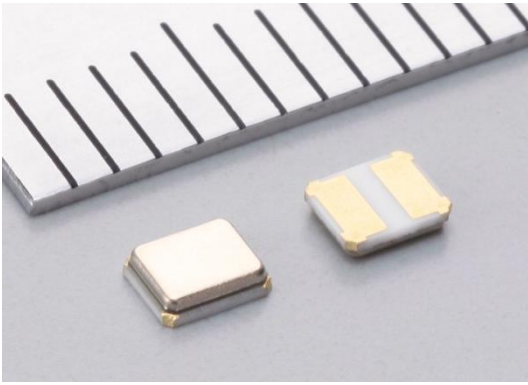


Crystal Unit

- For Automotive application -



Application

XRCHA-F-A Series For Automotive.

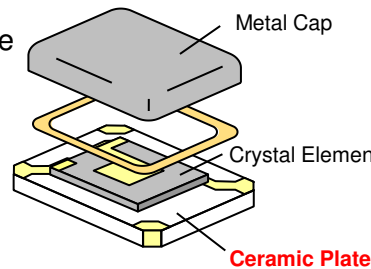
Power Train (ex. Engine/Transmission management ECU)
 ADAS (ex. Camera for driver assist, Image processing,
 Emergency Brake Assist ECU)
 Chassis, Safety applications ...



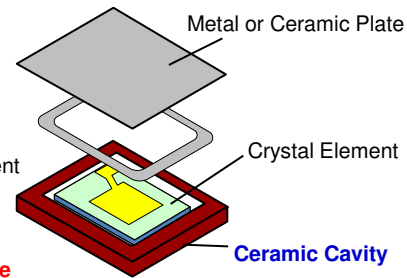
Feature and Structure

- ✓ **Small Size** : 2.5 x 2.0 x 0.8mm
- ✓ **High Quality** : Low ESR, High shock resistance
- ✓ **Economical & Robust Design**
 Simple structure using Murata's proven package technology.
 Particle screening process for enhanced reliability.
- ✓ **Complied with AEC-Q200**

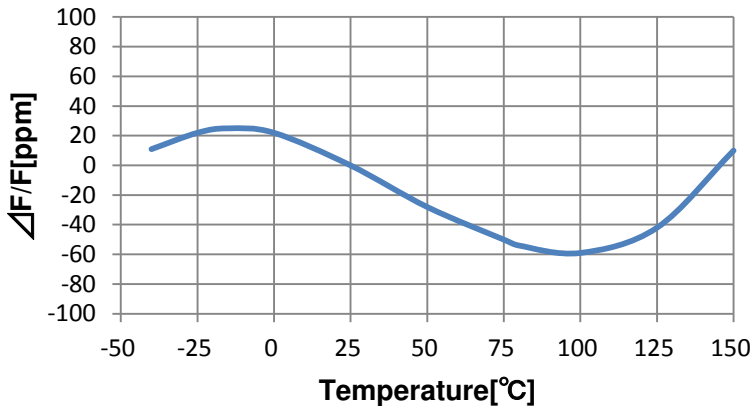
Murata Crystal Unit



Conventional Crystal Unit



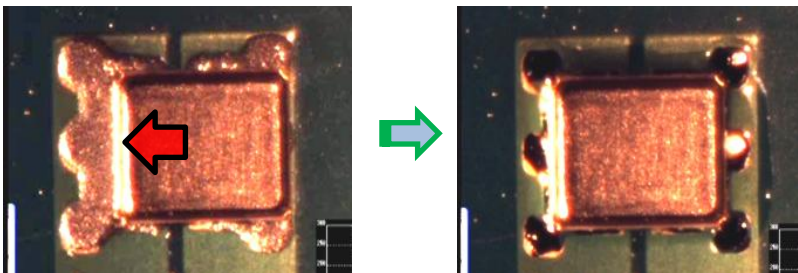
Frequency shift by temperature



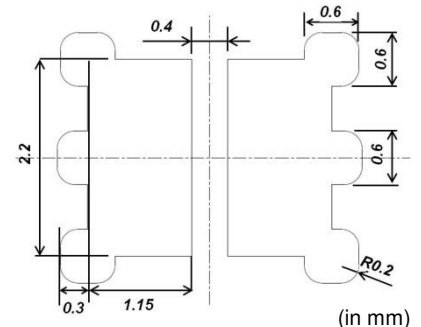
※This graph shows the frequency shift by temperature of XRCHA16M000F0A01R0

Compatibility

Self-alignment test on conventional 3225 crystal land pattern (2 terminals)
 Before reflow After reflow



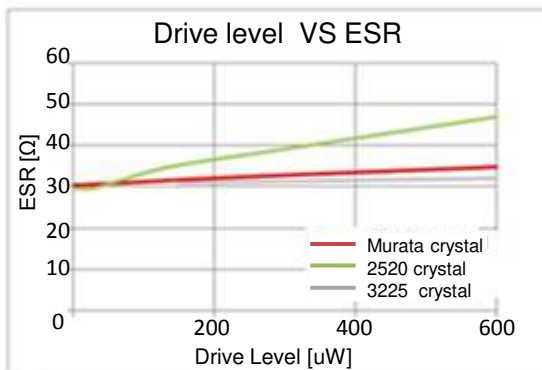
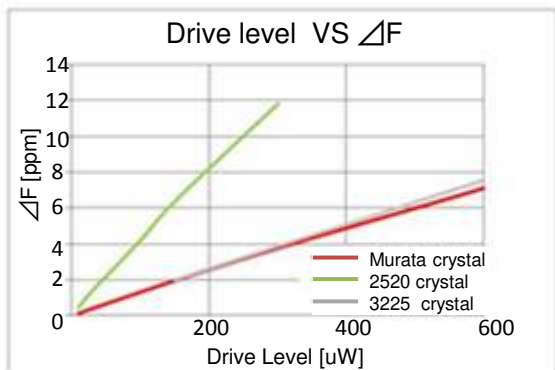
Compatible land pattern



High Performance

Murata crystal (2520*) and conventional crystal (3225*) have same ESR and DLD performance.

Murata can offer same performance with smaller package size to contribute downsizing for new design.



Lineup

P/N	Freq. (MHz)	Freq. Tolerance at +25 °C (ppm max.)	Frequency Shift By Temp. (ppm max.)	ESR (ohm max.)	Frequency Aging (ppm/Y)	Load Capacitance (pF)	Drive Level (μW max.)
XRCHA16M000F0A01R0	16.0000	+/-100	+/-100 (-40to +125 °C)	100	+/-5	8 +/-0.1	300
XRCHA20M000F0A01R0	20.0000			80			
XRCHA24M000F0A01R0	24.0000			80			
XRCHA16M000F0A12R0	16.0000		+/-100 (-40to +150 °C)	100			
XRCHA20M000F0A12R0	20.0000			80			
XRCHA24M000F0A12R0	24.0000			80			

Dimensions and Land pattern

(in mm)

XRCHA Series

