

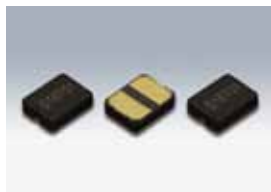
# SMD Crystal Resonators / MHz Band Crystal Resonators (For Automotive)

## DSX321G/DSX321GK/DSX320G/DSX320GE



DSX321G/DSX321GK

DSX320G



DSX320GE

Actual size

### Features

- Miniature and lightweight SMD crystal resonator height DSX321G (over 12MHz): 0.75mm (12MHz or under): 0.85mm DSX321GK: 0.85mm DSX320G (over 12MHz): 0.85mm (12MHz or under): 0.95mm DSX320GE: 0.95mm
- Excellent heat resistance, High precision and high reliability
- Offers a wide range of frequencies DSX321G/DSX320G/DSX320GE: 7.9 to 64MHz DSX321GK: 9.8 to 40MHz
- Enhanced durability of solder joint for thermal cycles : after 3000 thermal cycle tests "-40, +125°C" (DSX320G/DSX320GE)
- AEC-Q200 Compliant
- Fully lead free option available. (DSX321G)



### Applications

- Multimedia devices such as car navigation systems and car audio, safety controls, TPMS, keyless entry (DSX321G/DSX321GK)
- ECU (engine, body work control), safety relations, car body controls, ABS, EPS (DSX320G/DSX320GE)

### Standard Specification

Item	Type	DSX321G/DSX320G/DSX320GE					
		DSX321GK					
Frequency Range		7.9 to 9.8MHz	9.8 to 11MHz	11 to 12MHz	12 to 27MHz	27 to 40MHz	40 to 64MHz
Overtone Order		Fundamental					
Load Capacitance		8pF, 10pF, 12pF					
Drive Level		10μW (200μW max.)					
Frequency Tolerance		±30×10 <sup>-6</sup> (at 25°C)					
Series Resistance		400Ω max.	200Ω max.	150Ω max.	120Ω max.	100Ω max.	
Frequency Characteristics over Temperature		±100×10 <sup>-6</sup> /-40 to +125°C (Ref. to 25°C)					
Storage Temperature Range		-40 to +150°C					
Reliability		AEC-Q200					
Packing Unit (1)		3000pcs./reel (φ180)					

(1) Moisture prevention packing is unnecessary. Moisture Sensitivity Level: LEVEL1 (IPC/JEDEC J-STD-033)

Consult our sales representative for other specifications.

### DSX321G/DSX321GK [mm]

### DSX320G [mm]

### DSX320GE [mm]

DSX321G/DSX321GK [mm]	DSX320G [mm]	DSX320GE [mm]
<p><b>Dimensions</b></p> <p>3.2±0.1 2.5±0.1 Logo Frequency Lot No.</p> <p><b>Internal Connections (Top View)</b></p> <p>#1 &amp; #3 connected to quartz element #2 &amp; #4 open (unconnected)</p> <p>DSX321G 0.75±0.15 : Over 12MHz 0.85±0.15 : 12MHz or under DSX321GK 0.85±0.15</p> <p><b>Recommended Land Pattern (Top View)</b></p> <p>Over 12MHz 2.1 1.6 0.9 0.7</p> <p>12MHz or under 2.1 1.6 0.9 0.7</p>	<p><b>Dimensions</b></p> <p>3.2±0.1 2.5±0.1 Logo Frequency Lot No.</p> <p>0.85±0.15 : Over 12MHz 0.95±0.15 : 12MHz or under</p> <p><b>Internal Connections (Top View)</b></p> <p>#1 #2</p> <p><b>Recommended Land Pattern (Top View)</b></p> <p>1.8 0.8 0.5 2-1.3 2-1.5 2.0 1.6</p>	<p><b>Dimensions</b></p> <p>3.2±0.1 2.5±0.1 Logo Frequency Lot No.</p> <p>0.95±0.15</p> <p><b>Internal Connections (Top View)</b></p> <p>#1 #2</p> <p><b>Recommended Land Pattern (Top View)</b></p> <p>1.8 4.0 2.1 2.3 2-1.0 2-1.2 1.9 1.5 2.7</p>