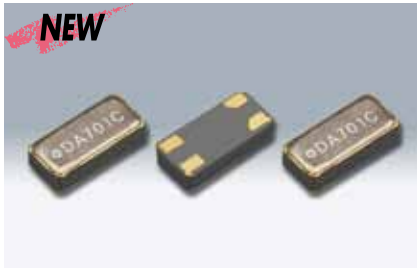


SMD Tuning Fork Crystal Resonators / kHz Band Crystal Resonators

DST311S/DST310S/DST410S



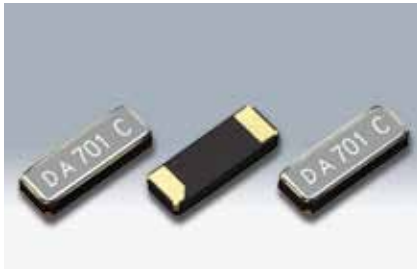
DST311S

Actual size



DST310S

Actual size

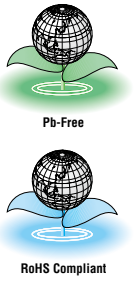


DST410S

Actual size

■ Features

- 3215/4115 size miniature and lightweight SMD tuning fork crystal resonator with a low profile of 0.75mm.
- A ceramic package providing high precision and reliability.
- Metal lid connected to GND terminal to reduce EMI (DST311S).
- Noise sensitive application (smart meter etc.) (DST311S).
- Series Resistance 50kΩ max. available (DST311S, DST310S).
- AEC-Q200 Compliant (DST310S, DST410S)



■ Applications

- Mobile communications, PDA, wave clock, digital appliance.
- Automotive applications such as multimedia device (AEC-Q200 Compliant).

■ Standard Specification

Item	Type	DST311S	DST310S	DST410S
Frequency Range		32.768kHz		
Load Capacitance		9pF, 10pF, 12.5pF		
Drive Level		0.2μW (1.0μW max.)		
Frequency Tolerance		±20×10 ⁻⁶ , ±30×10 ⁻⁶ , ±50×10 ⁻⁶ , ±100×10 ⁻⁶ (at 25°C)		
Series Resistance		50kΩ max./80kΩ max.		80kΩ max.
Turnover Temperature		+25°C±5°C		
Parabolic Coefficient		-0.04×10 ⁻⁶ /°C ² max.		
Operating Temperature Range		-40 ~+85°C		
Storage Temperature Range		-40 ~+85°C		
Shunt Capacitance		0.9pF typ.	1.3pF typ.	
Packing Unit		3000pcs./reel (φ180)		

Consult our sales representative for other specifications.

■ DST311S

■ Dimensions[mm]

■ Internal Connections

■ Recommended Land Pattern [mm]

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

■ DST310S

■ Dimensions[mm]

■ Internal Connections

■ Recommended Land Pattern [mm]

■ DST410S

■ Dimensions[mm]

■ Internal Connections

■ Recommended Land Pattern [mm]