

3.3V LOW PROFILE SMD VCXO

VCSAXT SERIES

FEATURES

- 3.3V Operation
- HCMOS Output
- Enable/Disable
- Tape and Reel (2,000 pcs. STD)
- Pb Free

OPTIONS

- Many Stability/Pullability Options
- -40°C ~ +85°C Option ('R' Version)



• MODEL NUMBER SELECTION				
Model Number	Frequency Stability ¹	Frequency Pullability	Operating Temperature (°C)	Frequency Range (MHz)
VCS12AXT	±25PPM	±50PPM	-10 ~ +70	1.000 ~ 77.760
VCS12AXTR ³	±25PPM	±50PPM	-40 ~ +85	1.000 ~ 77.760
VCS15AXT	±50PPM	±50PPM	-10 ~ +70	1.000 ~ 77.760
VCS15AXTR	±50PPM	±50PPM	-40 ~ +85	1.000 ~ 77.760
VCS22AXT	±25PPM	±100PPM	-10 ~ +70	1.000 ~ 77.760
VCS22AXTR ³	±25PPM	±100PPM	-40 ~ +85	1.000 ~ 77.760
VCS25AXT	±50PPM	±100PPM	-10 ~ +70	1.000 ~ 77.760
VCS25AXTR	±50PPM	±100PPM	-40 ~ +85	1.000 ~ 77.760
VCS20AXT	±100PPM	±100PPM	-10 ~ +70	1.000 ~ 77.760
VCS20AXTR	±100PPM	±100PPM	-40 ~ +85	1.000 ~ 77.760

• ELECTRICAL CHARACTERISTICS	
PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	1.000 ~ 77.760 ⁴ MHz
Storage Temperature Range (T _{STG})	-40°C ~ +85°C
Supply Voltage (V _{DD})	3.3V ± 10%
Control Voltage (V _c)	1.65V ± 1.5V
Input Current (I _{DD})	
1.000 ~ 30.000 MHz	15mA
30.000+ ~ 45.000 MHz	25mA
45.000+ ~ 77.760 MHz	50mA
Output Symmetry (50% V _{DD})	40% ~ 60%
Rise Time (10% ~ 90% V _{DD}) (T _R)	5nS
Fall Time (90% ~ 10% V _{DD}) (T _F)	5nS
Output Voltage (V _{OL})	10% V _{DD}
(V _{OH})	90% V _{DD} Min
Output Current (I _{OL})	4.0mA Min
(I _{OH})	-1.0mA Min
Output Load (HCMOS)	15pF
Start-up Time (T _s)	10mS
Enable/Disable Time ²	150nS
Frequency Linearity	±10%
Modulation Bandwidth	20 kHz

¹ Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock, vibration, and V_c = 1.65V.

² An internal pullup resistor from pin 1 to pin 4 allows active output if pin 1 is left open.

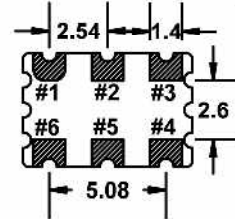
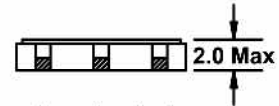
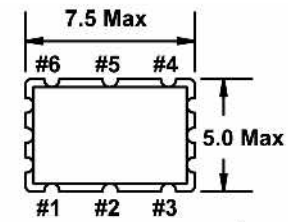
³ Available on an individual inquiry basis.

⁴ Custom specifications from 45.000 to 77.760 MHz available on an individual inquiry basis.

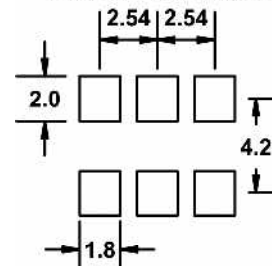
Note: A 0.01µF bypass capacitor should be placed between V_{DD} (Pin 6) and GND (Pin 3) to minimize power supply line noise.

Note: An alternate pin connection with E/D on pin #5 is available.

All specifications subject to change without notice. Rev. 02/10/03



Recommended Solder Pad Layout



Pin Connections

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

All dimensions are in millimeters.

• ENABLE / DISABLE FUNCTION	
INH (Pin 2)	OUTPUT (Pin 4)
OPEN ²	ACTIVE
'1' Level V _{IH} ≥ 70% V _{DD}	ACTIVE
'0' Level V _{IL} ≤ 30% V _{DD}	High Z

See page 79 for tape and reel specifications.