

# QUARTZ CRYSTAL

## SMD Seam Sealed Crystal - C2016 / C2025 Series

### Features

- \* High precision characteristic covering up to high frequency range
- \* Designed for automatic mounting and reflow soldering
- \* RoHS Compliant / Pb Free



### Specifications

Holder Type	C2016 Series	C2025 Series
Frequency	16 Mhz ~ 96	12 Mhz ~ 54 Mhz
Operating Temperature Range	-20°C to +70°C typical or custom-designed	
Storage Temperature Range	- 55 to +125°C typical	
Load Capacitance	8pF ~ 32pF of Series	
Frequency Tolerance at 25°C	±10ppm ~ ±30ppm, or specify	
Frequency Stability	±10 ~ 50ppm, or specify	
Shunt Capacitance	3.0pF Max.	
Insulation Resistance	500MΩ Min. at DC 100V	
Drive Level	1 ~ 200μW (50μW typical) / 1 ~ 100μW (10μW	
Aging (at 25°C)	±3ppm/ year Max.	

### Equivalent Series Resistance (ESR) and Mode of Operation

Series	Size	Thickness	Frequency Range	ESR(Ω)	Mode
C2016	2.0 x 1.6 mm	0.5 mm	16 ~ 19.2 Mhz	200 Max.	AT/Fundamental
			19.2 ~ 30 Mhz	100 Max.	
			30 ~ 96 Mhz	80 Max.	
C2025	2.0 x 2.5 mm	0.55 mm	12 ~ 24 Mhz	80 Max.	AT/Fundamental
			24 ~ 54 Mhz	60 Max.	

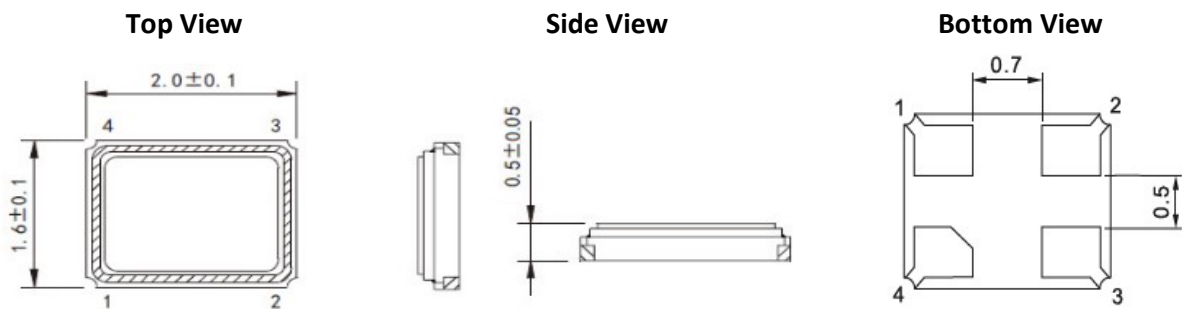
### How to order

C2025	20M	2	20	D	R
Series	Frequency	Operating Temp.	Load capacitance	Frequency Tol.	Package
C2016=2.0x1.6mm	20= 20Mhz	1= -10°C~+60°C	10 = 10pF	B=±10ppm	R = Tape Reel
C2025=2.0x2.5mm	25= 25Mhz	2= -20°C~+70°C	15 = 15pF	C=±15ppm	
	30= 30Mhz	3= -40°C~+85°C	20 = 20pF	D=±20ppm	
	40= 40Mhz	4= -40°C~+105°C	30 = 30pF	E=±30ppm	
		5= -30°C~+85°C	Or specify	F=±50ppm	

