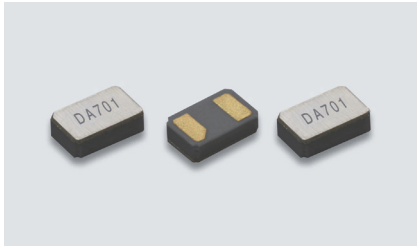


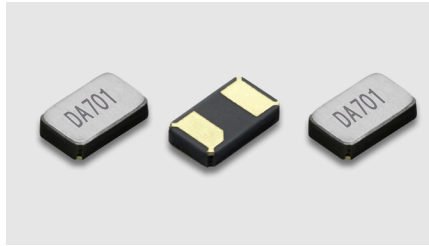
# SMD Tuning Fork Crystal Resonators / kHz Band Crystal Resonators (For Automotive)

## DST1610A/DST210AC/DST310SA



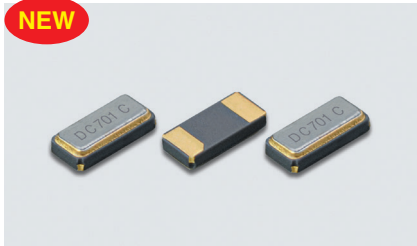
DST1610A

Actual size



DST210AC

Actual size



DST310SA

Actual size

### Features

- AEC-Q200 Compliant
- Pb free
- RoHS/ELV Compliant

### Applications

- Automotive multimedia devices



### Standard Specification

Item	Type	DST1610A	DST210AC	DST310SA
Frequency Range		32.768kHz		
Load Capacitance		7pF, 9pF, 12.5pF		
Drive Level		0.1μW (0.5μW max.)		
Frequency Tolerance		±20×10 <sup>-6</sup> (at 25°C)		
Series Resistance		50kΩ max. (-40 to +85°C) 80kΩ max. (-40 to +125°C)	80kΩ max. (-40 to +85°C) 120kΩ max. (-40 to +125°C)	50kΩ max. (-40 to +85°C) 80kΩ max. (-40 to +125°C)
Turnover Temperature		+25°C±5°C		
Parabolic Coefficient		-0.04×10 <sup>-6</sup> / °C <sup>2</sup> max.		
Operating Temperature Range		-40 to +85°C / -40 to +125°C		
Storage Temperature Range		-40 to +125°C		-55 to +125°C
Shunt Capacitance		1.6pF typ.	1.3pF typ.	1.7pF typ.
Reliability		AEC-Q200		
Packing Unit (1)		3000pcs./reel(φ180)		

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

Consult our sales representative for other specifications.

### DST1610A

[mm]

### DST210AC

[mm]

### DST310SA

[mm]

DST1610A		DST210AC		DST310SA	
Dimensions	Internal Connections (Top View)	Dimensions	Internal Connections (Top View)	Dimensions	Internal Connections (Top View)
<p>1.6 ± 0.1 1.0 ± 0.1 0.45 ± 0.05 0.8 0.4 C0.2</p>		<p>2.0 ± 0.1 1.2 ± 0.1 0.5 ± 0.05 1.25 1 0.55 C0.2</p>		<p>3.2 ± 0.1 1.8 ± 0.1 0.75 ± 0.1 2.35 1.3 0.65</p>	
Recommended Land Pattern (Top View)	Recommended Land Pattern (Top View)	Recommended Land Pattern (Top View)	Recommended Land Pattern (Top View)	Recommended Land Pattern (Top View)	Recommended Land Pattern (Top View)
<p>1.1 1.2 0.7</p>		<p>1.35 1.4 0.85</p>		<p>1.0</p>	