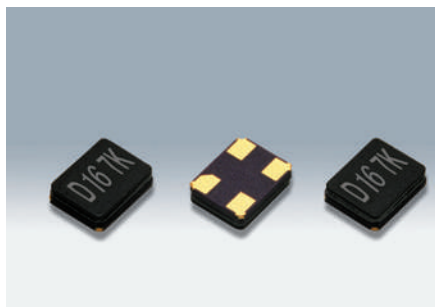


# SMD Crystal Resonators / MHz Band Crystal Resonators

## DSX321G (For Industrial Equipment)



Actual size

### ■ Features

- 3225 size miniature and lightweight SMD crystal resonator.  
Height DSX321G (over 12MHz): 0.75mm  
Height DSX321G (under 12MHz): 0.85mm
- Excellent heat resistance, High precision and high reliability (Frequency aging specification of  $\pm 1 \times 10^{-6}/1$  year or  $\pm 3 \times 10^{-6}/5$  years is available for cell phone or wireless communication systems etc.)
- Offers a wide range of frequencies from 7.9MHz up to 64MHz.
- Moisture prevention packing is unnecessary.  
Moisture Sensitivity Level: LEVEL 1 (IPC/JEDEC J-STD-033)
- AEC-Q200 Compliant
- Fully lead free option available.



### ■ Applications

- Industrial equipment
- Telecommunication products, short-range wireless modules and other small devices such as DVC, DSC, PDA, PC.
- Automotive applications such as Bluetooth, wireless LAN, GPS/GNSS, RKE (Remote Keyless Entry), safety controls and multimedia devices (AEC-Q200 Compliant)

### ■ Standard Specification

Item	Type	DSX321G						
		7.9 ~ 9MHz	9 ~ 9.8MHz	9.8 ~ 11MHz	11 ~ 12MHz	12 ~ 20MHz	20 ~ 27MHz	27 ~ 64MHz
Frequency Range		7.9 ~ 9MHz	9 ~ 9.8MHz	9.8 ~ 11MHz	11 ~ 12MHz	12 ~ 20MHz	20 ~ 27MHz	27 ~ 64MHz
Overtone Order		Fundamental						
Load Capacitance		8pF, 10pF, 12pF						
Drive Level		10 $\mu$ W (200 $\mu$ W max.)						
Frequency Tolerance		$\pm 20 \times 10^{-6}$ (at 25 $^{\circ}$ C)						
Series Resistance		400 $\Omega$ max.	300 $\Omega$ max.	150 $\Omega$ max.	100 $\Omega$ max.	80 $\Omega$ max.	60 $\Omega$ max.	50 $\Omega$ max.
Frequency Characteristics over Temperature		$\pm 5.0 \times 10^{-6} / -40 \sim +105^{\circ}$ C (Ref. to 25 $^{\circ}$ C)						
Storage Temperature Range		-40 ~ +105 $^{\circ}$ C						
Packing Unit		3000pcs./reel ( $\phi$ 180)						

Consult our sales representative for other specifications.

### ■ DSX321G (under 12MHz)

### ■ DSX321G (over 12MHz)

[mm]		[mm]	
<h4>■ Dimensions</h4> <p>3.2<math>\pm</math>0.1 2.5<math>\pm</math>0.1 0.85<math>\pm</math>0.15 2.1 1.6 0.9</p>	<h4>■ Internal Connections</h4> <p>&lt;Top View&gt;</p> <p>#1 #2 #3 #4 #1 &amp; #3 connected to quartz element #2 &amp; #4 open (unconnected)</p>	<h4>■ Dimensions</h4> <p>3.2<math>\pm</math>0.1 2.5<math>\pm</math>0.1 0.75<math>\pm</math>0.15 2.1 1.6 0.9</p>	<h4>■ Internal Connections</h4> <p>&lt;Top View&gt;</p> <p>#1 #2 #3 #4 #1 &amp; #3 connected to quartz element #2 &amp; #4 open (unconnected)</p>
<h4>■ Recommended Land Pattern</h4> <p>&lt;Top View&gt;</p> <p>2.2 1.7 1.4</p>	<h4>■ Recommended Land Pattern</h4> <p>&lt;Top View&gt;</p> <p>2.2 1.7 1.4</p>		