

3.3V CMOS 77.76MHz SONET VCXO

FRSONT077



7.0 x 5.0mm Ceramic SMD

ASSP VCXO™ for SONET



Product Features

- Very low Pk to Pk jitter - 50ps Max
- Low supply current - 10mA Max
- Low power standby mode
- RoHS Compliant

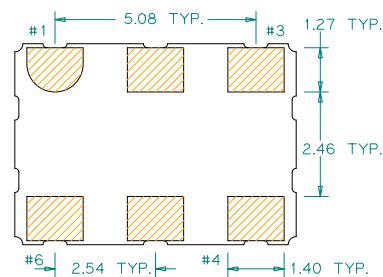
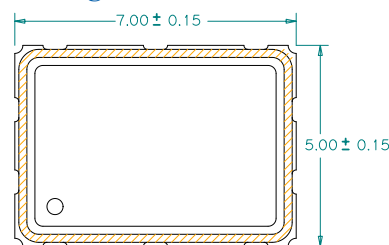
Product Description

This is an enhanced 3.3V, 77.76MHz with superb jitter and low operating current for providing clock references in telecom applications.

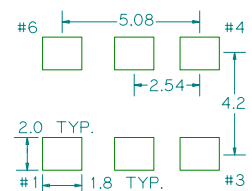
Applications

- SONET
- SDH
- E3
- STM1

Package:



Recommended Land Pattern:



Pin Functions:

Pin	Function
1	Voltage Control
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: FRSONT077

Electrical Performance

Parameter	Min.	Typ.	Max.	Units	Notes
Output Frequency		77.760		MHz	
Supply Voltage V _{DD}	3.135	3.3	3.465	V	
Supply Current, Output Enabled			10	mA	
Supply Current, Output Disabled			3	mA	
Frequency Stability			±50	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			4	ns	Measured 20/80% of waveform
Jitter, Phase			1	ps, RMS(1-σ)	12kHz~20MHz Frequency Band
Jitter, Peak to Peak			40	ps, Pk-Pk	100,000 Random Periods

Notes:

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

Voltage Control Function

Parameter	Min.	Typ.	Max.	Units	Notes
Absolute Pull Range (APR)	±100			ppm	See 1 below
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	5000			kΩ	Control Voltage Pin

Notes:

- APR is relative to the nominal output frequency; APR is inclusive of frequency deviation due to stability.

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
Internal Pullup Resistance		20		kΩ	
Output Disable Delay			100	ns	
Output Enable Delay			100	ns	

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/timing/oscillators/FRSONT077/>

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