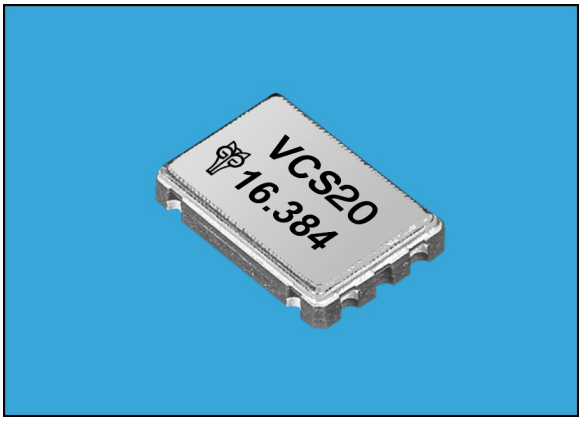
VCXO SMD LOW PROFILE/VOLTAGE CONTROLLED CRYSTAL OSCILLATOR

VCSAT SERIES

The Fox VCS Series VCXO is an SMD, tight stability, voltage controlled oscillator available in a wide range of stability and pullability options. It is intended to be a general purpose VCXO with minimum utilization of board space.



FEATURES

- 5.0 Volt VDD
- HCMOS
- Enable/Disable
- Many Stability/Pullability Options
- -40 ~ +85ºC Temp Range Option

• ELECTRICAL CHARACTERISTICS (VDD = 5.0V, CL = 15pF)

PARAMETERS		FREQUENCY RANGE	CONDITIONS	MIN	MAX	
Frequency Range	(Fo)			1.000	52.000	MHz
Temperature Range		1.000 ~ 52.000				
Operating	(TOPR)			-10	+70	ºC
Storage	(TSTG)			-40	+85	
Supply Voltage	(VDD)	1.000 ~ 52.000		+4.75	+5.25	V
Control Voltage	(Vc)	1.000 ~ 52.000		+0.5	+4.5	V
Input Current	(IDD)	1.000 ~ 18.000			20	mA
		18.000+ ~ 36.000			30	
		36.000+ ~ 52.000			40	
Output Symmetry		1.000 ~ 52.000	2.5V	40	60	%
Rise Time	(TR)	1.000 ~ 52.000	1.0V ~ 4.0V		5	nS
Fall Time	(TF)		4.0V ~ 1.0V		5	
Output Voltage	(VOL)	1.000 ~ 52.000	IOL = 16.0 mA		0.5	V
	(VOH)		IOH = -4.0 mA	4.5		
Output Current	(IOL)	1.000 ~ 52.000	VOL = 0.5V		16.0	mA
	(IOH)		VOH = 4.5V		-4.0	
Output Load		1.000 ~ 52.000	TTL		10	TTL
			HCMOS		15	pF
Start-up Time	(TS)	1.000 ~ 52.000			10	mS
Enable/Disable Time **		1.000 ~ 52.000			100	nS
Frequency Linearity		1.000 ~ 52.000		-10	+10	%
Modulation Bandwidth		1.000 ~ 52.000		20		kHz

• MODEL SELECTION

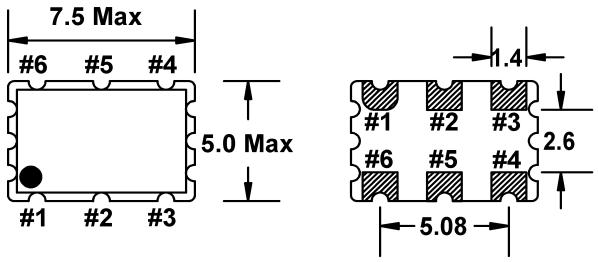
Model Number		Stability (PPM) (MAX) *	Pullability (PPM) (MIN) Vc = 2.5 ±2.0V
-10°C~+70°C	-40°C~+85°C		
VCS12AT	VCS12ATR	±25***	±50
VCS15AT	VCS15ATR	±50	±50
VCS22AT	VCS22ATR	±25	±100
VCS25AT	VCS25ATR	±50	±100
VCS20AT	VCS20ATR	±100	±100

* Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock, vibration, and Vc=2.5V.

*** 25 PPM stability over -40°C ~ +85°C is available on an individual inquiry basis.

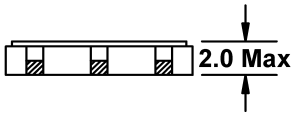
• ENABLE / DISABLE FUNCTION **

Pin 2	OUTPUT (Pin 4)
OPEN	ACTIVE
≥ 2.2 V	ACTIVE
≤ 0.8 V	High Z

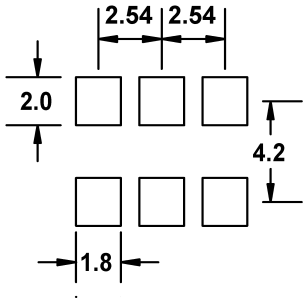


Pin Connections

#1 $V_{Control}$ #4 Output
#2 E/D #5 N.C.
#3 GND #6 V_{DD}



Recommended Solder Pad Layout



All dimensions are in millimeters.

See page 74 for tape and reel specifications.