

TTS14NSB-A11 / TTS14VSB-A11

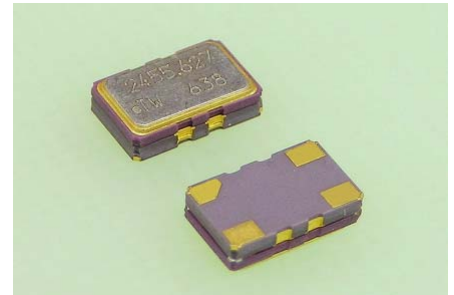
Temperature Compensated Crystal Oscillator (TCXO /VC-TCXO)

◆ Feature

Ultra-compact (5.0×3.2), lowest height, light weight and low current consumption type . Low frequency is available.Using built in 1/2 frequency divide down function.Reflow solderable, Ceramic SMD package base offers superior flatness. RoHS compliant.

◆ **Applications** Cell phone, Base station, GPS, and mobile radio application.

◆ Specifications



Item	Symbol	Specifications		Conditions
		TTS14NSB-A11 (TCXO)	TTS14VSB-A11 (VC-TCXO)	
Output frequency	f_0	10.0 MHz to 40.0 MHz		
Supply voltage	Vcc	$2.8V \pm 5\%$		Range = +2.3V to +3.7 V
Current consumption	Icc	2.0 mA max.		Vcc=2.8V , 10 kOhm//10 pF
Output voltage	Vpp	0.8 V min.		NOTE 1) DC coupling
Load	Load_R,C	10 kOhm // 10 pF		
Frequency Stability				
/Frequency tolerance	f_{tol}	$\pm 1.0 \times 10^{-6}$ max.		After reflow , at 25 °C
/ temperature characteristics	f_{0_TC}	$\pm 2.0 \times 10^{-6}$ max.		-30 °C to +85 °C
/ voltage coefficient	f_{0_Vcc}	$\pm 0.2 \times 10^{-6}$ max.		at $2.8V \pm 5\%$
/load coefficient	f_{0_Load}	$\pm 0.2 \times 10^{-6}$ max.		at (10kOhm // 10pF) $\pm 5\%$
/ Frequency ageing	f_{age}	$\pm 1.0 \times 10^{-6}$ max.		1 year , at 25 °C
Frequency control range	f_{cont}	---	± 5 to $\pm 13 \times 10^{-6}$	Vc=1.4V \pm 1.0V , Positive polarity

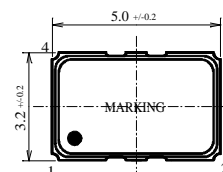
NOTE 1) DC-cut capacitor of output is not put in TCXO. Please add DC-cut capacitor (1,000pF) in oscillator output line.

◆ Phase Noise

Frequency Offset (Hz)	Phase Noise (dBc/Hz)
100	-110 typ.
1k	-130 typ.
10k	-145 typ.
100k	-145 typ.

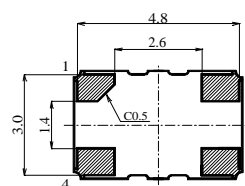
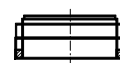
at $f_0=26.000\text{MHz}$ (25 \pm 2°C)

◆ Outline

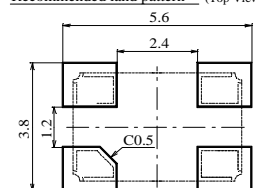


Pin Connections

- 1 : Vc (VSB)
GND or NC (NSB)
- 2 : GND
- 3 : OUTPUT
- 4 : Vcc



Recommended land pattern (Top View)



unit (mm)

Note : Modified specifications are available upon request for specific applications.