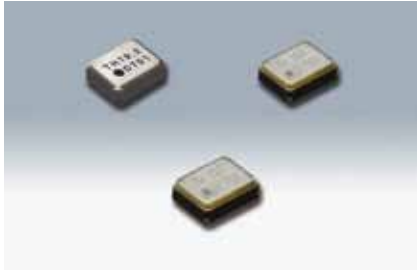


SMD Crystal Resonators with dedicated temperature sensor / MHz Band Crystal Resonators (For Automotive)

DSR211ATH/DSR211STH/DSR221STH



Actual size DSR211ATH □ DSR211STH □
DSR221STH □

■ Features

- DSR211ATH: 2016size, height 0.65mm max.
- DSR211STH: 2016size, height 0.8mm max. (19.2MHz)
0.65mm max. (38.4MHz)
- DSR221STH: 2520size, height 1.0mm max.
- Built-in NTC thermistor
- AEC-Q200 Compliant

■ Applications

- Multimedia devices such as car navigation systems and car audio
- GPS/GNSS



■ Standard Specification

Item	Type	DSR211ATH	DSR211STH	DSR221STH
Frequency Range		19.2MHz	19.2MHz/38.4MHz	19.2MHz
Overtone Order		Fundamental		
Load Capacitance		7pF, 8pF		
Drive Level		10 μW (100 μW max.)		
Frequency Tolerance		±10×10 ⁻⁶ (at 25°C)		
Series Resistance		80Ω max.		
Frequency Characteristics over Temperature		±30×10 ⁻⁶ / -40 to +105 °C (±12×10 ⁻⁶ / -30 to +85 °C)		±30×10 ⁻⁶ / -40 to +105 °C (±12×10 ⁻⁶ / -30 to +85 °C) ±20×10 ⁻⁶ / -40 to +105 °C
Storage Temperature Range		-40 to +125 °C		
Thermistor Resistance		100kΩ (at +25°C)		
Thermistor B-constant		4250K (+25°C to +50°C)		
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.

■ DSR211ATH

■ DSR211STH

■ DSR221STH

[mm]	[mm]	[mm]
<p>■ Dimensions</p> <p>Model Code: TH19.2, Frequency: 19.2MHz, Lot No.: D701</p> <p>Dimensions: 2.0±0.1 (width), 1.6±0.1 (height), 0.65mm max. (height)</p> <p>Internal Connections (Top View): #1 X1ta, #2 GND, #3 Xtal, #4 SENSOR</p> <p>Recommended Land Pattern (Top View): 0.75, 0.45, 0.15, 0.20, 1.80, 2.20</p>	<p>■ Dimensions</p> <p>Model Code: TH38.4, Frequency: 38.4MHz, Lot No.: D701</p> <p>Dimensions: 2.0±0.1 (width), 1.6±0.1 (height), 0.8mm max. (height)</p> <p>Internal Connections (Top View): #1 X1ta, #2 GND, #3 Xtal, #4 SENSOR</p> <p>Recommended Land Pattern (Top View): 0.75, 0.45, 0.15, 0.20, 1.80, 2.20</p>	<p>■ Dimensions</p> <p>Model Code: TH19.2, Frequency: 19.2MHz, Lot No.: D701</p> <p>Dimensions: 2.5±0.15 (width), 2.0±0.15 (height), 1.0mm max. (height)</p> <p>Internal Connections (Top View): #1 X1ta, #2 GND, #3 Xtal, #4 SENSOR</p> <p>Recommended Land Pattern (Top View): 0.85, 0.95, 1.95, 1.55, 1.80</p>