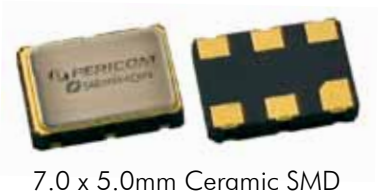
PERICOM SaRonix-eCera

ASSP VCXO

Application Specific Voltage Controlled Crystal Oscillator 7.0 x 5.0mm

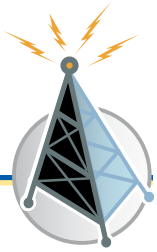
3.3V CMOS 153.6MHz WiMAX VCXO

YNWMAX153



7.0 x 5.0mm Ceramic SMD

ASSP VCXO™ for WiMAX



Product Features

- Very low Pk to Pk jitter - 40ps Max
- Low supply current - 30mA Max
- Low power standby mode
- RoHS Compliant

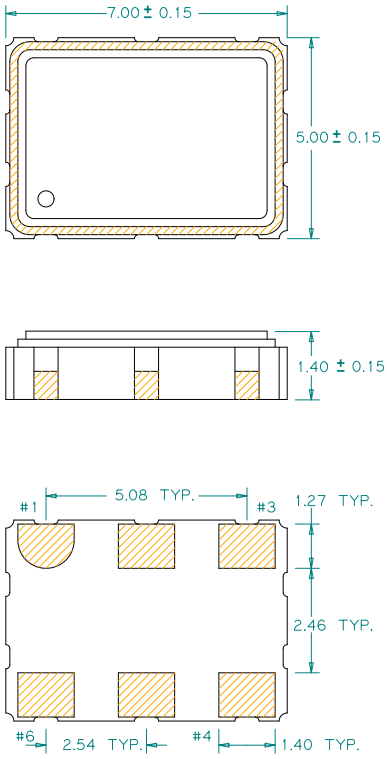
Product Description

This is an enhanced 3.3V, 153.6MHz with superb jitter and low operating current for providing clock references in telecom applications.

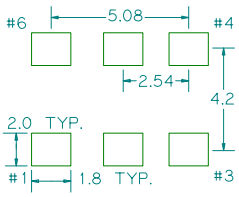
Applications

- E1
- CEPT1(x8)
- Modems

Package: (Scale: none, Dimensions are in mm)



Recommended Land Pattern:



Pin Functions:

Pin	Function
1	Control Voltage
2	Enable/Disable
3	Ground
4	Output
5	N/C
6	V_{DD}

*Extended high frequency power decoupling is recommended (see test circuit for minimum recommendation). To ensure optimal performance, do not route RF traces beneath the package.

Part Ordering Information:

YNWMAX153

PERICOM SaRonix-eCera

ASSP VCXO

Application Specific Voltage Controlled Crystal Oscillator 7.0 x 5.0mm

Electrical Performance

Parameter	Min.	Typ.	Max.	Units	Notes
Output Frequency		153.6		MHz	
Supply Voltage V_{DD}	3.135	3.3	3.465	V	
Supply Current, Output Enabled			30	mA	
Frequency Stability			±35	ppm	See Note 1 below
Operating Temperature Range	-40		+85	°C	
Output Logic 0, V_{OL}			10% V_{DD}	V	
Output Logic 1, V_{OH}	90% V_{DD}			V	
Output Load			15	pF	
Duty Cycle	45		55	%	Measured 50% V_{DD}
Rise and Fall Time			5	ns	Measured 20/80% of waveform
Jitter, Phase RMS(1-σ)			1	ps	12kHz~20 MHz Frequency Band
Jitter, Peak to Peak (Pk-Pk)			40	ps	100.000 Random Periods
Phase Noise		-65	-55/-40	dBc/Hz	Typ./Max. at 10Hz offset
Phase Noise		-90	-85/ -70	dBc/Hz	Typ./Max. at 100Hz offset
Phase Noise		-120	-115/-100	dBc/Hz	Typ./Max. at 1kHz offset
Phase Noise		-135	-133/-130	dBc/Hz	Typ./Max. at 10kHz offset

Notes:
1. Stability includes all combinations of operating temperature, load changes, rated input (supply) voltage changes, initial calibration tolerance (25°C), aging (10 years at +40°C average effective ambient temperature), shock and vibration.
2. For specifications other than those listed, please contact sales.

Voltage Control Function

Parameter	Min.	Typ.	Max.	Units	Notes
Pullability	±75		±110	ppm	
Control Voltage Range	0.3		3.0	V	As rated
Center Control Voltage		1.65		V	For RMT Nominal Frequency
Monotonic Linearity			10	%	Positive Transfer Slope
Input Impedance	130			kΩ	Control Voltage Pin

Output Enable / Disable Function

Parameter	Min.	Typ.	Max.	Units	Notes
Input Voltage (pin 2), Output Enable	3.0			V	or open
Input Voltage (pin 2), Output Disable (low power standby)			0.3	V	Output is Hi-Z

Absolute Maximum Ratings

Parameter	Min.	Typ.	Max.	Units	Notes
Storage Temperature	-55		+125	°C	

For the latest product information visit: http://www.pericom.com/products/crystals-and-crystal-oscillators/assp-xo/?part=YNWMAX153

For test circuit go to: http://www.pericom.com/pdf/sre/tc_vc6cmos.pdf

For soldering reflow profile and reliability test ratings go to: http://www.pericom.com/pdf/sre/reflow.pdf

For tape and reel information go to: http://www.pericom.com/pdf/sre/tr_7050_xo.pdf