PERICOM SaRonix-eCera

ASSP XO™

Application Specific Crystal Oscillator 5.0 x 3.2mm

3.3V PECL Low Jitter 155.52MHz GPON XO

PDGPON155



5.0 x 3.2mm Ceramic SMD

ASSP XO™ for Networking



Product Features

- Very low phase jitter
- Thicker crystal for improved reliability
- Pb-free & RoHS compliant
- Industrial temperature range

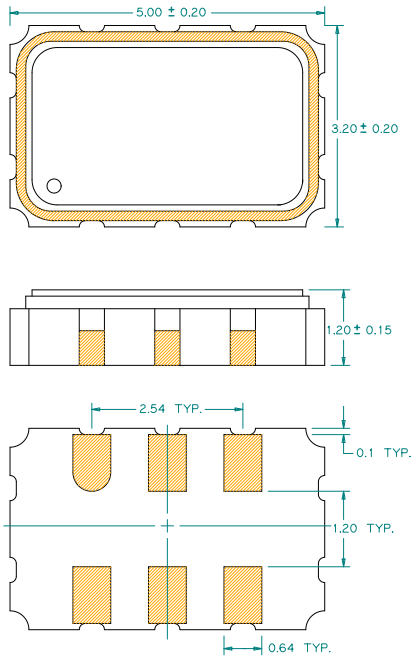
Product Description

The PD series 3.3V, 155.52MHz crystal clock oscillator achieves superb jitter for GPON applications. The output clock signal, generated internally with a custom oscillator design, is compatible with LVPECL logic levels. The device, available on tape and reel, is contained in a 5.0 x 3.2mm surface-mount ceramic package.

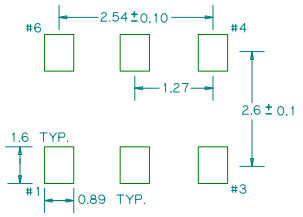
Applications

- GPON Optical Network Unit (ONU)
- GPON Optical Line Termination (OLT)
- GPON Gateway

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



Recommended Land Pattern:



Pin Functions:

Pin	Function
1	OE Function
2	N/C
3	V_{EE}
4	OUT
5	$\overline{OUT}$
6	V_{CC}

*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:

PDGPON155

Electrical Performance

Parameter	Min.	Typ.	Max.	Units	Notes
Output Frequency		155.52		MHz	
Supply Voltage	2.97	3.30	3.63	V	
Supply Current, Output Enabled			80	mA	
Supply Current, Output Disabled			30	µA	
Frequency Stability			±50	ppm	See Note 1 below
Operating Temperature Range	-40		+85	°C	
Output Logic 0, V_{OL}			V_{CC} – 1.620	V	
Output Logic 1, V_{OH}	V_{CC} – 1.025			V	
Output Load	50Ω to V_{CC} – 2V				output requires termination
Duty Cycle	45		55	%	Measured 50% waveform
Rise and Fall Time			1.0	ns	Measured 10/90% of waveform
Jitter, Phase RMS (1-σ)			1.0	ps	12 kHz to 20 MHz frequency band
Jitter, pk–pk			40	ps	100,000 random periods

Notes:
1. Stability includes all combinations of operating temperature, load changes, rated input (supply) voltage changes, initial calibration tolerance (25°C), aging (5 year at 40°C average effective ambient temperature), shock and vibration.
2. For specifications othere than those listed, please contact sales.

Output Enable / Disable Function

Parameter	Min.	Typ.	Max.	Units	Notes
Input Voltage (pin 1), Output Enable	0.7* V_{CC}			V	or open
Input Voltage (pin 1), Output Disable (low power standby)			0.3* V_{CC}	V	Outputs disabled to Hi-Z
Output Disable Delay			200	ns	
Output Enable Delay			2	ms	
Internal Pull Up Resistance		50		kΩ	

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=PDGPON155

For test circuit go to: http://www.pericom.com/pdf/sre/tc_pecl.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_5032_xo.pdf