

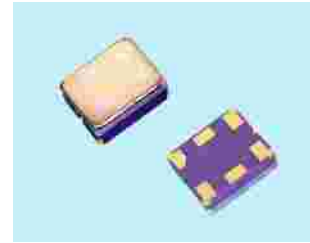
# TTS27N/V/ESC - series

## Low Voltage high precision Temperature Compensated Crystal Oscillator (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.  
 Low supply voltage (Vcc=1.7V min) available.  
 Suitable for Cell phone, Base station, GPS, and mobile radio application.  
 RoHS compliant.

**Added functions: The enable/disable function is available.**  
**: The temperature sensor output function is available.**



### Specifications

Item	symbol	Specifications		Conditions
		TTS27NSC (TCXO)	TTS27VSC (VC-TCXO)	
Output frequency	f <sub>0</sub>	10.0 MHz ~ 52.0 MHz		
Supply voltage	V <sub>cc</sub>	+1.7V ~ +3.3V		
Current consumption	I <sub>cc</sub>	NOTE <sup>2)</sup> 1.5 mA max.		V <sub>cc</sub> =+2.8V ,10kΩ//10pF
Output voltage	V <sub>pp</sub>	0.8 V min.		NOTE <sup>1)</sup> DC coupling
Load	Load_R,C	10 kΩ // 10 pF		
Frequency Stability				
/Frequency tolerance	f <sub>-tol</sub>	± 1.0×10 <sup>-6</sup> max.		After reflow , at +25 °C
/ temperature characteristics	f <sub>0-Tc</sub>	± 0.5 to 2.0×10 <sup>-6</sup> max.		-30 °C to +85 °C
/ voltage coefficient	f <sub>0-Vcc</sub>	± 0.2×10 <sup>-6</sup> max.		V <sub>cc</sub> =+2.8V ±10%
/load coefficient	f <sub>0-Load</sub>	± 0.2×10 <sup>-6</sup> max.		at (10kΩ// 10pF) ± 10%
/ Frequency ageing	f <sub>-age</sub>	NOTE <sup>2)</sup> ± 1.0×10 <sup>-6</sup> max.		1 year , at +25 °C
Frequency controlled range	f <sub>-cont</sub>	---	±3 ~ ±5×10 <sup>-6</sup>	V <sub>c</sub> =+1.4V±1.0V , Positive polarity

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

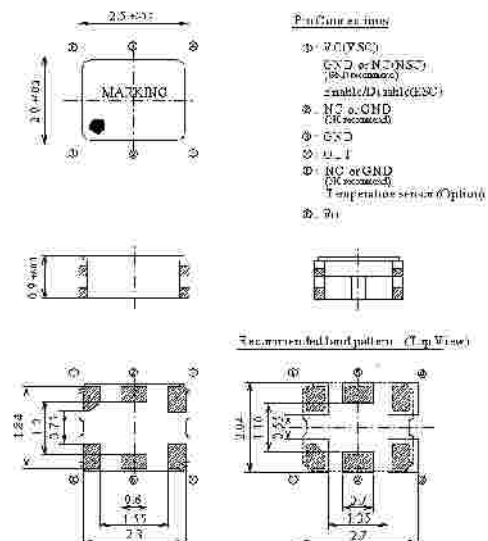
NOTE<sup>2)</sup> at f<sub>0</sub>=26.000MHz

### Phase Noise

Frequency Offset (Hz)	Phase Noise (dBc/Hz)
100	-110 typ.
1k	-130 typ.
10k	-148 typ.
100k	-148 typ.

at f<sub>0</sub>=26.000MHz (25±2°C)

### Outline



Products with specific requirements are available upon request.