

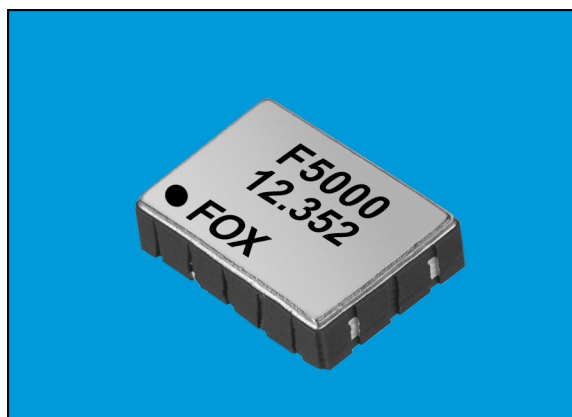
VCXO SMD / VOLTAGE CONTROLLED CRYSTAL OSCILLATOR

F5000

The F5000 series gives the frequency control features of a VCXO in a smaller, ceramic surface mount package. Frequency can be pulled a minimum to ± 100 PPM by varying a control voltage of 2.5 V applied to pin 1 by up to ± 2 V.

FEATURES

- HCMOS/TTL Output
- Pullability
- Smaller Package than Traditional, Thru-Hole VCXO's
- Low Power Consumption
- -40 ~ +85°C Option (F5000R)



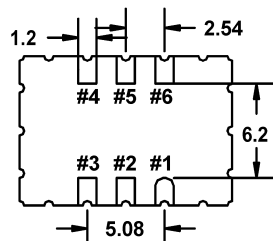
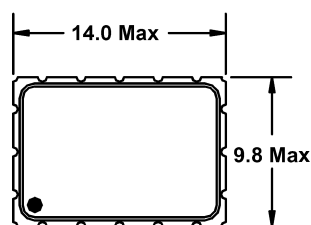
ELECTRICAL CHARACTERISTICS (V_{DD} = 5.0V, C_L = Max)

PARAMETERS	FREQUENCY RANGE	CONDITIONS	MIN	MAX	UNITS
Frequency Range (F _o)			2.000	30.000	MHz
Frequency Stability	2.000 ~ 30.000	All Conditions *	-50	+50	PPM
Temperature Range					
Operating (T _{OPR})	2.000 ~ 30.000		-10	+70	°C
Storage (T _{STG})	2.000 ~ 30.000		-30	+85	
Supply Voltage (V _{DD})	2.000 ~ 30.000		+4.75	+5.25	V
Control Voltage (V _c)	2.000 ~ 30.000		+0.5	+4.5	V
Pullability	2.000 ~ 30.000	V _c = 2.5 $\pm$ 2.0V	± 100		PPM
Input Current (I _{DD})	2.000 ~ 30.000			25	mA
Output Symmetry	2.000 ~ 30.000	2.5V	40	60	%
Rise Time (T _R)	2.000 ~ 30.000	1.0V ~ 4.0V		10	nS
Fall Time (T _F)	2.000 ~ 30.000	4.0V ~ 1.0V		10	nS
Output Voltage (V _{OL})	2.000 ~ 30.000	I _{OL} = 3.2 mA		0.5	V
(V _{OH})		I _{OH} = 0.1 mA	4.5		
Output Current (I _{OL})	2.000 ~ 30.000	V _{OL} = 0.5V		3.2	mA
(I _{OH})		V _{OH} = 4.5V		0.1	
Output Load	2.000 ~ 30.000	TTL Load		8	LSTTL
		HCMOS Load		15	pF
Start-up Time (T _s)	2.000 ~ 30.000			10	mS
Enable/Disable Time **	2.000 ~ 30.000			100	nS
Phase Noise	2.000 ~ 30.000	F _o +1 kHz	-125		dBc/Hz
		F _o + 10 kHz	-130		
Frequency	2.000 ~ 30.000				
Stability vs Voltage			-3.0	+3.0	PPM
Linearity			-10	+10	%
Modulation Bandwidth	2.000 ~ 30.000		20		kHz

ENABLE/DISABLE FUNCTION **

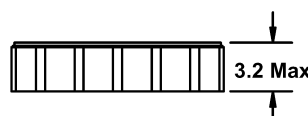
INH (Pin 2)	OUTPUT (Pin 4)
OPEN ***	ACTIVE
'1' Level V _{IH} $\geq$ 2.2 V	ACTIVE
'0' Level V _{IL} $\leq$ 0.80 V	High Z

* Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock, vibration and V_c = 2.5V.
 *** An internal pullup resistor from Pin 2 to Pin 6 allows active output if Pin 2 is left open.
 All specifications subject to change without notice. Rev: 03/02/00

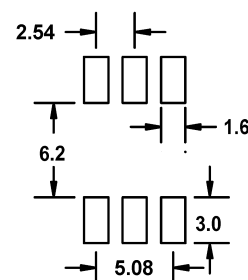


Pin Connections

#1 V_c #4 Output
 #2 E/D or NC #5 NC
 #3 GND #6 V_{DD}



Recommended Solder Pad Layout



All dimensions are in millimeters.
 See page 74 for tape and reel specifications.