

1 Purpose

WORK phase-locked oscillator (PLO) products are rugged modular components that can be used in a wide variety of applications. The phase-locked oscillators have found their way into every type of high quality telecommunications, lab testing, satellite up- and downconverters, radar and many other applications that require the high quality and performance that we design into our products.

2 Performance Parameters

The phase-locked frequency source is both an accurate and stable signal source. Its stability and accuracy are directly related to the stability and accuracy of a lower-frequency reference. The most significant parameters are the frequency band of operation and the corresponding frequency resolution. Next would be performance requirements such as phase noise, spurious, harmonics, type of reference, operating voltage and power consumption. The PLO-CRO-xxxx-TCXO Series is designed as a multi loop, single frequency device. It comes with an internal TCXO reference. Typical performance:

- Very low phase noise design
- High output level, typical +20 dBm
- Low spurious (typical <-90 dBc) and harmonics
- High reference frequency suppression, typical -90 dBc
- Low power consumption <5 W
- Frequency stability < 10 ppm over temperature and aging over 15 years
- Wide operating temperature range -30°C ... +70°C

Further options:

- Lower power consumption <3.5 W with less output level

3 Setup

WORK synthesizers are compatible with many standard serial or parallel interfaces to program frequency, and can be customized to meet any user protocol. Standard user interfaces can be downloaded from the WORK web site and operate from any windows based PC.



Figure 1: PLO-CRO-xxxx-TCXO product example.

4 Dimensions of PLO-CRO-xxxx-TCXO Series

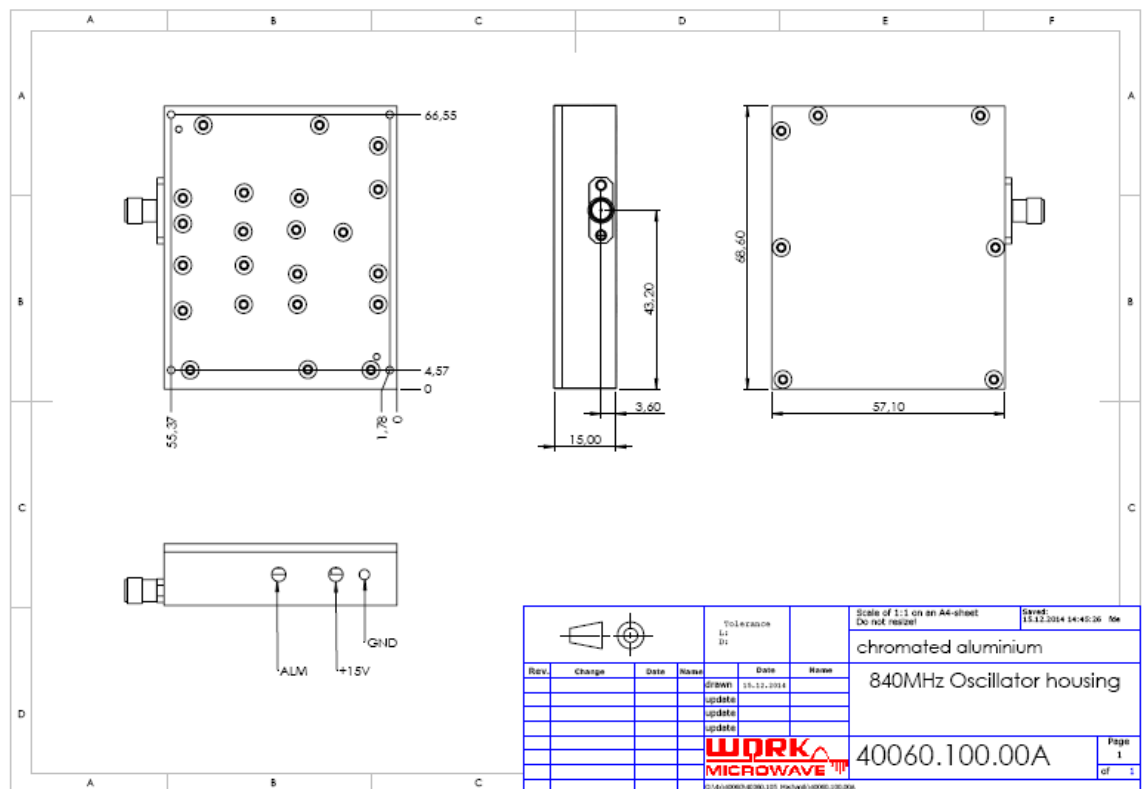
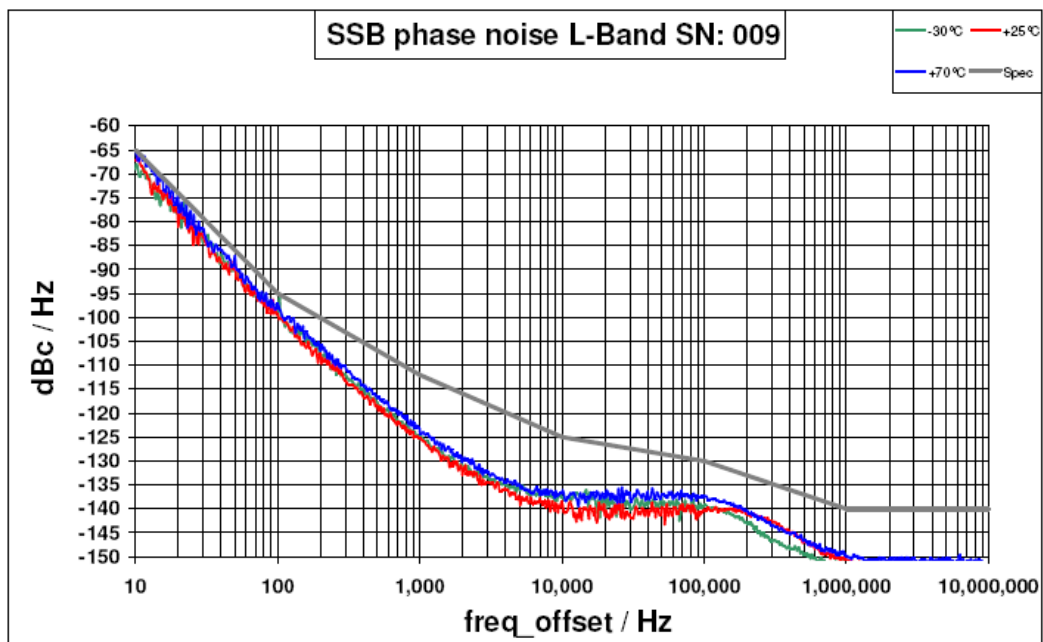


