

Package : TTS27NSH / TTS27VSH

Low Voltage high precision Temperature Compensated Crystal Oscillator (TCXO / VC-TCXO)

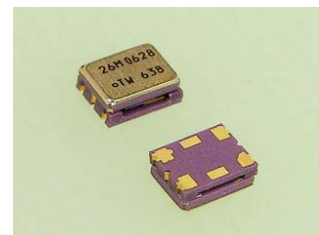
◆ Feature

Reflow solderable, Ceramic SMD package base offers superior flatness.

Ultra-compact (2.5×2.0), lowest height, light weight,

and low Current consumption type.

available .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
		TTS27NSH (TCXO)	TTS27VSH(VC-TCXO)	
Output frequency	f_0	10.0 MHz to 40.0 MHz		
Supply voltage	Vcc	+2.3V to +3.7V		
Current consumption	Icc	NOTE ²⁾ 1.5 mA 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}	$\pm 0.5 \times 10^{-6}$ max.		-30 °C to +85 °C , at Vc=+1.4V
/ 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

NOTE¹⁾ DC-cut capacitor of output is not put in TCXO. Please add DC-cut capacitor (1,000pF) in oscillator output line.

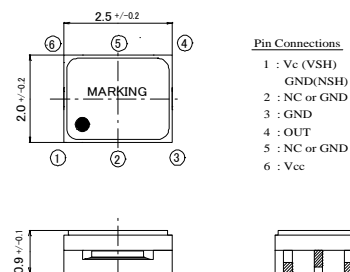
NOTE²⁾ at $f_0=26.000\text{MHz}$

◆ Phase Noise

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

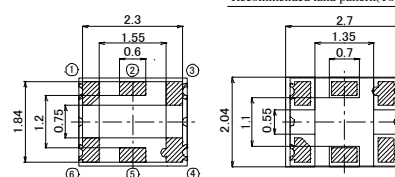
at $f_0=26.000\text{MHz}$ (25 $\pm 2^\circ\text{C}$)

◆ Outline



Pin Connections

- 1 : Vc (VSH)
- GND(NSH)
- 2 : NC or GND
- 3 : GND
- 4 : OUT
- 5 : NC or GND
- 6 : Vcc



Recommended land pattern(Top View)

unit (mm)

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

TEW TEW AMERICA, INC.,

<http://www.tewamerica.com>

Specifications subject to change without notice. Jan / 2011