



# OCXO 8788 / 8789 ultra low phase noise

## Oven Controlled Crystal Oscillator

The 8788 / 8789 models offer **ultra low phase noise** and excellent stability in standard **51.1x41.1 x19mm** and **50.8x50.8x19mm** packages.

### Standard frequencies are :

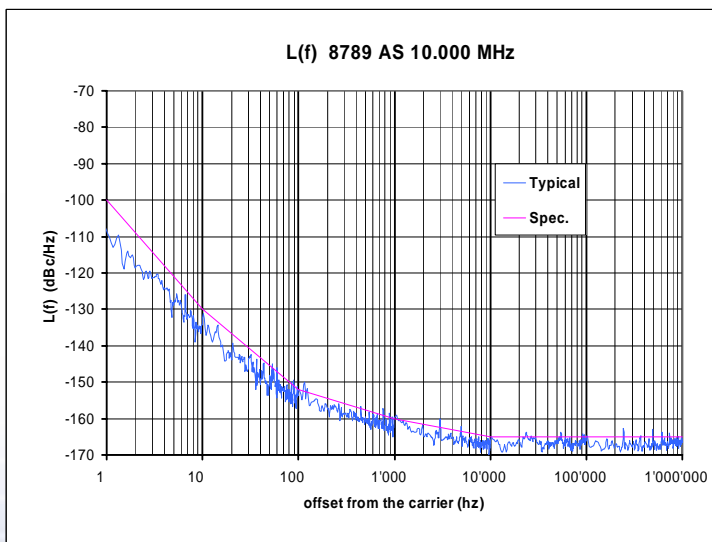
5MHz and 10MHz with noise figure as low as -100dBc/Hz @ 1Hz, and -165dBc/Hz @ 10KHz

### Features

- Ultra low phase noise
- High stability
- Wide operating temperature range up to -40°C to 70°C
- Low profile

### Applications

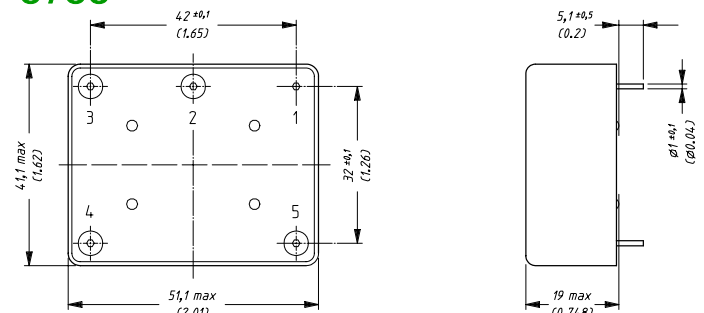
- Satellite data transmission
- Instrumentation
- Transceiver stations



### Outline and Electrical connections.

All dimensions in mm (inches)

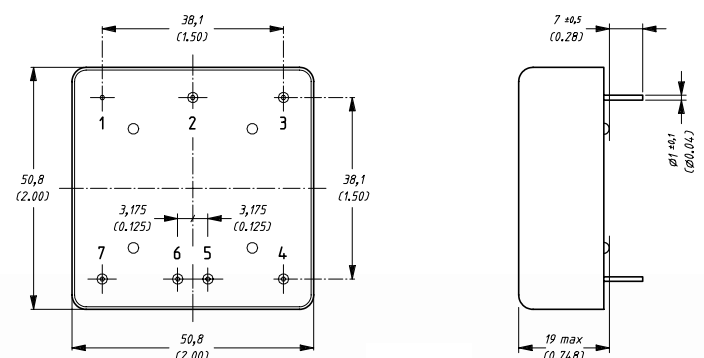
#### 8788



#### Pin-out connections

- 1: GND
- 2: Vc input
- 3: Vref out
- 4: +Power supply
- 5: Output

#### 8789



#### Pin-out connections

- 1: Electronic and case ground
- 2: NC
- 3: Frequency control
- 4: NC
- 5: NC
- 6: Output frequency
- 7: Power supply

Standard / Option	Standard	Option
Crystal Oscillator	SC-cut	
Standard frequencies	10 MHz / 5 MHz	Consult factory
Operating temperature range	A: -20°C to +70°C B: 0°C to +70°C C: 0°C to +60°C	D: -10°C to +70°C E: -40°C to +70°C
Frequency stability (Δ f/f)		
Long term stability (aging after 30 days of continuous operation)	Standard: $5 \times 10^{-10}$ /day $7 \times 10^{-8}$ /year	G: $2 \times 10^{-10}$ /day $3 \times 10^{-8}$ /year    H: $1 \times 10^{-10}$ /day
Setting @ 25°C VC max / 2	$< \pm 2 \times 10^{-7}$	
Over temperature range (Y)	Std : $< 2 \times 10^{-8}$ peak to peak	1: $< 1 \times 10^{-8}$ peak to peak
Versus supply voltage changes (Vcc ± 5%)	$< \pm 2 \times 10^{-10}$	
Versus load changes (50Ω ± 10%)	$< \pm 2 \times 10^{-10}$	
Short term stability σ (τ) @ 1s Allan variance	$< 1 \times 10^{-12}$	
Electronic frequency control : Z > 10 kΩ	$> \pm 0.8$ ppm (0 to 10 Volts) / Linearity <10% / Positive slope	
Power Supply (P)		
Input voltage range (DC)	+12 Volts ± 10% / over consult factory	
Power consumption (@Vcc = 12V)	$< 8$ W during warm up / $< 2.5$ W after warm-up at +25°C	
Environment (Not operating)		
Storage temperature	-40°C to +125°C	
Vibration	IEC 68-2-6 Test Fc : 10 Hz—500 Hz, 10g	
Shock	IEC 68-2-27 : Half-sine 50g, 11ms	
Size (L x W x H)	<b>8788</b> : 51.1 x 41,1 x 19mm	<b>8789</b> : 50.8 x 50,8 x 19mm (2>x2>x0.75>)
Weight	$\cong 80$ g	
Outline and electrical connections	See drawing	
Outputs Characteristics (Z)	S	
Wave form	Sine	
Level (Tol.) / Impedance	8dBm ± 1 dBm / 50 Ω	
Phase noise	See drawing	
Harmonics	$< -25$ dBc	
Spurious in the frequency range up to 1 MHz	$< -75$ dBc	

Oscilloquartz SA reserves the right to change all specifications contained herein at any time without prior notice.



### Ordering Information

**8789 — B SG - 5.000 MHz**

Model  
+12Vdc

Operating temperature range  
A; B; C; D; E

Nominal frequency output  
5.000 MHz

Aging Options  
- ; G

Output signal  
S: Sine wave