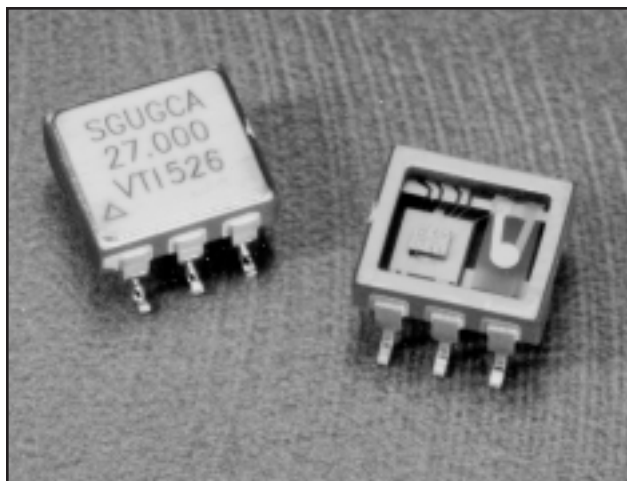


# Voltage Controlled Crystal Oscillators (VCXO's)

## S-Type



### Description:

The S-Type is a high volume, high reliability CMOS VCXO. It is ASIC based and available in a through-hole or SMD industry standard footprint ceramic package.

### Features:

- Frequencies to 65.536 MHz
- 5 or 3.3 volt operation
- <6 ps rms jitter (output frequencies >12 MHz)
- Advanced custom ASIC technology
- Surface mountable
- TTL or CMOS selectable
- Tri-state output
- 0/70°C or -40/85°C Operating Temp. Range

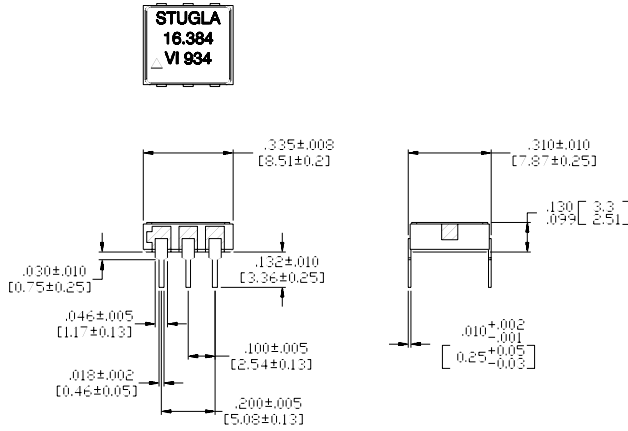
### Performance Characteristics

Parameter	Symbol	Minimum	Typical	Maximum	Units
Frequency:	$f_o$	1.024		65.536	MHz
Supply Voltage: (+3.3 V) (+5.0 V)	$V_{DD}$	2.97 4.5	3.3 5.0	3.63 5.5	V
Supply Current:	$I_{DD}$	10mA +0.25mA/MHz			mA
Output Logic Levels ( $V_{DD} = 4.5V$ ): Output Logic High: Output Logic Low:	$V_{OH}$ $V_{OL}$	0.8* $V_{DD}$ --		-- 0.1* $V_{DD}$	V V
Transition Times: Rise Time Fall Time	$t_R$ $t_F$			5 5	ns ns
Symmetry or Duty Cycle:	SYM	45		55	%
Operating temperature ( <i>ordering option</i> ):		0/70 or -40/85			°C
Test Conditions for APR (+5V option):	$V_c$	0.5		4.5	V
Test Conditions for APR (+3.3V option):	$V_c$	0.3		3.0	V
Absolute Pull Range ( <i>ordering option</i> ):	APR	+/-50 +/- 80 +/-100			ppm
Gain Transfer:		Positive			ppm/V
Control Voltage Leakage Current:	$I_{vcxo}$			±1	uA
Control Voltage Bandwidth (-3dB):	BW	10			kHz
Package Size:		7.8 x 8.5 x 3.3			mm

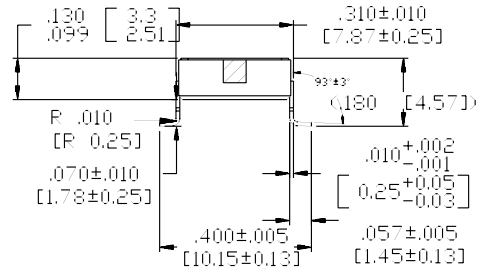
# Voltage Controlled Crystal Oscillators (VCXO's)

## S-Type

### Thru-Hole



### Gull-Wing



VCXO

### Pin Out Information

Pin #	Symbol	Name/Function
1	Vc	VCXO: Control Voltage to modulate frequency.
2	Tri-state	TTL logic low disables output. TTL logic high or no connection enables output frequency.
3	GND	Circuit and case ground
4	Output	Output waveform
5	TTL/CMOS	TTL logic low provides waveform symmetry for CMOS. TTL logic high or no connection provides waveform symmetry for TTL.
6	VDD	Supply Voltage, 5 V ±10% or 3.3V ±10%

### Standard Frequencies (MHz)

1.024	1.544	2.000	2.048	3.088	3.580	3.686
4.000	4.032	4.096	4.434	5.000	5.760	6.144
6.176	6.312	6.400	8.000	8.192	8.448	9.192
10.000	11.000	11.2896	11.290	12.000	12.288	12.352
12.900	13.000	13.500	14.318	15.360	15.440	16.000
16.123	16.384	17.734	18.432	19.440	19.985	20.000
20.480	24.000	24.576	24.704	27.000	30.000	32.000
32.768	34.368	35.328	38.880	40.000	40.960	44.736
50.000	51.840	52.000				

### Ordering Information

