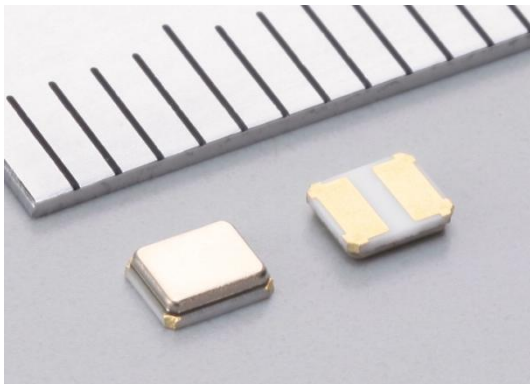


Crystal Unit

- For Automotive application -



Application

XRCHA-F-A Series For Automotive.

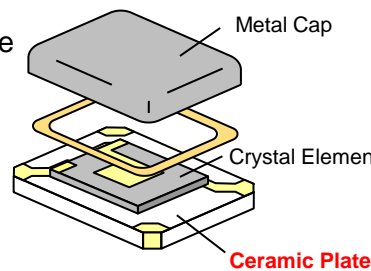
Power Train (ex. Engine/Transmission management ECU)
 ADAS (ex. Camera for driver assist, Image processing,
 Emergency Brake Assist ECU)
 Chassis, Safety applications ...



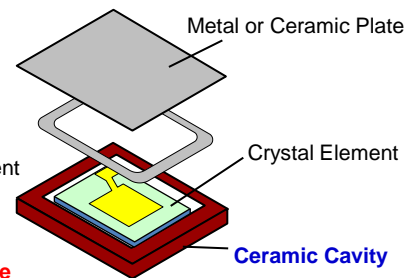
Feature and Structure

- ✓ **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**

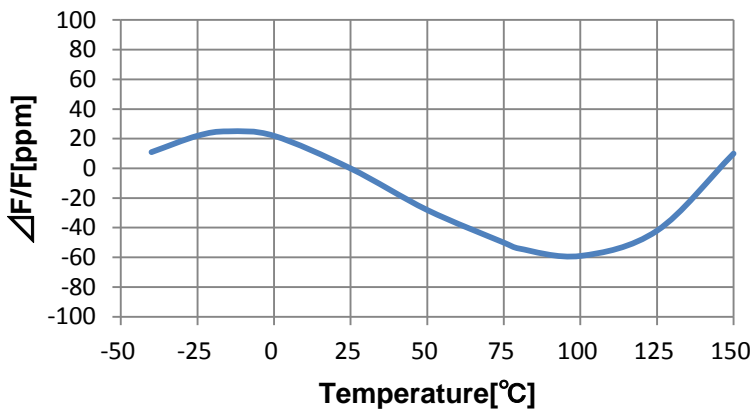
Murata Crystal Unit



Conventional Crystal Unit



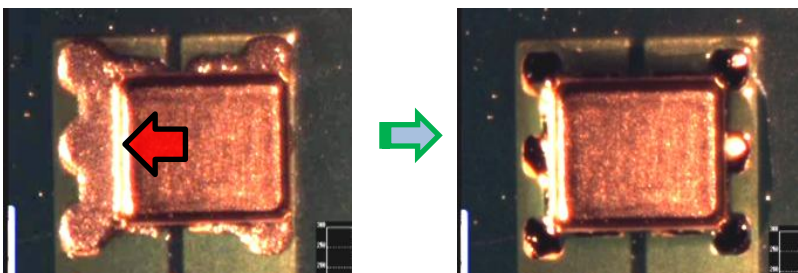
Frequency shift by temperature



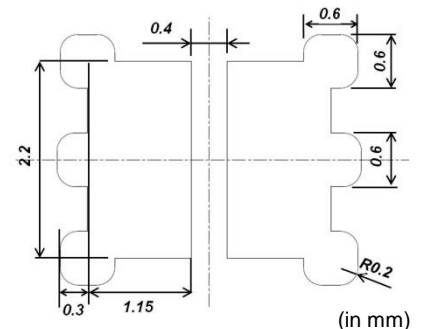
※This graph shows the frequency shift by temperature of XRCHA16M000F0A01R0

Compatibility

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



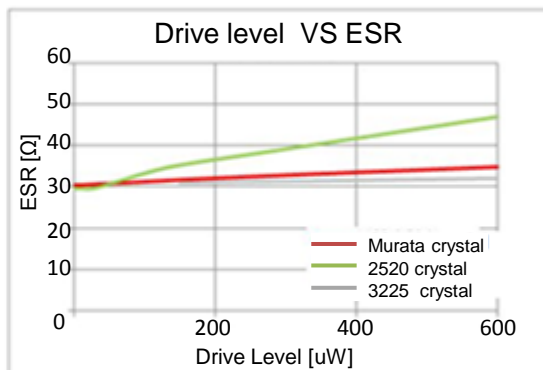
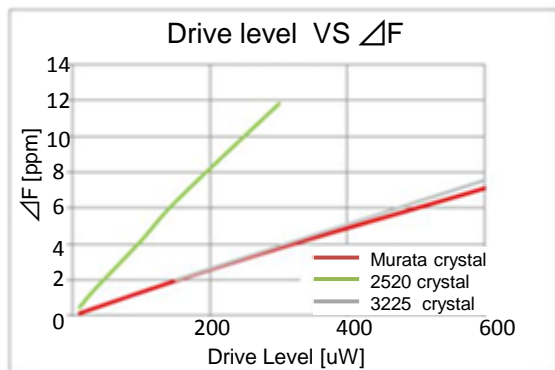
Compatible land pattern



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.



(*16MHz)

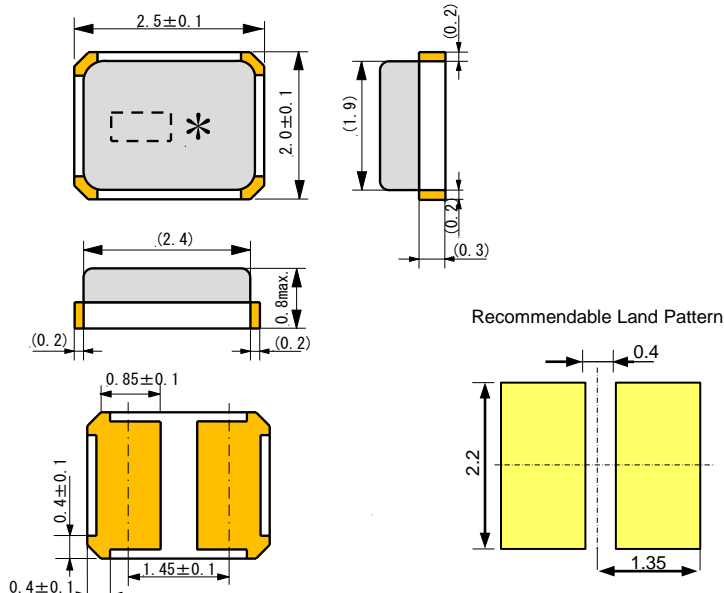
Lineup

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



Product specifications are as of July 2015. They are subject to change without notice.

Murata Manufacturing Co., Ltd.

No. VPPT-HCRJ078A-D