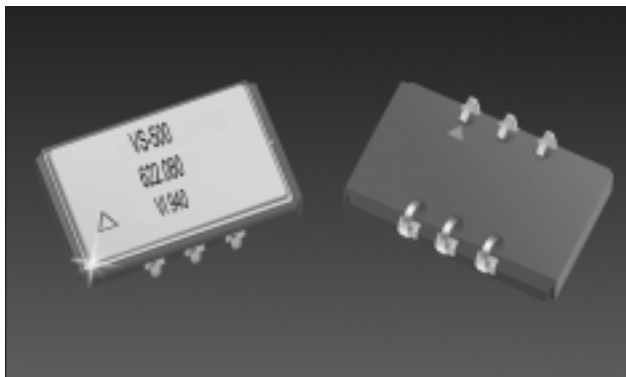


Voltage Controlled Saw Oscillators (VCSO's)

VS-500 Series



Description:

The VS-500 is a SAW based voltage controlled oscillator that operates at the fundamental frequency of the internal SAW filter. This product is ideally suited for SONET/SDH/10G Ethernet and other optical applications.

Features

- Output Frequency 155 MHz to 800 MHz
- 3.3V or 5.0V operation
- Low jitter, <1 ps rms across 50 kHz to 80 MHz
- J-Lead package
- Ideal for clock smoothing, frequency translation, clock and data retiming applications
- 10K ECL, PECL logic levels with fast transition times
- Complementary outputs
- Low profile, surface mount package
- Output disable feature

Performance Characteristics

Table 2. Electrical Performance @ 25°C

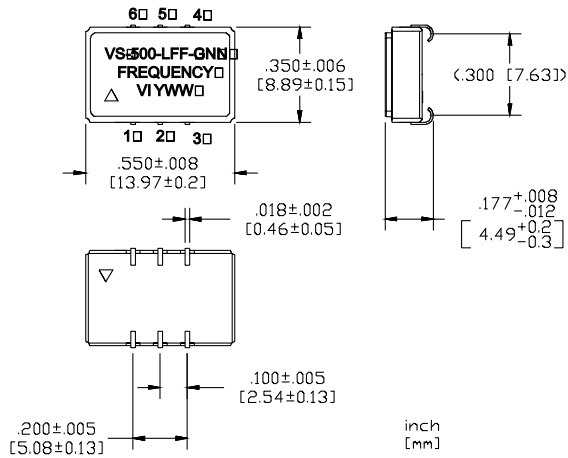
Parameter	Symbol	Minimum	Typical	Maximum	Units
Center Frequency (See Ordering Information)	F _N	155.52		800	MHz
Operating Temperature	T _{OP}	-40	25	+85	°C
Supply Current (No Load)	I _{CC}		55	70	mA
Supply Voltage	V _{CC}	2.97	3.3	3.63	V
Absolute Pull Range (-40 to 85 Deg C, VC = 0.3 to 3.0 V)	APR	±50	-	-	ppm
Positive Gain Transfer @ 155.52 (3.3V)	K _V		650		ppm/V
Positive Gain Transfer @ 622.08 (3.3V)	K _V		430		ppm/V
Linearity ¹	Lin		±3		%
Frequency Stability (-40 to 85 Deg C)	F _{STAB}		±150		ppm
Mid Level Voltage		V _{CC} -1.5	V _{CC} -1.3	V _{CC} -1.1	V
Output Voltage Swing (peak to peak)		500	650	800	mV
Output Rise Time ³	t _R		250	400	ps
Output Fall Time ³	t _F		250	400	ps
Jitter @ 155.52 MHz (12kHz to 20MHz)			0.694		
Jitter @ 622.08 MHz (50 kHz to 80 MHz)			0.350		ps-rms
Spurious Suppression		50	60		dBc
Data Symmetry	SYM	45		55	%
Control Voltage Input Impedance	Z _C		100		kΩ
Control Voltage Modulation Bandwidth	BW	-	500	-	kHz
Output Current	I _{OUT}	-	-	20	mA

1. Linearity is a best-fit straight line
2. Output Levels are standard 100K PECL compatible.

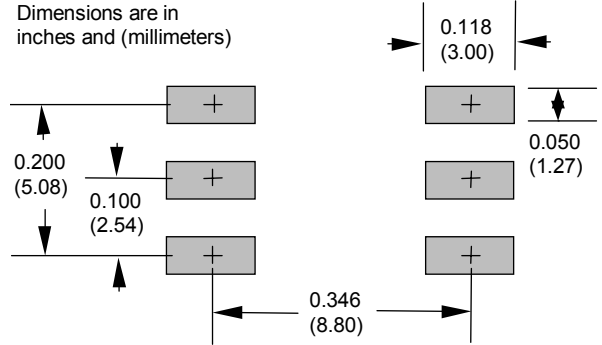
Voltage Controlled Saw Oscillators (VCSO's)

VS-500

Outline Drawing



Pad Layout



VCSO

Pin out information

Pin	Symbol	Function
1	V _c	VCSO Control Voltage
2	O _D	Output Disable
3	GND	Case and electrical ground
4	Output	VCSO Output
5	COutput	VCSO Complementary Output
6	V _{cc}	Power Supply Voltage

Standard Frequencies (MHz)

155.520	156.250	161.1328
166.6286	177.7371	311.040
622.080	624.7048	625.000
627.3296	644.5313	666.5143
669.1280	669.3265	765.5906
767.250	777.600	

Other Frequencies available - contact factory.

Ordering Information

