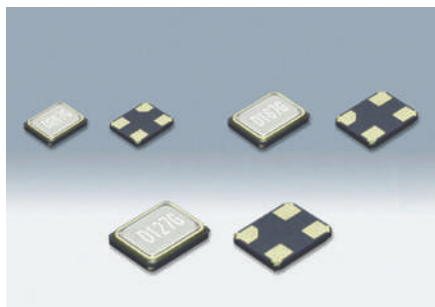


SMD Crystal Resonators / MHz Band Crystal Resonators

DSX211SH/DSX221SH/DSX321SH (For Industrial Equipment)



Actual size DSX211SH □ DSX221SH □
DSX321SH □

■ Features

- Miniature and lightweight SMD crystal resonator
DSX211SH : 2016 size 0.45mm height
DSX221SH : 2520 size 0.45mm height
DSX321SH : 3225 size 0.65mm height
- Excellent heat resistance, High precision and high reliability
- Offers a wide range of frequencies
DSX211SH : 24MHz ~ 50MHz
DSX221SH : 16MHz ~ 54MHz
DSX321SH : 12MHz ~ 50MHz
- Moisture prevention packing is unnecessary.
Moisture Sensitivity Level: LEVEL1 (IPC/JEDEC J-STD-033)
- AEC-Q200 Compliant

■ Applications

- Industrial equipment
- Telecommunication products, short-range wireless modules and other small devices such as DVC, DSC, PDA, PC.
- Automotive applications such as multimedia devices (AEC-Q200 Compliant).



■ Standard Specification

Item \ Type	DSX211SH		DSX221SH				DSX321SH		
Frequency Range	24~30MHz	30 ~ 50MHz	12 ~ 16MHz	16 ~ 24MHz	24 ~ 30MHz	30 ~ 54MHz	12 ~ 20MHz	20 ~ 28MHz	28 ~ 50MHz
Overtone Order	Fundamental								
Load Capacitance	8pF, 10pF, 12pF								
Drive Level	10μW (100μW max.)		10μW (200μW max.)						
Frequency Tolerance	±20×10 ⁻⁶ (at 25℃)								
Series Resistance	100Ω max.	80Ω max.	200Ω max.	150Ω max.	100Ω max.	60Ω max.	80Ω max.	60Ω max.	50Ω max.
Frequency Characteristics over Temperature	±5.0×10 ⁻⁶ / -40 ~ + 105℃ (Ref. to 25℃)								
Storage Temperature Range	- 40 ~ + 105℃								
Packing Unit	3000pcs./reel(φ 180)								

Consult our sales representative for other specifications.

■ DSX211SH

[mm]

■ DSX221SH

[mm]

■ DSX321SH

[mm]

■ Dimensions ■ Internal Connections (Top View) #1 & #3 connected to quartz element #2 & #4 connected to the cover #2 & #4 recommended GND connection ■ Recommended Land Pattern (Top View)	■ Dimensions ■ Internal Connections (Top View) #1 & #3 connected to quartz element #2 & #4 connected to the cover #2 & #4 recommended GND connection ■ Recommended Land Pattern (Top View)	■ Dimensions ■ Internal Connections (Top View) #1 & #3 connected to quartz element #2 & #4 connected to the cover #2 & #4 recommended GND connection ■ Recommended Land Pattern (Top View)
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