

# O-CEGM-0XXXXXX-X

## Low Phase Noise UHF OCXO in 36x27 mm “Europack”

### Product Data Sheet

### Description

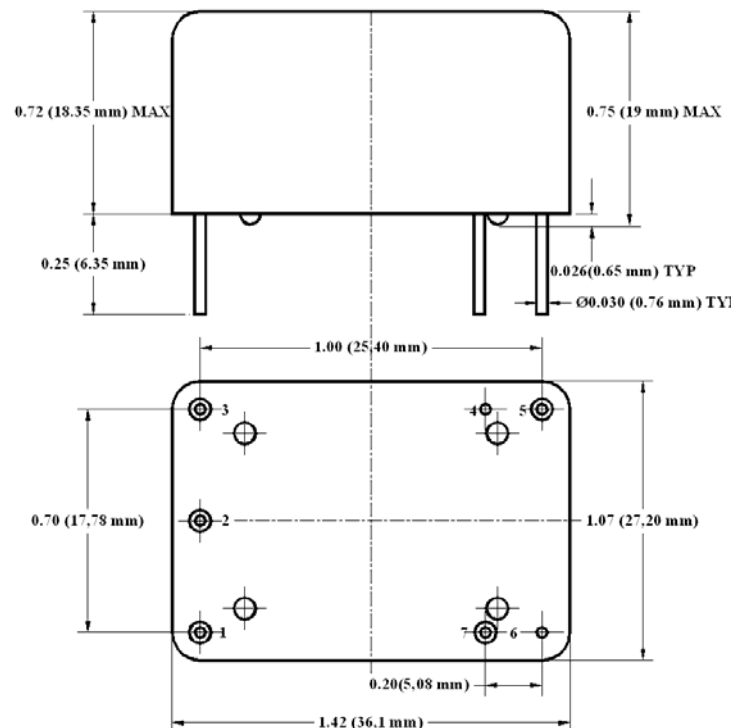
O-CEGM-0XXXXXX-X is based on lower frequency SC-cut OCXO with Low Noise analog multiplier to achieve frequency range of 500 MHz to 1,300 MHz

### Features

- UHF
- Ultra Low Phase Noise
- Low Spurious
- +12 dBm Sine Wave output

### Applications

- Instrumentation
- Telecommunication Systems
- Radar
- GPS
- COTS/Dual use



Note: 0.63”(16mm) height is available with lower grade units



Parameter	Symb	Condition	Min	Typ	Max	Unit	Note	
<b>Absolute Maximum Ratings</b>								
Input Break Down Voltage	V <sub>cc</sub>	5 V supply	-0.5		5.5	V		
Storage temper.	T <sub>s</sub>		-40		85	°C		
Control Voltage	V <sub>c</sub>		-1		5.5	V		
<b>Electrical (1)</b>								
Frequency	F		500	1,000	1,300	MHz		
Frequency stability	ΔF/F	vs. Temp.		±50		ppb	See chart below	
		vs. Supply		2	3	ppb/10%V <sub>cc</sub>		
Aging		per day		5E-9			after 30 days	
		first year		3E-7				
		10 years			2E-6			
Allan Deviation		.1s to 10s		1E-10				
SSB Phase Noise	L <sub>φ</sub>	10 Hz		-75	-70	dBc/Hz	1 GHz "P" grade	
		100 Hz		-105	-100			
		1 KHz		-130	-128			
		10 KHz		-145	-143			
		100 KHz		-150	-147			
			10 Hz		-85	-82	dBc/Hz	1 GHz "E" grade, available with slope option "L" only. May require package height .75" (19 mm)
			100 Hz		-115	-112		
			1 KHz		-140	-138		
			10 KHz		-158	-155		
			100 KHz		-160	-158		
			10 Hz		-80			1.28 GHz "E" grade <b>PRELIMINARY</b>
		100 Hz		-110				
		1 KHz		-138				
		10 KHz		-155				
		100 KHz		-160				
Retrace		After 30 minutes		±100		ppb	24 Hours off *	
G-sensitivity		worst direction			±0.5	ppb/G		
Input Voltage	V <sub>cc</sub>		4.75	5.0	5.25	V		
Power consumption, Still air	P	steady state, 25°C		1.3	1.50	W		
		start-up @ -30°C		2.5				
Spectral Purity		Sub-harmonics		-50		dBc	Please contact factory for actual sub-harmonic's frequencies. It may vary by requirements	
		Spurious			-80			
		Harmonics			-15			
Load	Internally AC-coupled 50 Ohm							
Warm-up time	τ	to 0.1ppm accuracy		3	5	minutes		
Output Waveform	Sine-wave							
Output Power			+9	+12			dBm	
Control voltage	V <sub>c</sub>			0	4.5	V	Option "P" Option "L"	
				0	10.0			
Input impedance	Z <sub>in</sub>	At V <sub>c</sub> pin	10			KOhm		
Modulation bandwidth	F <sub>m</sub>		DC		1	KHz	Note 2	
Pull range	from nominal F		±3.0				ppm	
Absolute Pull Range (If used in PLL shows what reference instability it can tolerate to lock over life)	APR	Over all conditions, Including Temperature, V <sub>cc</sub> , Load Variations and 10 years aging	± 0.5				ppm	
Deviation slope	Monotonic, positive		1.5				ppm/V	
				0.8				



Setability	Vc0	@25°C, Fnom.	2.25±0.5 5±0.5	V	Option "P" Option "L"
Reference Voltage	Vref		4.5	V	

Notes:

- \*. Longer storage time, especially at low temperatures, may affect both retrace and setability parameters. It may require few days on power for re-stabilization.
- 1. All parameters, unless otherwise specified, are at nominal conditions, ie: T=25°C, Nominal Vcc & Nominal Load.

