

Package :TTS30NS-A18 / TTS30VS-A18

Ultra-compact Temperature Compensated Crystal Oscillator (TCXO / VC-TCXO)

◆ Feature

Reflow solderable, SMD package base offers superior flatness.

Ultra-compact (2.0×1.6), lowest height (0.8t max), light weight, and low Current consumption type.

High frequency ($f_0=52\text{MHz}$) available, and low frequency available using built in 1/2 frequency divide down function.RoHS compliant.



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

◆ Specifications

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

Item	Symbol	Specifications		Conditions
		TTS30NS-A18 (TCXO)	TTS30VS-A18 (VC-TCXO)	
Output frequency	f_0	13.0 MHz to 52.0 MHz		
Supply voltage	Vcc	+2.8V \pm 5%		+2.3V to +3.7V
Current consumption	Icc	2.0mA max.		at 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}	$\pm 2.5 \times 10^{-6}$ max.		-30 °C to +85 °C
/ voltage coefficient	f_{0_Vcc}	$\pm 0.2 \times 10^{-6}$ max.		at Vcc=+2.8V \pm 5%
/load coefficient	f_{0_Load}	$\pm 0.2 \times 10^{-6}$ max.		at (10kOhm // 10pF) \pm 10%
/ Frequency ageing	f_{age}	NOTE 2) $\pm 1.0 \times 10^{-6}$ max.		1 year , at +25 °C
Frequency controlled range	f_{cont}	---	± 3 to $\pm 5 \times 10^{-6}$	Vc=+1.4V \pm 1.0V , Positive polarity

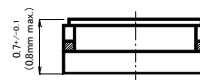
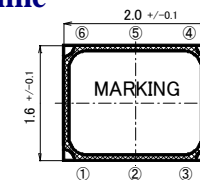
NOTE 1) DC-cut capacitor of output is not put in TCXO. Please add DC-cut capacitor (1,000pF) in oscillator output line.

◆ Phase Noise

Frequency Offset (Hz)	Phase Noise (dBc/Hz)
100	-110 typ.
1k	-132 typ.
10k	-147 typ.
100k	-151 typ.

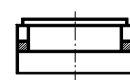
at $f_0=26.000\text{MHz}$ (25 \pm 2°C)

◆ Outline

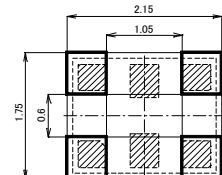
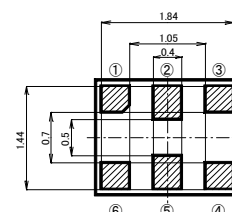


Pin Connections

- ① : Vc(VS)
- GND(NS)
- ② : NC
- ③ : GND
- ④ : OUTPUT
- ⑤ : NC
- ⑥ : Vcc



Recommended land pattern (Top View)



The ordering number will be obtained separately by customer's requirement.