

## STANDARD HC49/SMD4 CRYSTAL (12.0 x 4.7mm)

### FEATURES:

- AT OR BT CUT AVAILABLE
- RESISTANCE WELD SEAL
- TIGHT TOLERANCE / STABILITY



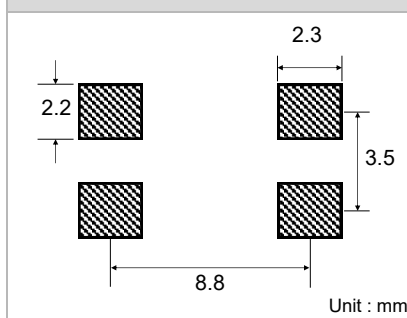
### ■ SPECIFICATION

FREQUENCY RANGE	3.500MHz ~ 100.000MHz
FREQUENCY TOLERANCE @ 25°C	±5ppm ~ ±50ppm
FREQUENCY STABILITY	±2.5ppm* ~ ±100ppm (*Available in selected operating temp.)
OPERATING TEMPERATURE RANGE	-20°C ~ 70°C (See P/N guide for other options)
STORAGE TEMPERATURE RANGE	-40°C ~ 85°C
LOAD CAPACITANCE	4pF min.
SHUNT CAPACITANCE	7pF max.
INSULATION RESISTANCE	500MΩ min. @ 100V <sub>DC</sub>
DRIVE LEVEL	1μW ~ 100μW
AGING	±3.0ppm / 1 <sup>st</sup> yr. max.
EQUIVALENT SERIES RESISTANCE	See Table (Freq. vs ESR)
OPERATION MODE	Fundamental (AT, BT) / 3rd overtone

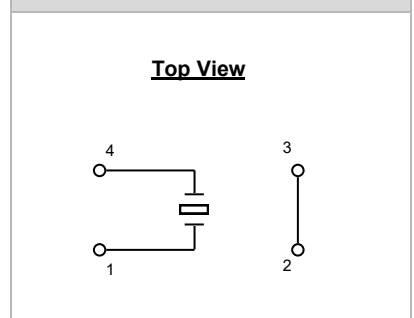
### ■ FREQ VS. ESR

Frequency (MHz)	Mode	ESR (Ω)
3.200 ≤ f < 4.900	AT Fundamental	300~150
5.000 ≤ f < 6.900	AT Fundamental	120~100
7.000 ≤ f < 12.900	AT Fundamental	80~60
13.000 ≤ f < 19.900	AT Fundamental	40
20.000 ≤ f < 36.000	AT Fundamental	30
27.000 ≤ f < 100.000	3 <sup>rd</sup> Overtone	100

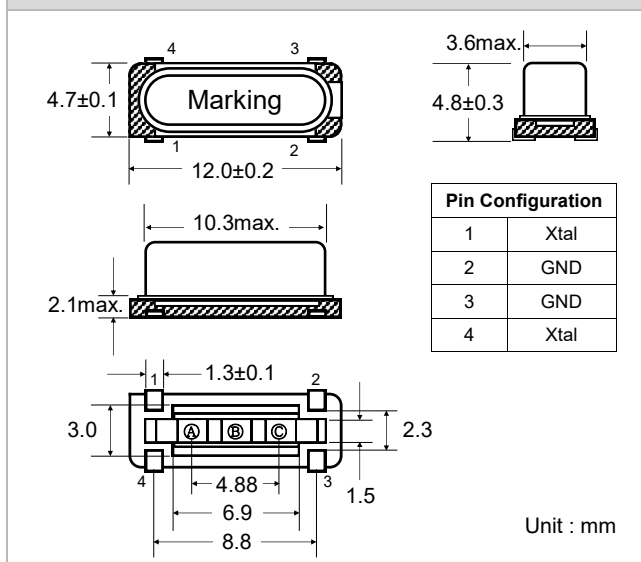
### ■ SOLDER PATTERN



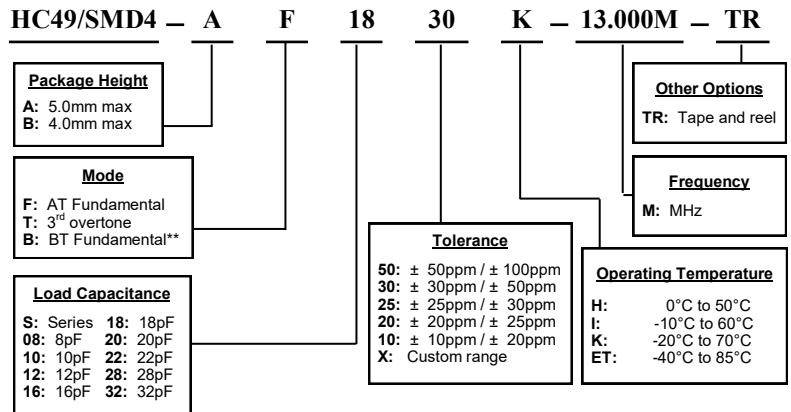
### ■ PAD CONNECTIONS



### ■ PACKAGE DIMENSIONS



### ■ PART NUMBERING GUIDE



\*\* BT Fundamental: 100ppm (Freq. Stability), -20 to 70°C Operating Temp. Only

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.