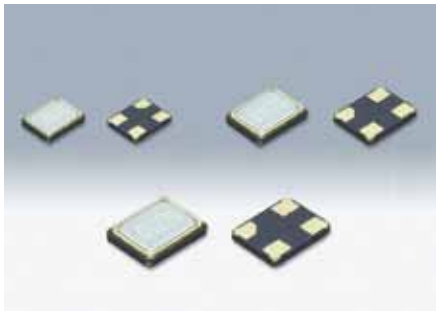
SMD Crystal Resonators / MHz Band Crystal Resonators

DSX211SH/DSX221SH/DSX321SH



Actual size DSX211SH DSX221SH DSX321SH

■ Features

- Miniature and lightweight SMD crystal resonator
  - DSX211SH : 2016 size 0.45mm high
  - DSX221SH : 2520 size 0.45mm high
  - DSX321SH : 3225 size 0.65mm high
- Excellent heat resistance, High precision and high reliability
- Offers a wide frequency range
  - DSX211SH : 24MHz ~ 50MHz
  - DSX221SH : 16MHz ~ 54MHz
  - DSX321SH : 12MHz ~ 50MHz
- AEC-Q200 Compliant (DSX221SH, DSX321SH)

Pb-Free

RoHS Compliant

■ Applications

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

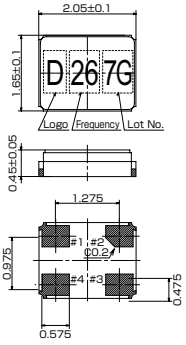
■ Standard Specification

Item \ Type	DSX211SH		DSX221SH			DSX321SH		
Frequency Range	24 ~ 30MHz	30 ~ 50MHz	16 ~ 24MHz	24 ~ 30MHz	30 ~ 54MHz	12 ~ 20MHz	20 ~ 28MHz	28 ~ 50MHz
Overtone Order	Fundamental							
Load Capacitance	Series, 8pF, 10pF, 12pF							
Drive Level	10μW (100μW max.)		10μW (200μW max.)					
Frequency Tolerance	±10×10^{-6},±20×10^{-6},±30×10^{-6},±50×10^{-6} (at 25℃)							
Series Resistance	100 Ωmax.	80 Ωmax.	150 Ωmax.	100 Ωmax.	60 Ωmax.	80 Ωmax.	60 Ωmax.	50 Ωmax.
Frequency Characteristics over Temperature	±8×10^{-6}, ±20×10^{-6}, ±30×10^{-6}, ±50×10^{-6}/-10 ~ +60℃ (Ref. to 25℃) ±12×10^{-6}, ±20×10^{-6}, ±30×10^{-6}, ±50×10^{-6}/-20 ~ +70℃ (Ref. to 25℃) ±15×10^{-6}, ±20×10^{-6}, ±30×10^{-6}, ±50×10^{-6}/-30 ~ +85℃ (Ref. to 25℃)							
Storage Temperature Range	−40 ~ 85℃							
Packing Unit	3000pcs./reel(φ180)							

Consult our sales representative for other specifications.

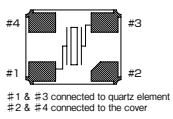
■ DSX211SH

■ Dimensions[mm]



■ Internal Connections

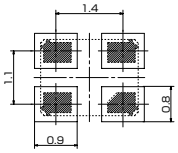
〈Top View〉



#1 & #3 connected to quartz element
#2 & #4 connected to the cover

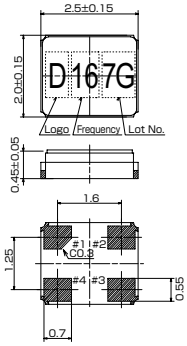
■ Recommended Land Pattern [mm]

〈Top View〉



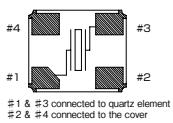
■ DSX221SH

■ Dimensions[mm]



■ Internal Connections

〈Top View〉



#1 & #3 connected to quartz element
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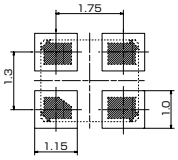
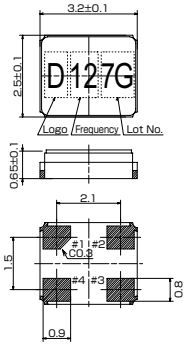
■ Recommended Land Pattern [mm]

〈Top View〉



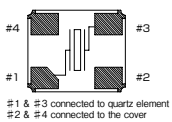
■ DSX321SH

■ Dimensions[mm]

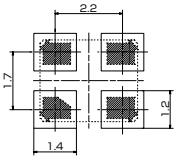


■ Internal Connections

〈Top View〉



#1 & #3 connected to quartz element
#2 & #4 connected to the cover

■ Recommended Land Pattern [mm]

〈Top View〉