

# VFTH Series Miniature High Frequency OCXO

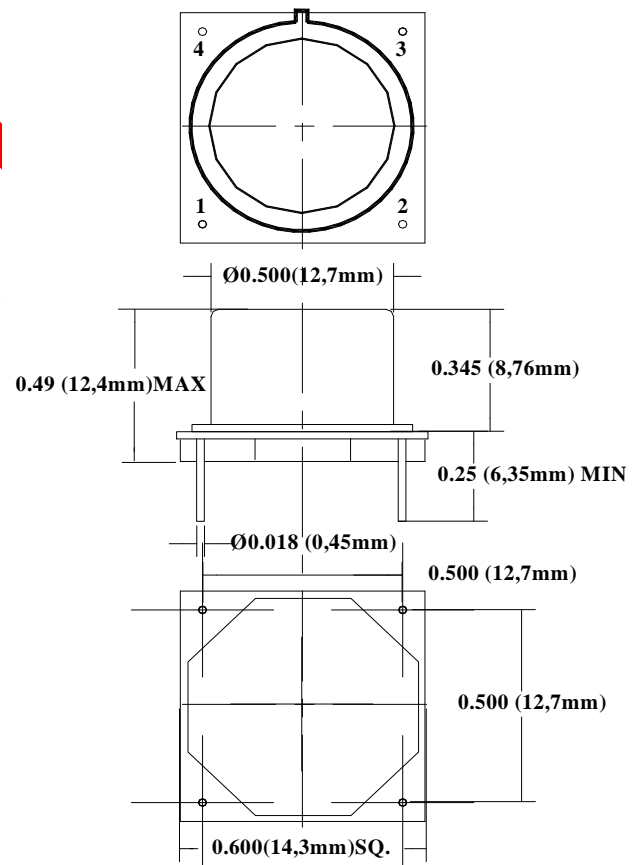
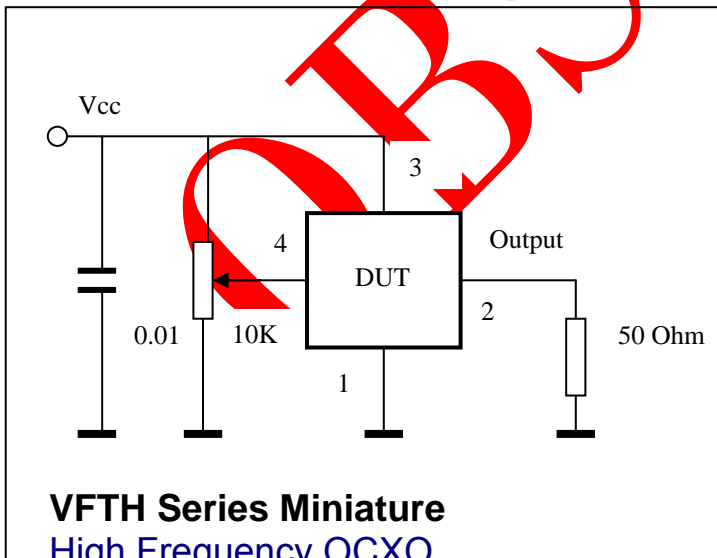
## Features

- Very Small Size (< 1.5 cm<sup>3</sup>, 4g weight)
- Very Low Power Consumption (<150 mW)
- Very Fast Warm-up Time (20s)
- High Frequency Range (80 MHz to 160 MHz)
- High Stability (up to 1x10<sup>-9</sup> per °C)
- Low Aging (2x10<sup>-9</sup>/day, 2x10<sup>-7</sup>/year @100 MHz)
- Very Low Phase Noise (-150 dBc/Hz TYP floor)



## Applications

- Telecommunications, Stratum-3
- Data Communications, Networking
- Microwave Sources
- Battery Powered Systems and Equipment
- GPS
- Instrumentation



## Specifications:

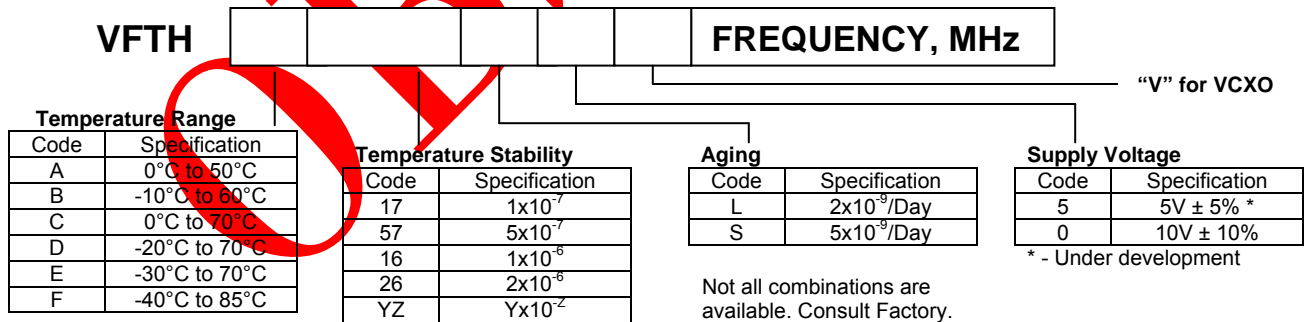
Parameter	Symb	Condition	Min	Typ	Max	Unit	Note
<b>Absolute Maximum Ratings</b>							
Input Break Down Voltage	Vcc		-0.5		13.0	V	
Storage temper.	Ts		-40		85	°C	
Control Voltage	Vc		-1		9	V	

<b>Electrical</b>							
Frequency	F		50	100.000	160	MHz	
Frequency stability	□F/F	vs. Temp.		±150	±500	ppb	See chart below
		vs. Supply		10	25	ppb/V	
Aging		per day		2E-9			after 30 days
		per year		2E-7			
Allan Variance		.1s to 10s		1E-10			
SSB Phase Noise		10 Hz		-100		dBc/Hz	
		100 Hz		-130			
		10 KHz		-155	-150		
Retrace		After 30 minutes			±50	ppb	
G-sensitivity		worst direction			±2.0	ppb/G	
Input Voltage	Vcc		8	10	12.6	V	5V under development
Input Current	Icc	steady state, 25°C		15	25	mA	10V supply
		steady state, -30°C		50			
		start-up current		200			
Load		50 Ohm					
Warm-up time	□	to 1 ppm accuracy		25		s	
Output Waveform				(+7 ±3) dBm	sinewave		10 V supply
Control voltage	Vc		0		8	V	
Pull range		from nominal F	±1.0	±2		ppm	
Deviation slope		Monotonic, positive		0.5		ppm/V	
Setability	Vc0	@25°C, Fnom.	2.0	4.0	6.0	V	±1 ppm preset clock avail.

<b>Environmental and Mechanical</b>	
Operating temp. range	-30°C to 70°C Standard, Other options – see chart below
Mechanical Shock	Per MIL-STD-202, 30G, 11ms
Vibration	Per MIL-STD-202, 5G to 2000 Hz
Soldering Conditions	Leads Temperature 260°C, for 10s, Max
Hermetic Seal	Leak rate less than 1x10 <sup>-8</sup> atm.ccm/s of helium (crystal only)

<b>Electrical Connections</b>	
Pin Out	Pin #1 – Vc; Pin #2 – GND, case; Pin #3 – Output; Pin #4 – Vcc

### Create a Part Number



12/08

