGE
- LOW PROFILE / SUITABLE FOR REFLOW



**■ SPECIFICATION**

<b>FREQUENCY RANGE</b>	12.000MHz ~ 50.000MHz
<b>FREQUENCY TOLERANCE @ 25°C</b>	±10ppm ~ ±50ppm (See P/N guide for other options)
<b>FREQUENCY STABILITY</b>	±10ppm ~ ±50ppm (See P/N guide for other options)
<b>OPERATING TEMPERATURE RANGE</b>	STD: 0°C ~ 70°C, Option: -40°C ~ 85°C (See P/N guide for other options)
<b>STORAGE TEMPERATURE RANGE</b>	-55°C ~ 125°C
<b>LOAD CAPACITANCE</b>	STD: 12pF (See P/N guide for other options)
<b>SHUNT CAPACITANCE</b>	5.0pF max.
<b>INSULATION RESISTANCE</b>	500MΩ min. @ 100V <sub>DC</sub> ± 15V <sub>DC</sub>
<b>DRIVE LEVEL</b>	100μW ~ 200μW max. – contact factory for higher drive level
<b>AGING @ 25°C ± 3°C</b>	±3.0ppm / 1 <sup>st</sup> year max.
<b>EQUIVALENT SERIES RESISTANCE</b>	12.000MHz ~ 16.000MHz: 80Ω max. 16.001MHz ~ 21.000MHz: 60Ω max. 21.001MHz ~ 50.000MHz: 50Ω max.
<b>OPERATION MODE</b>	AT cut, Fundamental

**■ PACKAGE DIMENSIONS**

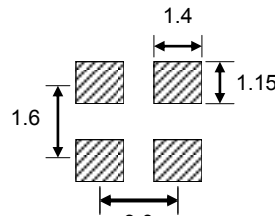


\* Package 1 and 2 are provided interchangeably based on material availability.  
\*\* Different chamfer location between package 1 and 2.

Pin Configuration	
1	Xtal
2	GND
3	Xtal
4	GND

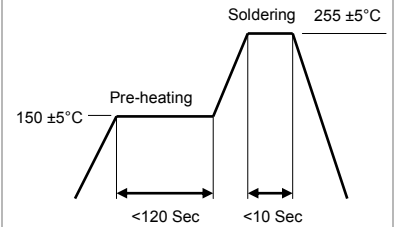
Unit : mm

**■ SOLDER PATTERN**



Unit :mm

**■ REFLOW PROFILE**



Note: Consult factory for detail

**■ PART NUMBERING GUIDE**

CS42 – F – 30 – 50 – HM – 12 – 40.000M – TR

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

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