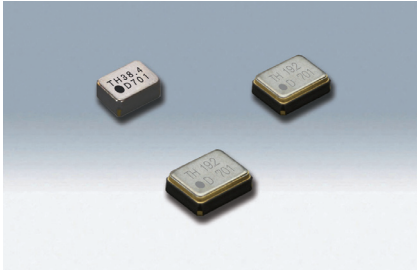


SMD Crystal Resonators with dedicated temperature sensor / MHz Band Crystal Resonators (For Automotive)

DSR1612ATH/DSR211STH/DSR221STH



Actual size DSR1612ATH □ DSR211STH □
DSR221STH □

Features

- DSR1612ATH: 1612size, height 0.55mm
DSR211STH: 2016size, height 0.7mm (19.2MHz)
0.6mm (38.4MHz / 55.2MHz)
- DSR221STH: 2520size, height 0.9mm
- Built-in NTC thermistor
- AEC-Q200 Compliant

Applications

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



Standard Specification

Item	Type	DSR1612ATH	DSR211STH	DSR221STH
Frequency Range		38.4Mhz	19.2MHz / 38.4MHz / 55.2MHz	19.2MHz
Overtone Order		Fundamental		
Load Capacitance		7pF, 8pF		
Drive Level		10μW (100μW 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		10kΩ / 100kΩ (at +25°C)		
Thermistor B-constant		3435K (+25 to +85°C) / 3380K / 4250K (+25 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.

DSR1612ATH [mm]	DSR211STH [mm]	DSR221STH [mm]
<h4>Dimensions</h4> <p>Model Code: TH38.4, D701 Frequency: 38.4MHz Dimensions: 1.64±0.06, 1.24±0.06, 0.55±0.1, 1.10, 0.70, 0.84, 0.30, 0.10</p> <h4>Internal Connections (Top View)</h4> <p>#4 SENSOR, #3 XTal, #1 XTal, #2 GND</p> <h4>Recommended Land Pattern (Top View)</h4> <p>Dimensions: 1.80, 0.55, 0.70, 1.80, 1.40, 0.30, 0.55, 1.10, 0.84</p>	<h4>Dimensions</h4> <p>Model Code: TH19.2, D701 Frequency: 19.2MHz / 38.4MHz / 55.2MHz Dimensions: 2.0±0.1, 1.6±0.1, 0.7±0.1, 1.375, 0.975, 0.475, 0.15, 0.75</p> <h4>Internal Connections (Top View)</h4> <p>#4 SENSOR, #3 XTal, #1 XTal, #2 GND</p> <h4>Recommended Land Pattern (Top View)</h4> <p>Dimensions: 2.20, 0.75, 0.75, 1.375, 0.975, 0.475, 0.15, 0.75, 0.20, 1.80</p>	<h4>Dimensions</h4> <p>Model Code: TH19.2, D701 Frequency: 19.2MHz Dimensions: 2.5±0.15, 2.0±0.15, 0.9±0.1, 1.75, 1.65, 0.65, 1.55, 0.85, 0.95</p> <h4>Internal Connections (Top View)</h4> <p>#4 SENSOR, #3 XTal, #1 XTal, #2 GND</p> <h4>Recommended Land Pattern (Top View)</h4> <p>Dimensions: 1.95, 0.95, 1.55, 0.85, 1.80</p>