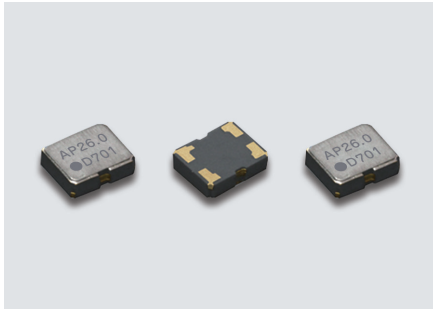


High-precision SMD VC-TCXO/TCXO (For Automotive)

DSA211SP/DSB211SP



Actual size

■ Features

- Capable of operating over a wide temperature range, from -40 to +105°C
- Low voltage operation
- Low phase noise
- Single packaged structure
- AEC-Q100/AEC-Q200 compliant

■ Applications

- GPS / GNSS
- Telematics, Satellite radio



■ Standard Specification

Item	Type	DSA211SP(VC-TCXO)	DSB211SP(TCXO)
Output Frequency Range		12.288 to 52 MHz	12.288 to 52 MHz
Standard Frequency		16.3676/ 16.367667/ 16.368/ 16.369/ 16.8/ 26/ 38.4 MHz	
Supply Voltage Range		+1.68 to +3.5V	
Supply Voltage (Vcc)		+1.8V / +2.8 V / +3.0V / +3.3V	
Current Consumption		+1.7 mA max. (f≤26MHz)/+2.2 mA max. (f>26MHz)	
Output Level		0.8 Vp-p min. (Clipped Sine Wave / DC-coupled)	
Output Load		10 kΩ//10 pF	
Frequency Stability Tolerance		±1.5×10 ⁻⁶ max.(After 2 reflows)	
vs. Temperature		±1.0×10 ⁻⁶ max. / -40 to +105°C	±0.5×10 ⁻⁶ max. / -40 to +105°C
vs. Supply Voltage		±0.2×10 ⁻⁶ max. (Vcc±5%)	
vs. Load Variation		±0.2×10 ⁻⁶ max.	
vs. Aging		±1.0×10 ⁻⁶ max. /year	
Start up Time		2.0ms max.	
Frequency Control Control Sensitivity		±3.0×10 ⁻⁶ to ±5.0×10 ⁻⁶ / Vcont=+1.4V±1V @Vcc≥+2.6V ±3.0×10 ⁻⁶ to ±5.0×10 ⁻⁶ / Vcont=+0.9V±0.6V @Vcc=+1.8V	—
Response Slope		Positive	—
SSB Phase Noise		[f≤15MHz]	[15MHz<f≤26MHz]
Offset 100Hz		-115 dBc/Hz	-110 dBc/Hz
Offset 1kHz		-135 dBc/Hz	-130 dBc/Hz
Offset 10kHz		-145 dBc/Hz	-140 dBc/Hz
Offset 100kHz		-145 dBc/Hz	-145 dBc/Hz
Reliability		AEC-Q100/AEC-Q200	
Packing Unit (1)		3000pcs./reel (φ180)	

(1) Prevention of moisture packing is unnecessary
Moisture Sensitivity Level : LEVEL 1 (IPC/JEDEC J-STD-033)

Consult our sales representative for other specifications.

[mm]

■ Dimensions

Model Code
AP : VC-TCXO (DSA211SP)
BP : TCXO (DSB211SP)

Pin Connections

Pin No.	Connection
#1	Vcont(VC-TCXO)/GND(TCXO)
#2	GND
#3	Output
#4	Vcc

■ Recommended Land Pattern (Top View)