



Parameter	Symb	Condition	Min	Typ	Max	Unit	Note
<b>Absolute Maximum Ratings</b>							
<b>Input Break Down Voltage</b>	Vcc	12 V supply 5 V supply	-0.5 -0.5		13.0 5.5	V	
<b>Storage temper.</b>	Ts		-40		85	°C	
<b>Control Voltage</b>	Vc		-1 -5		5.5 5	V	Slope option "P" Slope option "N"

**Electrical (4)**

<b>Frequency</b>	F		8	10.000	13	MHz	
<b>Frequency stability</b>	$\Delta F/F$	vs. Temp.		$\pm 10$		ppb	See chart below
		vs. Supply		0.2	0.3	ppb/10% Vcc	
<b>Aging</b>		per day per year, first year second year		5E-10 1E-7 3E-8			after 30 days 5E-8 available
<b>Allan Variance</b>		.1s to 10s		1E-12			
<b>SSB Phase Noise (achieved after 10 minutes warm-up)</b>		1Hz		-105	-102	dBc/Hz	
		10 Hz		-135	-133		
		100 Hz		-155	-154		
		1 KHz		-162	-161		
		10 KHz		-168	-167		
		100 KHz		-170	-169		
<b>Retrace</b>		After 30 minutes			$\pm 10$	ppb	24 Hours off 3*
<b>G-sensitivity</b>		worst direction			$\pm 1.0$	ppb/G	
<b>Input Voltage</b>	Vcc		4.75 11.4	5.0 12.0	5.25 12.6	V	See chart below to specify
<b>Power consumption</b>	P	steady state, 25°C steady state, -30°C start-up @ -30°C		0.8 1.5 2.5	1.0 3.2	W	Still air
<b>Spectral Purity</b>		Spurious Harmonics		-35	-80 -30	dBc	Non-harmonic
<b>Load</b>	Internally AC-coupled 50 Ohm						
<b>Warm-up time</b>	$\tau$	to 0.1ppm accuracy to 10ppb accuracy		3	5 10	minutes	Off time <24 hrs Aging rate was reached
<b>Output Waveform</b>	HCMOS/TTL compatible or Sinewave						
<b>Output Power</b>			+8	+10		dBm	Output Code S
<b>Logic 1 (CMOS)</b>	Voh		0.7 Vref			V	Output Code T
<b>Logic 0 (CMOS)</b>	Vol				0.1 Vref	V	Output Code T
<b>Control voltage</b>	Vc		0 -4.5		Vref 4.5	V	Slope option "P" Slope option "N"
<b>Reference Voltage</b>	Vref	Vcc = 12V Vcc = 5V		5 or 4.5 4.5		V	
<b>Output Impedance</b>		At Vref pin		100		Ohm	
<b>Pull range</b>		from nominal F	$\pm 0.3$ $\pm 0.4$	$\pm 0.5$ $\pm 0.6$		ppm	Slope option "P" Slope option "N"
<b>Deviation slope</b>		Monotonic, positive Monotonic, negative		1.0/Vref -0.13		ppm/V	Slope option "P" Slope option "N"
<b>Setability</b>	Vc0	@25°C, Fnom.	$V_{ref}/2 \pm 0.5$ $0 \pm 0.5$			V	Slope option "P" 3* Slope option "N"
<b>Oven Ready</b>		V pin #7	3.3		0.5	V	Ready Not Ready
<b>Output Enable</b>		CMOS Logic "1" (4.5V > V > 2.5) or floating Logic "0" (V < 0.5V)	Enabled  Disabled			V	Pout < -30 dBm

All parameters for 10 MHz



Notes:

- 1\*. For operating temperatures higher than 70°C the power consumption will be higher (about 20% for 85°C). Values listed are for test in still air environment, the values will go up while testing in the temperature chamber.
- 2\* For recommended phase noise test, contact factory. It's assumed that phase noise test is performed under static conditions (no vibration), in still air, and care is taken for minimizing EMI.
- 3\*. Longer storage time, especially at low temperatures, may affect both retrace and setability parameters. It may require few days on power for re-stabilization.
- 4. All parameters, unless otherwise specified, are at nominal conditions, ie: T=25°C, Nominal Vcc & Nominal Load.

***Environmental and Mechanical***

<b>Operating temp. range</b>	-30°C to 70°C Standard, Other options – see chart below
<b>Mechanical Shock</b>	Per MIL-STD-202, 30G, 11ms
<b>Vibration</b>	Per MIL-STD-202, 5G to 2000 Hz
<b>Soldering Conditions</b>	260°C for 10s Max leads only

***Electrical Connections***

<b>Pin Out</b>	Pin #1-Vc ; Pin#2, Pin #8 – For internal use – do not connect; Pin #3 – Vcc; Pin #4 – Output Enable; Pin #5 – RF Output; Pin #6 – GND; Pin #7 – Oven Ready indicator
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## Creating a Part Number

**Q** - **C** **E8** **X** **X** **YZ** **XX - X - V - XX - X** **FREQ**  
**OCXO** |  
**Conventional Power**

**Package Code**  
 Europack 36x27mm, 8 pin

**Supply Voltage**

Code	Specification
0	5V ± 5%
F	12V ± 5%

**Output**

Code	Specification
T	CMOS/TTL
S	Sinewave

**Temperature Stability**

Code	Specification
17	1x10 <sup>-7</sup>
58	5x10 <sup>-8</sup>
28	2x10 <sup>-8</sup>
18	1x10 <sup>-8</sup>
59	5x10 <sup>-9</sup>
YZ	Yx10 <sup>-Z</sup>

**Temperature Range**

Code	In 5°C steps **
First letter	Lowest temperature from A = -40°C
Second letter	Highest temperature to Z = 85°C
Examples	
AZ	-40°C to 85°C
GU	-10°C to 60°C
EW	-20°C to 70°C

**\*\*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		

Not all combinations are available. Consult Factory.

**Environmental**

Code	Specification
L	Contains a level of lead that is in excess of RoHS directive and is not designed for reflow
R	RoHS compliant, not designed for reflow

**Aging**

Insert Value per day times 1E-10	
Examples	
05	5E-10 = 0.5 ppb/day
10	1E-9 = 1 ppb/day

**Phase Noise Code**

Code	Specification
V	Standard

**Deviation slope**

Code	Specification
P	Positive
N	Negative