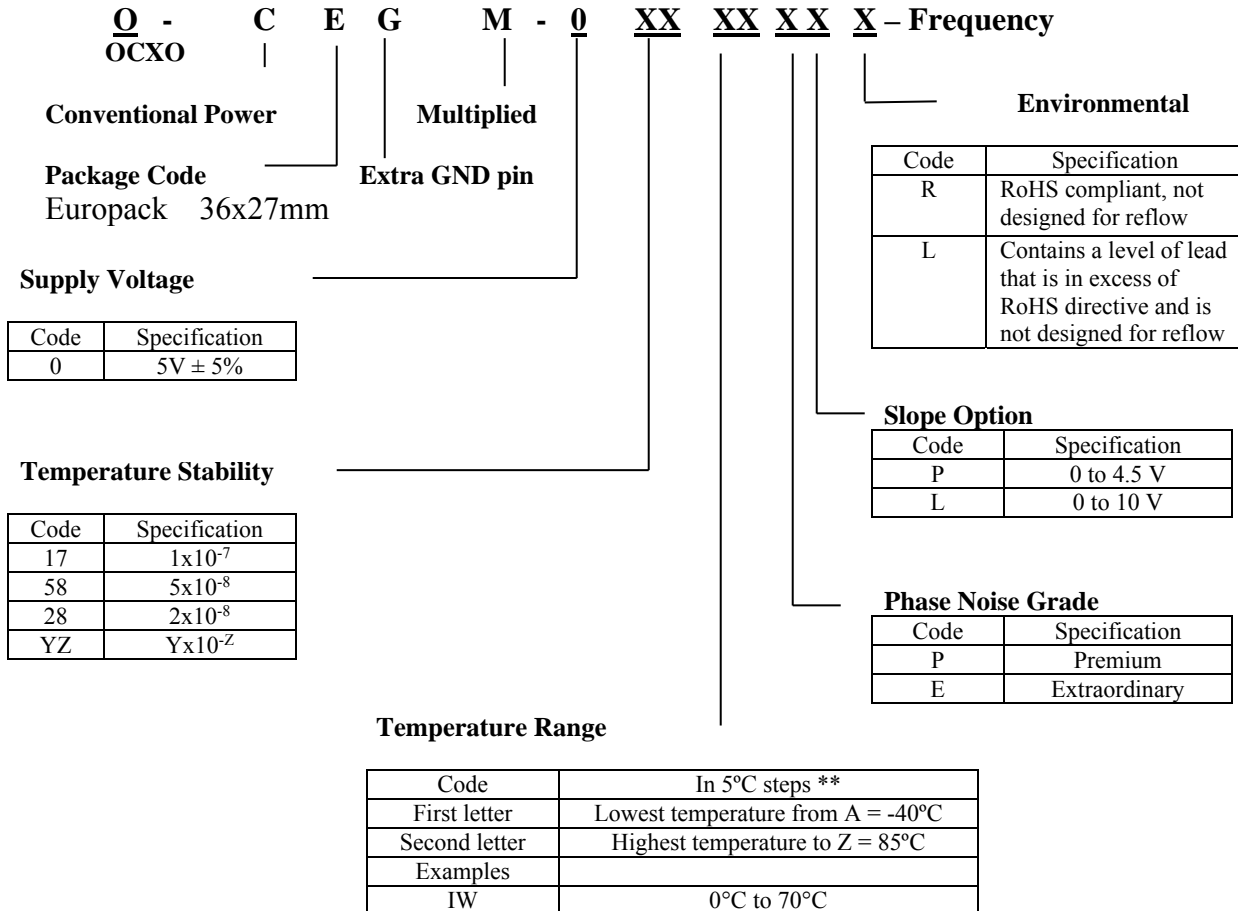
**Environmental and Mechanical**

Operating temp. range	-40 to 75°C; operable -40 to 85°C. See table below to specify
Storage temperature range	-50 to 90 °C
Mechanical Shock	Per MIL-STD-202, 30G, 11ms
Vibration	Per MIL-STD-202, 5G to 2000 Hz
Soldering Conditions	260°C for 10s Max leads only

**Electrical Connections**

Pin Out	Pin #1-Vc ; Pin#2 -Vref; Pin #3 - Vcc; Pin #4- GND ; Pin #5- RF OUT; Pin#6 - GND, Pin#7 -N/C or not present
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**Creating a Part Number**



Not all combinations are available. Consult Factory.

**\*\*Temperature Code Table**

Letter	Temp °C	Letter	Temp °C	Letter	Temp °C	Letter	Temp °C	Letter	Temp °C	Letter	Temp °C
A	-40	F	-15	K	10	P	35	U	60	Z	85
B	-35	G	-10	L	15	Q	40	V	65		
C	-30	H	-5	M	20	R	45	W	70		
D	-25	I	0	N	25	S	50	X	75		
E	-20	J	5	O	30	T	55	Y	80		

