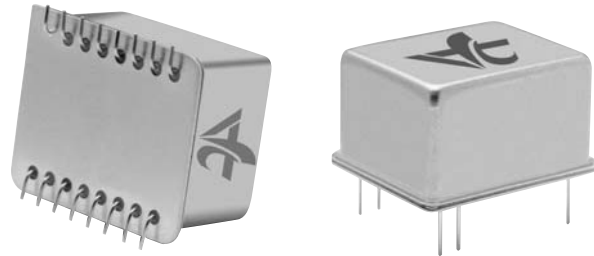


VFTCM Series OCXO

Product Data Sheet

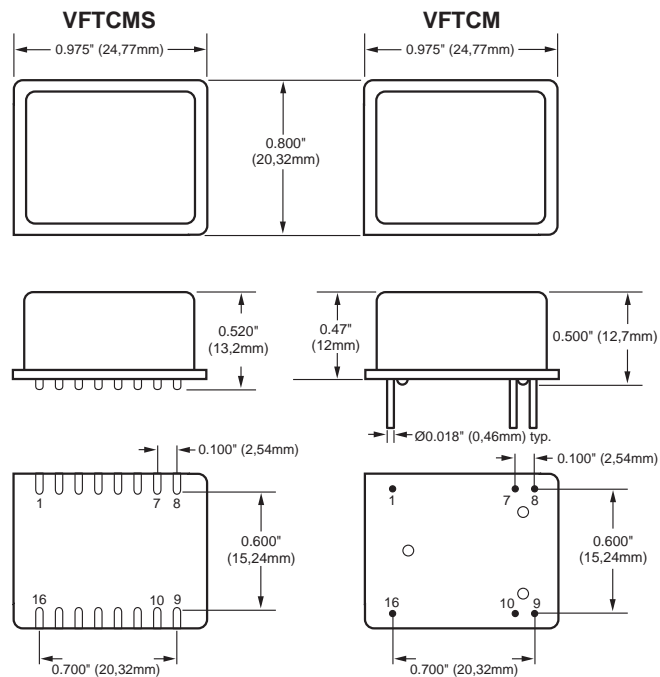
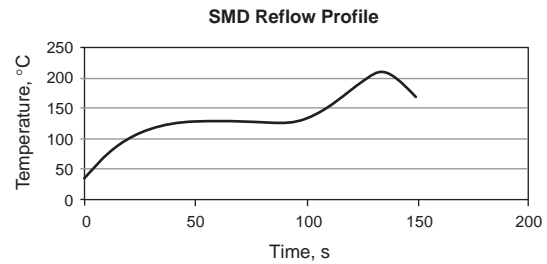
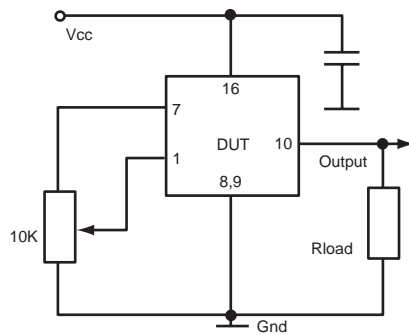
FEATURES

- SC-Cut Crystal
- Through Hole (VFTCM) or SMD (VFTCMS)
- High Stability (up to $\pm 5 \times 10^{-9}$)
- Low Aging (5×10^{-10} /day, 5×10^{-8} /year)
- Low Phase Noise (-160 dBc/Hz, TYP, floor)
- Sine Wave or HCMOS/TTL Output
- 4.8MHz to 50MHz Frequencies Available



APPLICATIONS

- Telecommunication Systems
- Data Communications
- GPS
- Instrumentation



ORX

All dimensions are typical.

VFTCM Series OCXO

Specifications							
Parameter	Symb	Condition	Min	Typ	Max	Unit	Note
Absolute Maximum Ratings							
Input Break Down Voltage	V _{cc}		-0.5		13.0	V	
Storage Temp.	T _s		-40		85	°C	
Contr. Voltage	V _c		-1		9	V	
Electrical							
Frequency Range	F		4.8	10.000	50	MHz	
Frequency Stability	³ F/F	vs. Temperature vs. Supply		±20 1	±50 5	ppb ppb/V	See chart below
Aging		per day per year		5E-10 1E-7			after 30 days 5E-8 avail.
Allan Variance		.1s to 10s		1E-11			
SSB Phase Noise		10 Hz 100 Hz 10 KHz		-120 -150 -160		dBc/Hz	
Retrace		After 30 minutes			±20	ppb	
G-sensitivity		worst direction			±1.0	ppb/g	
Input Voltage	V _{cc}		4.75	5.0	5.25	V	12V±5% optional
Power Consumption	P	steady state, 25°C steady state, -30°C start-up, -30°C		0.8 1.5 2.5	1	W	
Load	10K Ohm/15pF (HCMOS/TTL), 50 Ohm (Sinewave)						
Warm-up Time	τ	to 0.1ppm accuracy			5	minutes	3 min. at 12V
Output Waveform	3.3V HCMOS/TTL compatible or Sinewave (>+7dBm)						-25dBm harmonics at sine
Control Voltage	V _c		0		4.0	V	
Pull Range		from nominal F	±0.5	±1		ppm	
Deviation Slope		Monotonic, positive		0.4		ppm/V	
Setability	V _{c0}	@25°C, F _{nom} .	1.0	2.0	3.0	V	
Environmental and Mechanical							
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 2000Hz						
Soldering Conditions	260°C for 10s max., through hole; 230°C for 90s max. SMD						
Electrical Connections							
Pin Out	Pin #1 – V _c Pin #7 – V _{ref} Pin #8 – Gnd			Pin #9 – Gnd Pin #10 – Output Pin #16 – V _{cc}			

All parameters for 10 MHz

CREATING A PART NUMBER

TEMPERATURE RANGE		TEMPERATURE STABILITY		AGING		SUPPLY VOLTAGE	
Code	Specification	Code	Specification	Code	Specification	Code	Specification
A	0°C TO 50°C	17	1 x 10 ⁻⁷	L	1 x 10 ⁻⁵ / Day	5	5V ±5%
B	-10°C TO 60°C	58	5 x 10 ⁻⁸	S	5 x 10 ⁻¹⁰ / Day	2	12V ±5%
C	0°C TO 70°C	28	2 x 10 ⁻⁸	P	2 x 10 ⁻¹⁰ / Day	3	3.3V ±5%
D	-20°C TO 70°C	18	1 x 10 ⁻⁸				
E	-30°C TO 70°C	59	5 x 10 ⁻⁹				
F	-40°C TO 80°C	YZ	Y x 10 ⁻²				

Not all combinations are available. Consult factory.