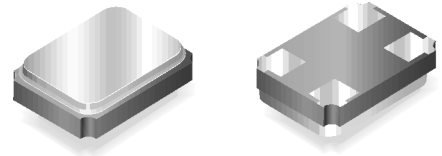


HE-MCC-32 MINIATURE CERAMIC SURFACE MOUNT CRYSTAL



The HE-MCC-32 is the most compact all ceramic surface mount crystal in the industry, with a package size of only 3.2 x 2.5 x 0.7mm. This crystal is offered with a wide frequency range from 13 MHz up to 48 MHz, fundamental operating mode, ability to withstand IR or vapor phase reflow soldering processes, and stabilities as tight as ± 15 PPM over -30°C to $+85^{\circ}\text{C}$ (selected frequencies), making the HE-MCC-32 ideal for very space limited applications.



ELECTRICAL SPECIFICATIONS

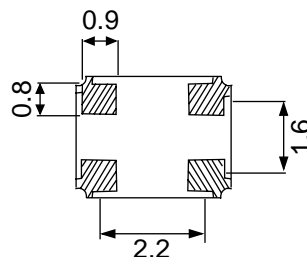
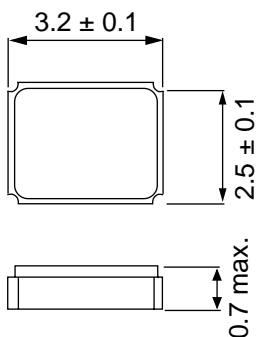
PARAMETERS	CONDITIONS	MINIMUM	STANDARD	MAXIMUM	UNIT
FREQUENCY RANGE		13.000		48.000	MHz
FREQ. TOLERANCE	at 25 °C		-50*		PPM
FREQ. STABILITY (reference @ 25°C)	-10 °C to +60 °C		-50*		PPM
OPERATING TEMPERATURE		-10 °C to +60 °C // -40 °C to +85 °C Optional			°C
STORAGE TEMPERATURE		-40 °C to +85 °C // -55 °C to +125 °C Optional			°C
SHUNT CAPACITANCE (C_0)				5.0	pF
LOAD CAPACITANCE (C_L)	To be specified	6.0	18.0		pF
DRIVE LEVEL	12.800 - 80.000 MHz		0.1		mW
AGING CHARACTERISTICS			± 5 PPM max. @ 25 °C per year		

* Tight tolerances optional - please specify

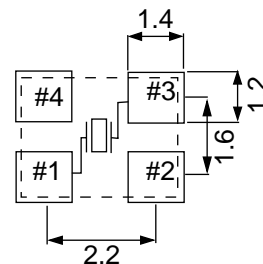
EQUIVALENT SERIES RESISTANCE

Frequency Range (MHz)	OSC. Mode	Max. ESR (Ω)	Frequency Range (MHz)	OSC Mode	Max. ESR (Ω)
13.000-13.999	AT Fund.	80	20.000 - 48.000	AT Fund.	40
14.000-19.999	AT Fund.	60			

MECHANICAL DRAWING



Recommended Solder Pad Layout



Unit : mm