

OX570 Series



Low G-sensitivity, Sine wave, 25.8 x 25.8 x 12.7mm, Through hole device

- Ultra - low phase noise OCXO with Low G-sensitivity
- Excellent frequency vs stability
- Unit weight: 20gm max
- RoHS compliant

Output characteristics			
Parameter	Specification		Remarks/Test condition
Frequency range	80.0MHz ~ 125.0MHz		Standard: 100MHz, 120MHz
Supply voltage (Vs)	12.0V (typical)		Min: 11.4V, Max: 12.6V
Warm-up current consumption	350.0mA max		Higher for wide temp. Range
Steady state current consumption	150.0mA max		At +25°C, higher for wide temp. Range
Operating temperature range	-40 ~ +85°C		
RF output			
Output waveform	Sine wave		
Output load	50.0Ω		±5%
Output level	+7dBm min		Other available on request
Harmonics	-30.0dBc max		
Spurious at rest	-90.0dBc max		
Phase noise	See table 1		Other frequencies please contact us
G-Sensitivity	See table 2		Measured with flat random vibration profile (0.01g ² /Hz, 20Hz~200Hz)
Warm-up time at +25°C	5.0 minute max, 3 minute typical		Δf final/ fnominal < ±0.1ppm
Frequency stability			
Initial tolerance	±300.0ppb max		Vc @ Vref/2
Vs. Operating temperature range	±5.0ppb ~ ±200.0ppb		See table 3, Steady state
Vs Load change	±5.0ppb max		RL ± 5%
Vs. supply voltage variation	±10.0ppb max		Vs ± 5%
Long term aging/day	±2.0ppb max, ±1.0ppb typical		After 30 days operation
Long term aging 1 st year	±200.0ppb max, ±100.0ppb typical		After 30 days operation
Frequency adjustment range			
Electronic frequency control (EFC)	Min: ±1.0ppm, typical: ±2.0ppm		
EFC voltage Vc	Vref/2 ± 5.0V		
Reference voltage Vref output	10V		Other available on request
EFC slope	Positive		
EFC input impedance	100.0kΩ min		
Absolute maximum ratings			
Supply voltage Vs	Min: -0.5V	Max: Vs + 10%	Vs to GND
Control voltage Vc	Min: -0.5V	15V	Vc to GND
Storage temperature	-55°C ~ +125°C		

Table 3: Frequency stability vs operating temperature range						
Temperature (°C)	±5.0ppb	±10.0ppb	±25.0ppb	±50.0ppb	±100.0ppb	±200.0ppb
0°C ~ +50	Enquire	✓	✓	✓	✓	✓
-10°C ~ +60	Enquire	✓	✓	✓	✓	✓
-20°C ~ +70	Enquire	✓	✓	✓	✓	✓
-30°C ~ +70	Enquire	Enquire	✓	✓	✓	✓
-40°C ~ +75	X	Enquire	✓	✓	✓	✓
-40°C ~ +85	X	X	Enquire	✓	✓	✓
-55°C ~ +85	X	X	Enquire	✓	✓	✓

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 Specifications subject to change without notification

OX570 Series

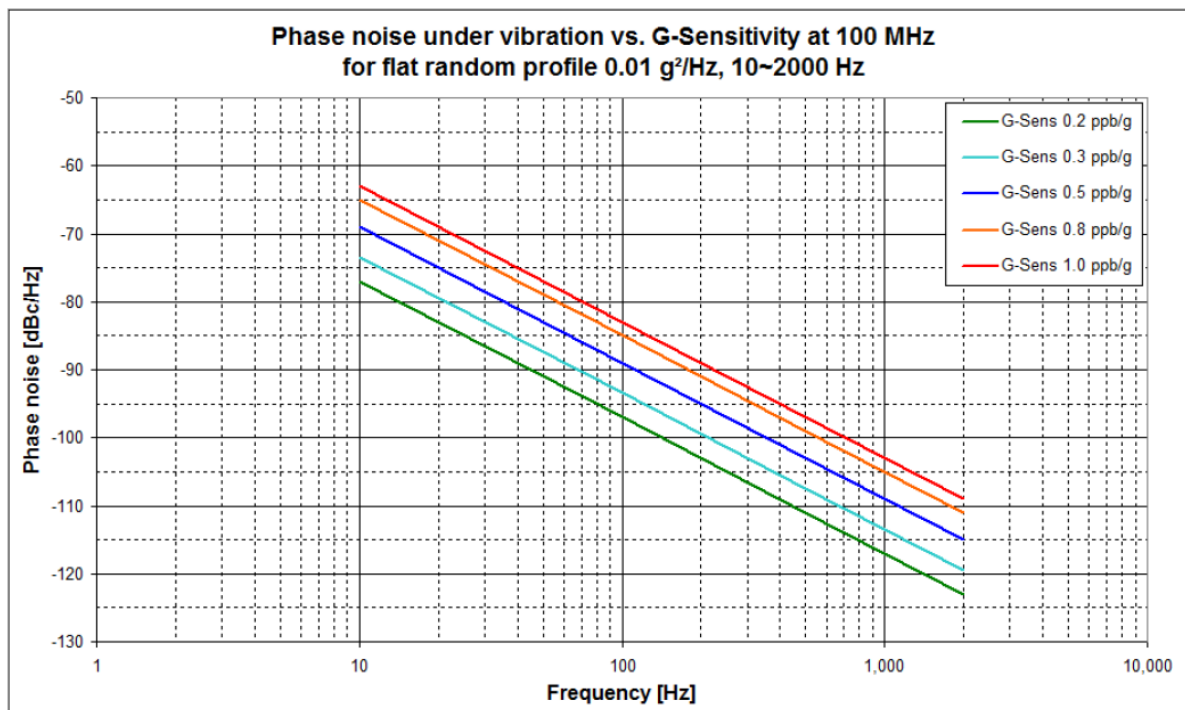
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Table 1: Phase noise (Unit: dBc/Hz)	
100.0MHz	
Offset	dBc/Hz
10 Hz	-100
100 Hz	-130
1k Hz	-160
10 kHz	-170
≥100 kHz	-175

