



RFM Integrated Device, Inc.

## **General Specification**

XTL Crystal Units

### **3225 Series**

SMD 3.2 x 2.5 mm

### **Frequency Range**

16.000 - 80.000 MHz

### **Tol/Spec**

**+/-3 to +/-30ppm @25C+/-3C**

## Features:

- Surface Mount Hermetic Package
- Excellent Reliability Performance
- Good Frequency Perturbation and Stability over temperature
- Ultra Miniature Package
- Moisture Sensitivity Level (MSL) : Level-1
- ROHS and AEC-Q200 compliance
- Compliance with BT/ WI/ NB-IOT application



## Specifications

Item	Symbol	Specification	Unit	Remark
Frequency Range	f_nom	16000 to 80000	KHz	
Overtone Order	OT	80000 to 160000		
Load Capacitance	CL	4~∞	pF	
Frequency Tolerance	f_tol	±5~-+30	×10 <sup>-6</sup>	25°C±3°C
Motional Series Resistance	R1	Table 1	ohm	
Drive Level	DL	10~500	μW	
Operating Temp. Range	T_use	-20 ~75// -30~85	°C	
		-40~85// -40~105	°C	
		-40~125// -40~150	°C	
Storage Temp. Range	T_stg	-40 to +150	°C	
Frequency Temp. Characteristics	f_tem	±10//+/-15//+20//+/-30//+/-50//+/-100	×10 <sup>-6</sup>	Freq. deviation from the value at 25°C

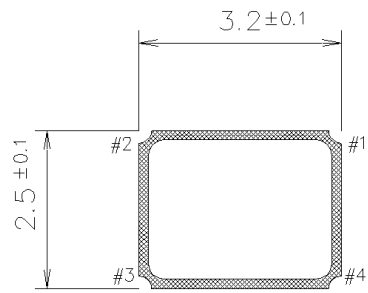
### Resistance (Fundamental)

Frequency Range	Motional Series Resistance
8000<=9000kHz	500 Ω max.
9000<=10000kHz	300 Ω max.
10000<=12000kHz	150 Ω max.
12000<=13000kHz	120 Ω max.
13000<=16000kHz	100 Ω max.
16000<=30000kHz	80 Ω max.
30000<=50000kHz	60 Ω max.
50000<=80000kHz	40 Ω max.

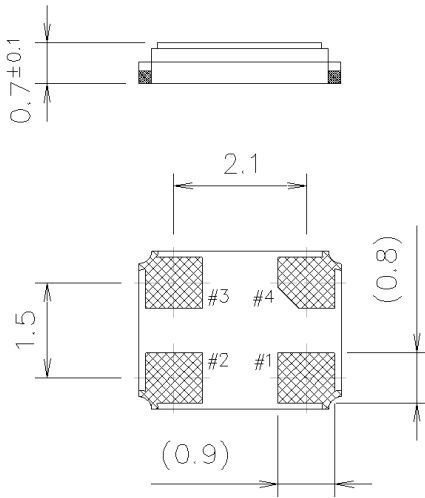
### Resistance (3<sup>rd</sup> overtone)

Frequency Range	Motional Series Resistance
50000<=80000kHz	120 Ω max.
80000<=120000kHz	100 Ω max.
120000<=150000kHz	80 Ω max.

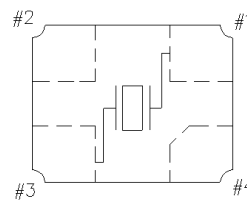
# Mechanical Dimensions (mm): Base



	Pin Connection
#1 pin	IN/OUT
#2 pin	GND
#3 pin	IN/OUT
#4 pin	GND



Internal Connections  
(Top View)



## Recommended Land Pattern: (unit: mm)

Reference Footpoint

