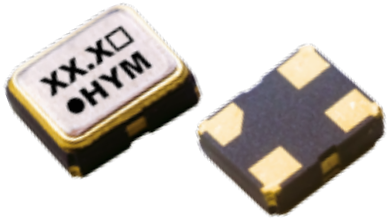


## HSA221S/HSB221S Series-2.5mm x 2.0mm CRYSTAL OSCILLATOR, VC-TCXO/ TCXO



### Features

- Small package size which can meet all major communication medium requirements
- Voltage Control Function available.
- Major applications include GPS, RF modules, WiFi, mobile phones and other common communication devices.

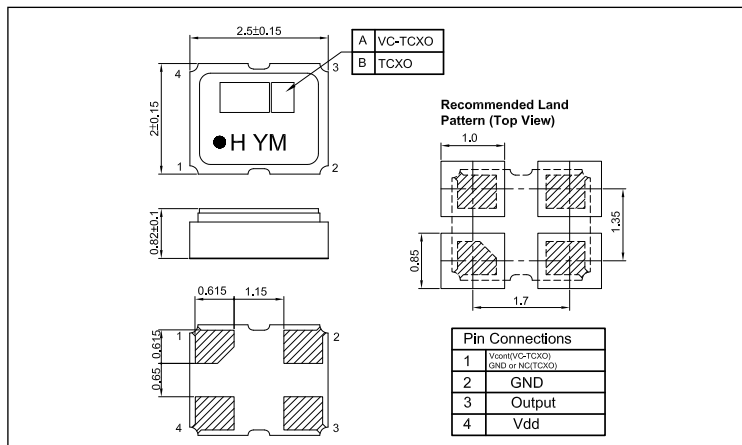
### STANDARD SPECIFICATION:

ITEMS		PARAMETER	
		TCXO	VC-TCXO
Frequency Range		13 ~ 52MHz	
Supply Voltage		1.8 ~ 3.3 V	
Current Consumption		+2.0mA max.	
Harmonics		- 5 dBc Max.	
Output Level		0.8 Vp-p min	
Output Load		10KΩ // 10pF	
Frequency Stability	Tolerance	± 2.0 ppm max. (After 2 times reflow )	
	vs Temperature	± 0.5 ppm max. / -30 ~ +85°C	± 2.0 ppm max. / -30 ~ +85°C
	vs Slope	± 0.2 ppm /°C max. (-30 ~ +85°C )	
	vs Supply Voltage	± 0.2 ppm max. (vdd±5%)	
	vs Load Variation	± 0.2 ppm max. (10KΩ / 10pF±10%)	
Frequency Control	vs Aging	± 1ppm / year	
	Control sensitivity	-	±9.0 ~ ±15ppm / Vcont=+1.4V±1V@Vdd=2.8V
Start Up		5.0 ms max.	
Phase Noise	offset 1kHz	- 130 dBc / Hz	

**Packing Unit : 3,000pcs/Reel.**

### DIMENSION

Unit: mm



### Measurement Circuit:

