

ME Series High Stability OCXO

Specifications:

Parameter	Symb	Condition	Min	Typ	Max	Unit	Note
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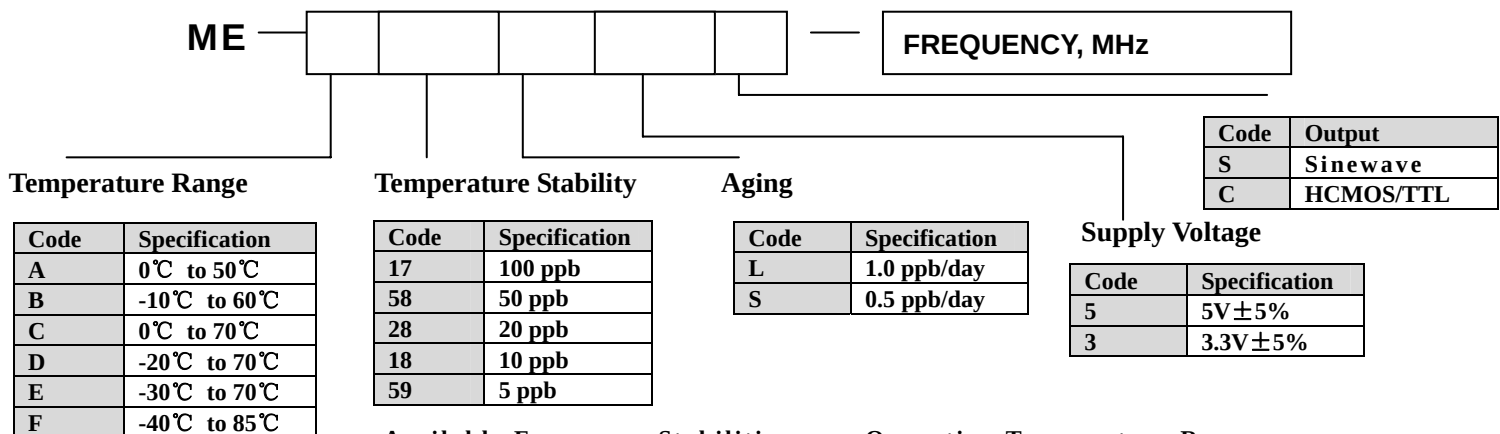
Absolute Maximum Ratings

Input Break Down Voltage	V _{CC}		-0.5		7.0	V	
Storage Temp.	T _s		-40		85	°C	

Electrical

Frequency	F		4.8		180	MHz		All parameters for 10 MHz
Frequency stability	$\Delta F/F$	vs. Temp.		± 10		ppb		
		vs. Supply		1		ppb		
Aging		per day per year		5×10^{-10} 1×10^{-7}			after 30 days	
Allan Variance		.1s to 10s		1×10^{-11}				
SSB Phase Noise		10 Hz 100 Hz 10 KHz		-125 -145 -165		dBc/Hz	At higher frequencies, deteriorates by 20LogN dB	
Retrace		After 30 minutes		± 1	± 20	ppb		
G-sensitivity		worst direction			± 1.0	ppb/G		
Input Voltage	Vcc		4.75	5.0	5.25	V	3.3V optional	
Supply Current	Icc	Steady state, 25°C Steady state, -30°C Start-up		25/35 70/100 100/150	35/45	mA	5V/3.3V	
Power consumption	P	steady state, 25°C		125/115	175/149	mW	5.0V/3.3V	
Load/Output Waveform	10KOhm/15pF(HCMOS/TTL), 50Ohm(Sinewave)							
Warm-up time	t	to 0.1 ppm accuracy		35/40		Seconds	5.0V/3.3V	
Control voltage	Vc		0		4.0	V	To 2.8V at Vcc=3.3V	
Pull range		from nominal F	± 0.5	± 1		ppm		
Deviation slope		Monotonic, posit		0.4		ppm/V		
Setability	Vc0	@25°C, Fnom.	1.0	2.0	3.0	V	5V/3.3 supply	

How to Order



Available Frequency Stabilities over Operating Temperature Ranges

Code	Temperature Range	50 ppb	20 ppb	10 ppb	5 ppb
A	0°C to 50°C	*	*	*	*
B	-10°C to 60°C	*	*	*	
D	-20°C to 70°C	*	*		
G	-40°C to 85°C	*			

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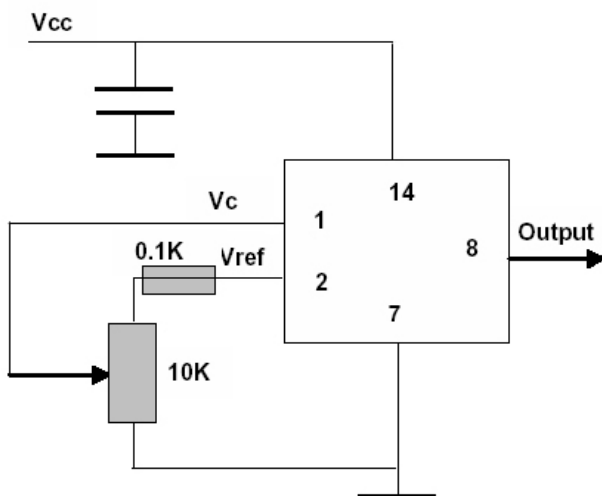
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Features

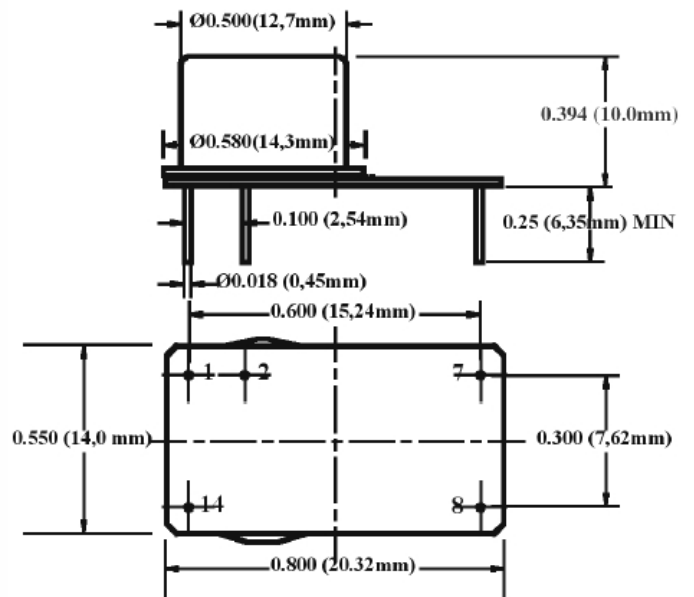
- Oven Controlled Crystal Oscillator (OCXO)
- SC-Cut Crystal
- HCMOS/TTL or Sinewave out put
- 3.3Vdc supply voltage, 5Vdc optional
- Stability to +/- 5ppb
- Compact DIL-14 package ($20.32 \times 14.0 \times 10.0\text{mm}$)
- 30 Second Warm-up Time
- QPL certified MIL-PRF-55310D, class B



Environmental And Mechanical	
Mechanical Shock	Per MIL-STD-883 ,Method 2002 ,Cond.B
Thermal Shock	Per MIL-STD-883 ,Method 1011 ,Cond.A
Vibration	Per MIL-STD-883 ,Method 2007 ,Cond.A
Seal	Per MIL-STD-883, Method 1014, Condition B & C
Solderability	Per MIL-STD-883 ,Method 2003 ,Cond.A



PIN #	Connection
1	Vc
2	Vref
7	GND
8	Output
14	Vcc



Outline Drawing