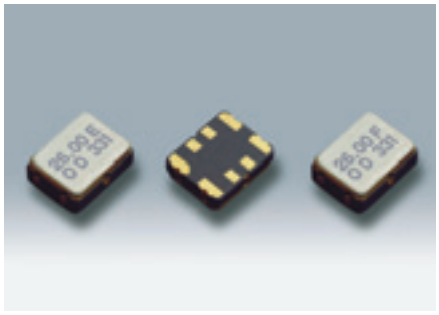
# SMD (VC-) TCXO

## DSA321SC/DSB321SC for Mobile communications



Actual size

### Features

- 3225 size, 0.9 mm high miniature SMD VC-TCXO (0.008cc, 0.03g)
- Low voltage. Supply voltage up to +2.4±0.1V.
- Low current consumption
- Low phase noise
- Single packaged structure making the use of moisture-proof packaging unnecessary.
  Moisture Sensitivity Level: LEVEL 1 (IPC/JEDEC J-STD-033)

Pb-Free

RoHS Compliant

### Applications

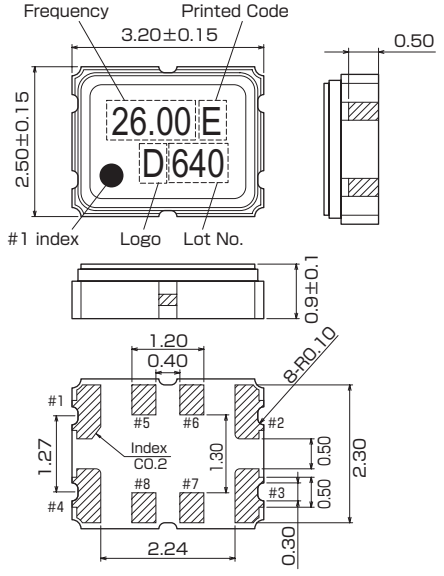
- Mobile phones (W-CDMA, CDMA2000, GSM, PCN, PCS, PHS)

### Standard Specification

| Item \ Type | DSA321SC (VC-TCXO) | DSB321SC (TCXO) |
|---|---|---|
| Output Frequency Range | 9.6 MHz to 40 MHz | |
| Standard Frequency | 12.6/ 13/ 14.4/ 16.8/ 19.2/ 19.68/ 19.8/ 20/ 26/ 38.4 MHz | |
| Supply Voltage | +2.6 V /+2.8 V / +3.0V | |
| Current Consumption | +1.3 mA max. (9.6≦F≦26MHz) / +1.5 mA max. (F>26MHz) | |
| Output Level | 0.8 Vp-p min. (Clipped Sinewave / DC-coupled) | |
| Harmonics | -5dBc max. | |
| Output Load | 10kΩ//10 pF | |
| Frequency Stability Tolerance | ±1.5×10$^{-6}$ max.( After 2 reflows ) | |
| vs. Temperature | ±2.0×10$^{-6}$ max . / - 30 to +85 deg. C @CDMA<br>±2.5×10$^{-6}$ max . / - 30 to +85 deg. C @GSM | |
| vs. Supply Voltage | ±0.2×10$^{-6}$ max. (Vcc ± 5%) | |
| vs. Load Variation | ±0.2×10$^{-6}$ max. ( 10 kΩ//10 pF ±10%) | |
| vs. Aging | ±1.0×10$^{-6}$ max. /year | |
| Start up Time | 2.0 msec. max. | |
| Frequency Control Control Sensitivity | ±5.5 to ±9.5×10$^{-6}$ / Vcont =+1.4V ±1V @CDMA<br>±9 to ±15×10$^{-6}$ / Vcont =+1.5V ±1V @GSM | – |
| Response Slope | Positive | – |
| Phase Noise | [F≦15MHz]<br>−115 dBc/Hz (Offset 100Hz)<br>−135 dBc/Hz (Offset 1kHz)<br>−145 dBc/Hz (Offset 10kHz)<br>−145 dBc/Hz (Offset 100kHz) | [15MHz<F≦26MHz]<br>−110 dBc/Hz (Offset 100Hz)<br>−130 dBc/Hz (Offset 1kHz)<br>−140 dBc/Hz (Offset 10kHz)<br>−145 dBc/Hz (Offset 100kHz) |
| | | [F>26MHz]<br>−105 dBc/Hz (Offset 100Hz)<br>−125 dBc/Hz (Offset 1kHz)<br>−135 dBc/Hz (Offset 10kHz)<br>−145 dBc/Hz (Offset 100kHz) |
| Packing Unit | 2000pcs./reel (φ180) | |

Consult our sales representative for other specifications.

### Dimensions[mm]




Pin Connections

| Pin No. | Connection |
|---|---|
| #1 | VCONT (VC-TCXO)/GND(TCXO) |
| #2 | GND |
| #3 | Output |
| #4 | Vcc |
| #5 | N.C.(Test Terminal) |
| #6 | N.C.(Test Terminal) |
| #7 | N.C.(Test Terminal) |
| #8 | N.C.(Test Terminal) |

### Recommended Land Pattern [mm]

〈Top View〉