

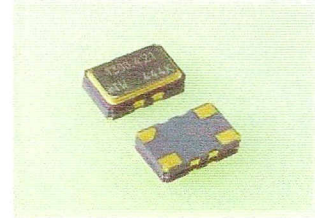
Coming soon

# TTS14NSH / VSH, TTS14NCH / VCH

## High Stability - Temperature Compensated Crystal Oscillator ( HS – TCXO )

### ◆ Feature

- Reflow solderable, Ceramic SMD package base offers superior flatness.
- Ultra-compact (5.0×3.2), lowest height(1.5max.), light weight, and low Current consumption type.
- Clipped Sine Wave or CMOS Output is available either output.
- High Frequency Stability and High Precision Frequency temperature characteristics.
- For Base station and Femto cell application.
- RoHS compliant.



### ◆ Specifications

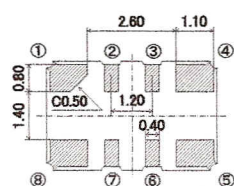
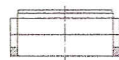
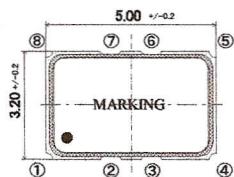
Item	Symbol	Specifications		Conditions	
		TTS14N/VSH	TTS14N/VCH		
Output Frequency	$f_0$	10.0MHz to 52.0MHz			
Supply Voltage	Vcc	+2.7V to +5.5V		10kohm/10pF	No Load
Current Consumption	Icc	2.4mA max. <sup>1)</sup>	4.0mA max. <sup>1)</sup>	Vcc=+3.3V	
Output Voltage	Vpp   V <sub>OH/OL</sub>	0.8Vp-p min. <sup>2)</sup>	Vcc×90%min. / Vcc×10%max.		
Load	Load	10kohm/10pF	15pF		
Frequency Stability					
/Frequency Tolerance	$f_{0\_tol}$	±1.5×10 <sup>-6</sup> max.		After reflow, at +25°C	
/Temperature Characteristic	$f_{\_Tc}$	±0.28×10 <sup>-6</sup> max. / ±0.05×10 <sup>-6</sup> max.		-40 to +85°C / -10 to +70°C	
/Voltage Coefficient	$f_{\_Vcc}$	±0.05×10 <sup>-6</sup> max. <sup>1)</sup>	TBD	at Vcc ±5%,	TBD
/Load Coefficient	$f_{\_Load}$			Load ± 10%	
/Frequency Ageing	$f_{\_age}$	±0.5×10 <sup>-6</sup> max. <sup>1)3)</sup>		1 year, at+25°C	
Frequency Controlled Range	$f_{\_cont}$	N:- / V:±3×10 <sup>-6</sup> to ±15×10 <sup>-6</sup>		VC=+1.5V±1.0V, Positive polarity	

NOTE 1) at  $f_0=19.200\text{MHz}$

NOTE 2) DC-cut capacitor of output is not put in TCXO. Please add DC-cut capacitor (1,000pF) in oscillator output line.

NOTE 3) target value

### ◆ Outline



#### Pin Connections

①VC(VSH/VCH), GND(NSH/NCH)\*1

②NC

③NC

④GND

⑤Clipped Sine OUTPUT(N/VSH),

CMOS OUTPUT(N/VCH) \*1

⑥OUTPUT Enable/Disable\*2

⑦NC

⑧Vcc

\*1 Please Choose either

\*2 Please connected to Vcc or unconnected if not required

Products with specific requirements are available upon request.