

## MINIATURE CERAMIC SMD CRYSTAL (5.0 x 3.2 x 1.0mm)

### FEATURES:

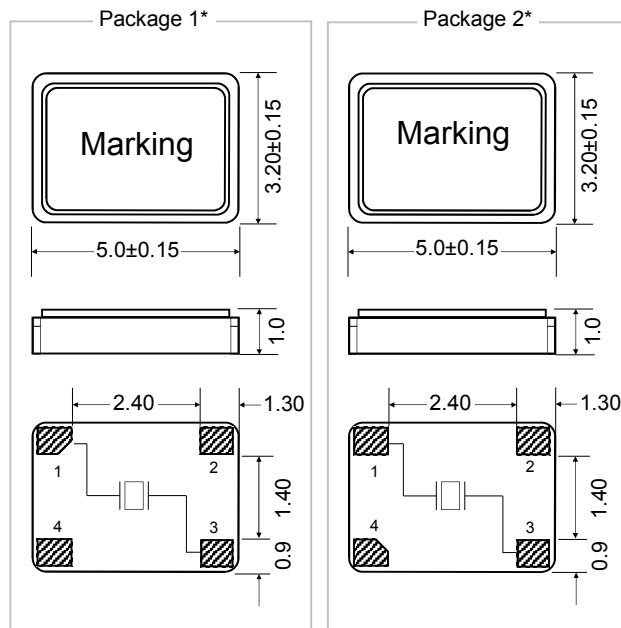
- HIGH FREQUENCY RANGE
- LOW COST SMD PACKAGE
- LOW PROFILE / SUITABLE FOR REFLOW



### ■ SPECIFICATION

FREQUENCY RANGE	7.3728MHz ~ 270.000MHz
FREQUENCY TOLERANCE @ 25°C	±30ppm (See P/N guide for other options)
FREQUENCY STABILITY	±50ppm (See P/N guide for other options)
OPERATING TEMPERATURE	STD: 0°C ~ 70°C, Option: -40°C ~ 85°C (See P/N guide for other options)
STORAGE TEMPERATURE RANGE	-55°C ~ 105°C
LOAD CAPACITANCE	STD: 18pF (See P/N guide for other options)
SHUNT CAPACITANCE	5.0pF max.
INSULATION RESISTANCE	500MΩ min. @ 100V <sub>DC</sub> ± 15V <sub>DC</sub>
DRIVE LEVEL	500μW max.
AGING @ 25°C ± 3°C	±3.0ppm / 1 <sup>st</sup> year max.
EQUIVALENT SERIES RESISTANCE	<b>Fundamental:</b> 7.000MHz ~ 10.000MHz: 100Ω max.    10.001MHz ~ 12.000MHz: 60Ω max. <b>Fundamental:</b> 12.001MHz ~ 19.000MHz: 50Ω max.    19.001MHz ~ 40.000MHz: 40Ω max. <b>3<sup>rd</sup> overtone:</b> 40.001MHz ~ 60.000MHz: 70Ω max.    60.001MHz ~ 170.000MHz: 100Ω max. <b>5<sup>th</sup> overtone:</b> 170.001MHz ~ 270.000MHz: 160Ω max.
OPERATION MODE	Fundamental, 3 <sup>rd</sup> overtone, 5 <sup>th</sup> overtone

### ■ PACKAGE DIMENSIONS

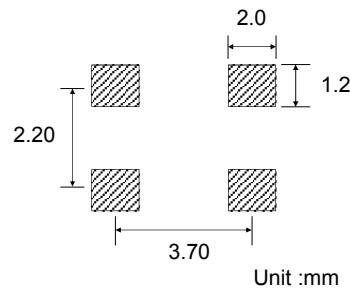


\* Package 1 and 2 are provided interchangeably based on material availability.  
 \*\* Different chamfer location between package 1 and 2.

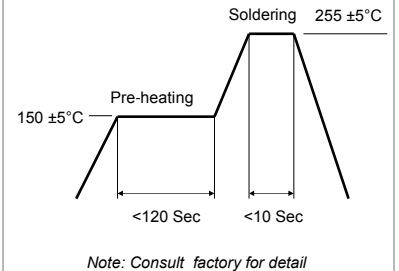
Unit : mm

Pin Configuration	
1	Xtal
2	GND
3	Xtal
4	GND

### ■ SOLDER PATTERN



### ■ REFLOW PROFILE



### ■ PART NUMBERING GUIDE

CS53A	F	30	50	HM	18	40.000M	TR
<b>Mode</b>		<b>Stability</b>		<b>Load Capacitance</b>		<b>Other Options</b>	
F: Fundamental T: 3 <sup>rd</sup> overtone B: 5 <sup>th</sup> overtone		00: ± 100ppm 50: ± 50ppm 25: ± 25ppm 15: ± 15ppm 10: ± 10ppm XX: Two digit for Stability		08: 8pF    20: 20pF 10: 10pF    22: 22pF 12: 12pF    24: 24pF 16: 16pF    28: 28pF 18: 18pF    32: 32pF S: Series		TR: Tape and reel	
<b>Tolerance @ 25°C</b>		<b>Operating Temperature</b>					
00: ± 100ppm 50: ± 50ppm 30: ± 30ppm 25: ± 25ppm 10: ± 10ppm XX: Two digit for Tolerance		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		<b>Frequency</b>			
		M: MHz					

Transko Electronics, Inc reserves the right to make changes to the product (s), service (s), and specification (s) described herein without notice. See "Terms of Sale" for details on our website.