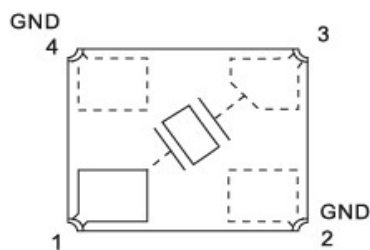
**MSC**

## Dimensions (mm)

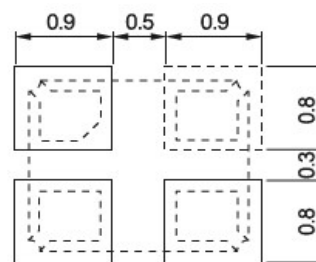
### ※ C2016 Seires



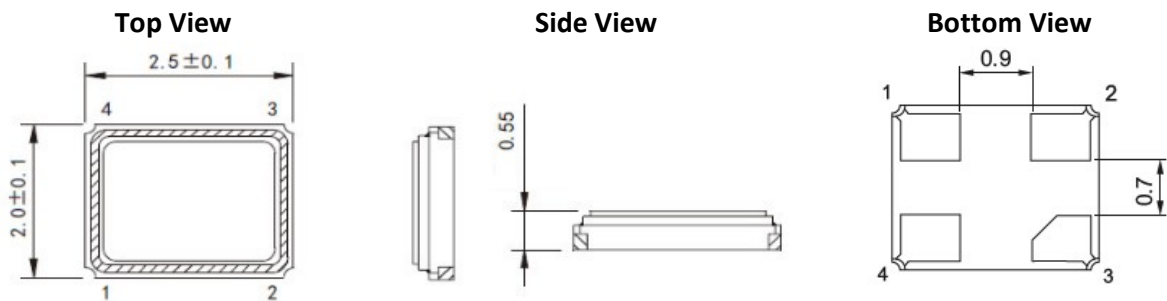
**Top View Crystal Connection**



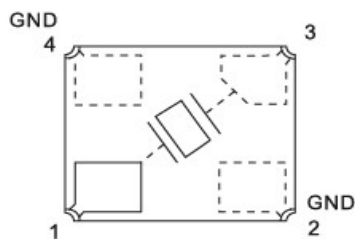
**Top View Suggested Layout**



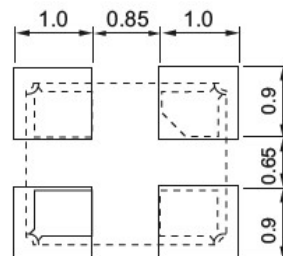
### ※ C2025 Seires



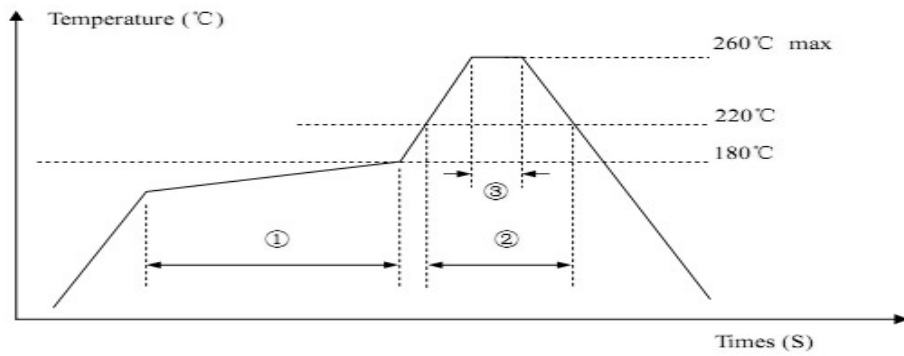
**Top View Crystal Connection**



**Top View Suggested Layout**

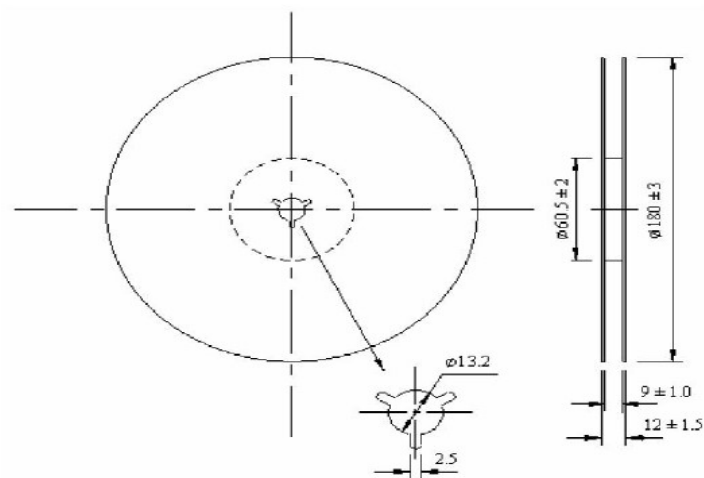
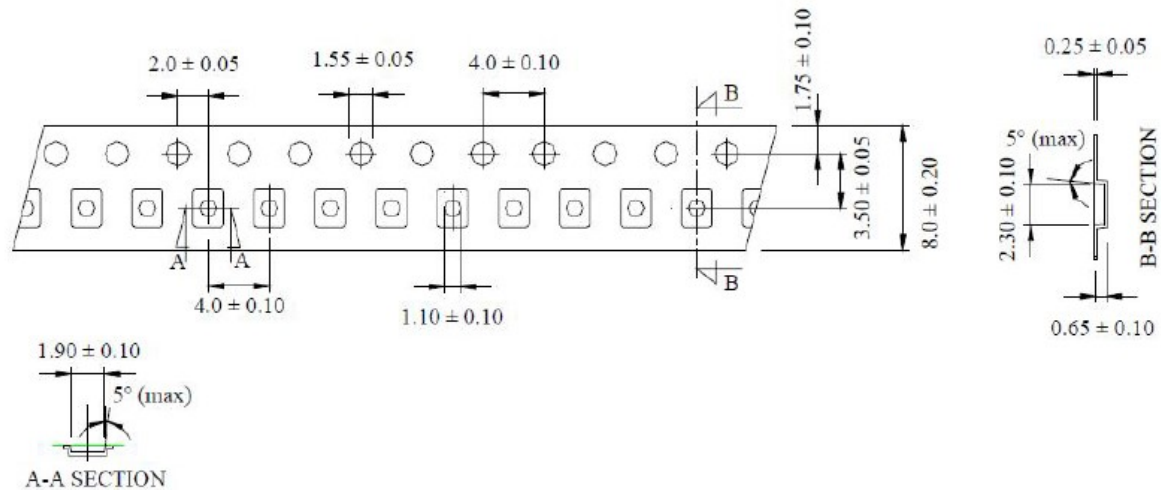


## Reflow Condition



Pb free reflow	①	Preheat	160~180 °C	120sec. max
	②	Primary heat	220 °C	60sec. max
	③	Peak	260 °C	10sec. max.

## Dimension of Reel



**MSC**