



### Features and Benefits

- Standard frequency: 10.0 MHz
- Ultra low phase noise level close to the carrier
- Short term stability (Allan deviation) per 1 sec: up to  $5 \times 10^{-13}$
- Package size: 50.8x50.8x16 mm
- High stability vs. temperature: up to  $1 \times 10^{-9}$
- High long term stability: up to  $1 \times 10^{-8}$ /year
- Power supply: 12 V
- Available as RoHS

### Typical Applications

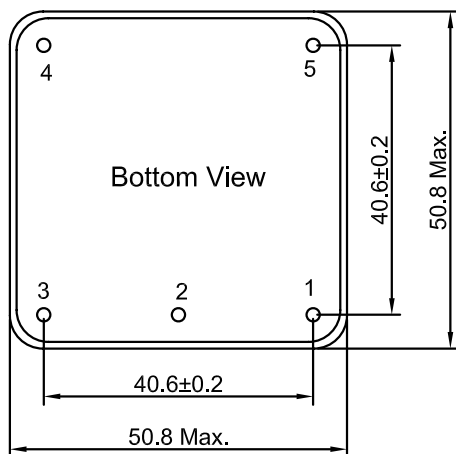
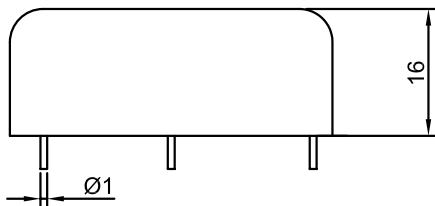
5G, Telecommunication, Test & Measurement

### Description

OCXO5151AN-10MHz offers high frequency stability, low long-term aging and low phase noise, all in a compact package to suit the different communication needs.

### Mechanical Drawing & Pin Connections

Drawing No: MD180021-5



#### Pin Connections:

Pin#	Function
1	Control Voltage
2	Reference Voltage
3	RF Output
4	Ground
5	Supply Voltage

Unit in mm  
1mm = 0.0394 inches



**Specifications**

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F <sub>nom</sub>			10		MHz	
<b>RF Output</b>							
Signal Waveform			Sinewave				
Load	R <sub>L</sub>		50±5%			Ohm	
Level Voltage	V <sub>H</sub>		400			mV	
Harmonics					-30	dBc	
<b>Power Supply</b>							
Supply Voltage	V <sub>S</sub>	±5%		12		V	
Power Consumption		Steady state, +25°C			250	mA	
		Warm-up			600	mA	
Warm-up Time	T <sub>up</sub>	within accuracy of <±2x10 <sup>-8</sup> @ 25°C			5	min	
<b>Frequency Control</b>							
Frequency pulling range			0.3			ppm	
Control voltage range			0		5	V	
Reference voltage				5		V	
<b>Frequency Stability</b>							
Versus Operating Temperature Range					5	ppb	See ordering information
Versus Load		±5%			0.5	ppb	
Versus supply voltage		±5%			0.5	ppb	
Short term stability (Allan deviation)		per 1 sec			5x10 <sup>-13</sup>		
<b>Environmental, Mechanical Conditions</b>							
Operating temperature range	See ordering information						
Storage temperature range	-55°C to 85°C						
Vibration	10 to 500Hz						
Acceleration	5g						
Shock	75 g/ 3±1 ms						
Humidity @ 25°C	98%						



### Ordering Information

OCXO5151AN	-	10MHz	-	01	02	03	04
Group				Code			

For example, OCXO5151AN -10MHz-1-1-1-1 denotes the unit has the following specifications:

Temperature Range: 0°C to +55°C  
 Stability Over Temperature: ±1ppb  
 Aging: ±50ppb  
 Phase Noise: <-113dBc/Hz@1Hz  
 <-143dBc/Hz@10Hz  
 <-154dBc/Hz@100Hz  
 <-160dBc/Hz@1KHz  
 <-163dBc/Hz@10KHz

01	Frequency Stability
Code	Specification
1	±1ppb
2	±2ppb
3	±3ppb
4	±5ppb

02	Temperature Range
Code	Specification
1	0°C to +55°C
2	-10°C to +60°C
3	-20°C to +70°C
4	-40°C to +70°C
5	-40°C to +80°C

03	Aging
Code	Specification
1	±50ppb
2	±30ppb
3	±20ppb
4	±10ppb

04	Phase Noise
Code	Specification
1	<-113dBc/Hz@1Hz <-143dBc/Hz@10Hz <-154dBc/Hz@100Hz <-160dBc/Hz@1KHz <-163dBc/Hz@10KHz
2	<-116dBc/Hz@1Hz <-144dBc/Hz@10Hz <-157dBc/Hz@100Hz <-160dBc/Hz@1KHz <-165dBc/Hz@10KHz
3	<-119dBc/Hz@1Hz <-145dBc/Hz@10Hz <-157dBc/Hz@100Hz <-160dBc/Hz@1KHz <-167dBc/Hz@10KHz