Figure 2: Outline Dimensions.

5 Technical data

PLO Type:	PLO-CRO-xxxx-TCXO	
RF-Output Frequency:	125 ... 2500 MHz	
Phase Noise: (800..1000 MHz)	10 Hz	-65
	100 Hz	-95
	1 kHz	-112
	10 kHz	-125
	100 kHz	-130
	1 MHz	-140
	10 MHz	-150
		max. values in dBc/Hz
Spurious Outputs:	$\Delta f < 20$ MHz:	< -80 dBc
	$\Delta f > 20$ MHz:	< -85 dBc
	Output harmonics:	< -60 dBc
Output level:	Connector:	+20 dBm \pm 2 dB SMA (female)
Frequency stability:	-20°C ... +70°C and aging	< \pm 10 ppm
Lock detect output:	TTL, active high	
Temperature Range:	-30 °C ... +70 °C operating, -40 °C ... 80 °C storage	
Relative Humidity:	< 95 % non condensing	
Power Input:	15 V \pm 5%	
Power Consumption:	Max: 5 W	
Power and control connector:	Feed-through-capacitor	
Dimension and Weight:	68.6 x 57.1 x 15.0 mm ³ (WxHxD), approx. 120 g	

Specifications are subject to change



PhaseNoise Chart 4

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Figure 3: Typical phase noise over temperature.

6 Ordering information

Model-Nr	Description	Connector
PLO-CRO-xxxx-TCXO	PLO, xxxx = frequency in MHz	SMA

7 Company address

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