Table 2: G sensitivity (Unit: ppb/g)	
Option	G-Sensitivity worst axis
A	0.8
B	0.5
C	0.4
D	0.3
E	0.25

Phase noise response under random vibration at 100MHz



Note: Double PSD results in 3 dB worse phase noise

ACT part number

ACT will provide a unique part number with full specification based on your requirements, please provide the following details.

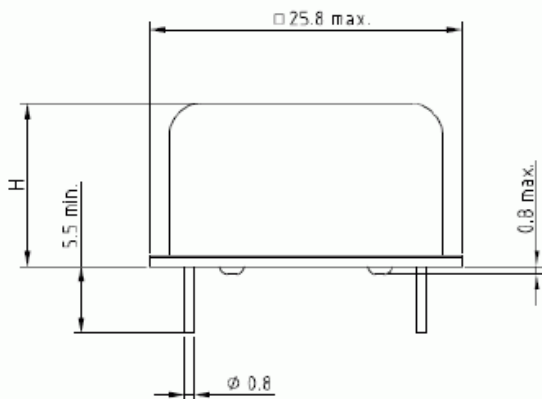
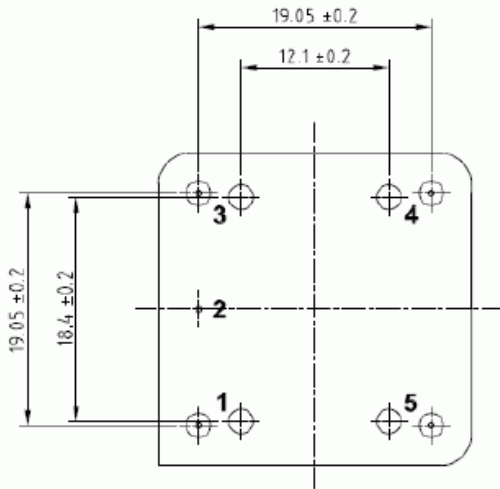
ACT series	Frequency (MHz)	Supply voltage (V)	Output type	Frequency stability (ppb)	Operating temperature range (°C)	G-Sensitivity
OX570						Option A Option B Option C Option D Option E

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Mechanical package drawing and pin connections



Pin connections

Pin #	Symbol	Function
1	RF OUT	RF Output
2	GND	Ground
3	V _C	Control Voltage (EFC)
4	VREF	Reference Voltage
5	V _S	Supply Voltage

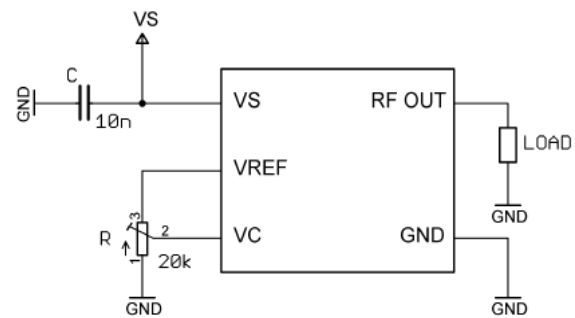


Table 3: Environmental conditions

Test	IEC60068 part...	IEC 60679-1 Clause	MIL-STD-202G Method	MIL-PRF-810F Method	MIL-PRF-55310D Clause	Test conditions (IEC)
Sealing tests (if applicable)	2-17	5.6	112E		3.6	Gross leak: Test QC, Fine leak : Test QK
Solderability resistance to soldering heat	2-20 2-58	5.6	208H 210F		3.6.52 3.6.48	Test Ta Method 1 Test Td1 Method 2 Test Td2 Method 2
Shock	2-27	5.6.8	213B	516.4	3.6	Test Ea, 3 x per axes 100g, 6 ms half sine pulse
Vibration, sinusoidal	2-6	5.6.7.1	201A 204D	516.4-4	3.6.38.1 3.6.38.2	Test Fc, 30 min per axes, 10Hz - 55Hz 0, 75mm; 55Hz-2kHz, 10g
Vibration, random	2-64	5.6.7.3	214A	514.5	3.6.38.3 3.6.38.4	Test Fdb
Endurance Tests -Ageing -extended aging		5.7.1 5.7.2	108A		4.8	30 days @ 85°C, OCXO @ 25°C 1000h, 2000h, 8000h @ 85°C

Drawing control: (Internal use only)

Issue number : 1

Date : 01/06/2017

Internal reference : O1

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