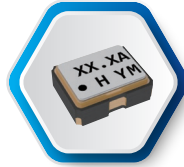




HSB211S SERIES

CRYSTAL OSCILLATOR, TCXO

✓ RoHS Compliant ✓ Pb Free



STANDARD SPECIFICATION

Items		Parameter
Frequency Range		13 ~ 52MHz
Supply Voltage		1.8 ~ 3.3 V
Current Consumption		1.5 mA Max. (f≤26MHz)/ +2.0mA Max. (26<f≤52MHz)
Harmonics		- 5 dBc Max.
Output Level		0.8 Vp-p Min.
Output Load		10KΩ// 10pF
Frequency Stability	Tolerance	± 1.5 ppm Max. (After 2 times reflow)
	vs Temperature	± 0.5 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		2.0 ms Max.

PHASE NOISE (FREQUENCY vs OFFSET)

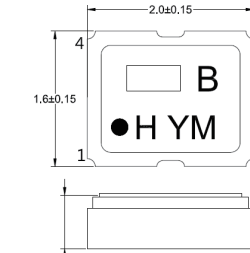
	1kHz	10kHz	100kHz
f≤26MHz	-130 dBc/ Hz	-150 dBc/ Hz	-155 dBc/ Hz
26MHz<f≤40MHz	-130 dBc / Hz	-150 dBc / Hz	-155 dBc / Hz
40MHz<f≤52MHz	-125 dBc / Hz	-145 dBc / Hz	-150 dBc / Hz

*For other specification, please contact us.

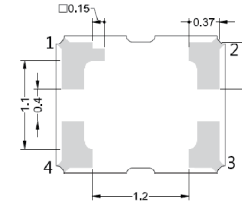
Packing Unit : 3,000pcs/Reel.

DIMENSION

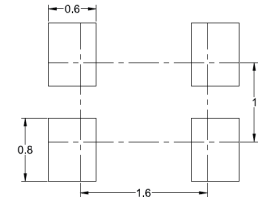
Unit:mm



Bottom View



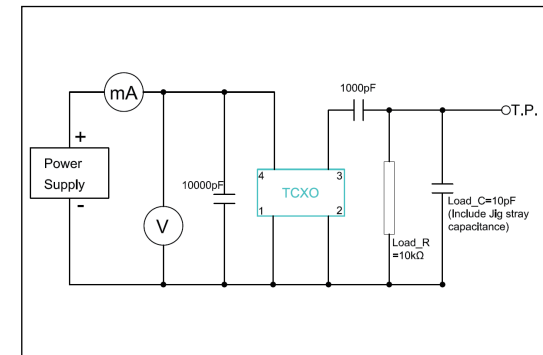
Recommended Land Pattern
Tolerance: ±0.1



Pin Connections	
1	GND or NC
2	GND
3	Output
4	Vdd

TEST CIRCUIT AND OUTPUT WAVEFORM

Measurement Circuit



Actual Size