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-xx.x-OCXO Series is designed as a multi loop, single frequency, very low spurious and phase noise device. It comes with an internal OCXO reference. Typical performance:

- Ultra low phase noise design
- High output level, typical +21 dBm
- Low spurious (typical <-100 dBc) and harmonics
- High reference frequency suppression, typical -100 dBc
- Frequency stability < 10 ppm over temperature and aging over 15 years
- Wide operating temperature range -30°C … +70°C

Further options:

- Lower power consumption <12 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-xx.x-OCXO product example.

4 Dimensions of PLO-CRO-xx.x-OCXO Series

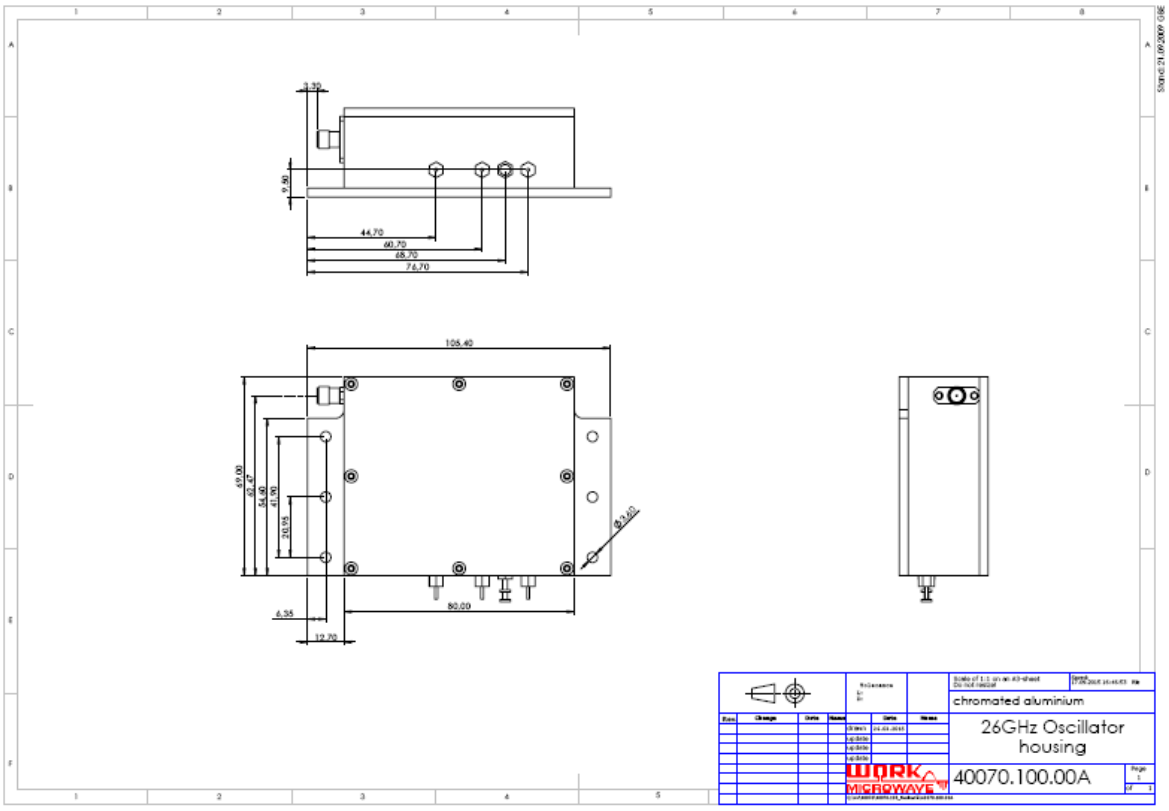

Figure 2: Outline Dimensions.

5 Technical data

PLO Type:		PLO-CRO-xx.x-OCXO	
RF-Output Frequency:		10.0 ... 26.5 GHz	
Phase Noise: (800..1000 MHz)	10 Hz 100 Hz 1 kHz 10 kHz 100 kHz 1 MHz 10 MHz	-45 -75 -95 -108 -112 -130 -140	-50 -80 -104 -112 -116 -135 -142
		max. values in dBc/Hz	typ. values in dBc/Hz
Spurious Outputs:		Δf < 20 MHz: Δf > 20 MHz: Output harmonics:	< -90 dBc < -90 dBc < -60 dBc
Output level:		Connector:	+21 dBm ±2 dB K (female)
Frequency stability:		-20°C … +70°C and aging	< ±10 ppm
Lock detect output:		Alarm contact, active open	
Temperature Range:		-30 °C … +70 °C operating, -40 °C … 80 °C storage	
Relative Humidity:		< 95 % non condensing	
Power Input:		±15 V ± 5%, <950 mA @ +15 V (steady state), <1300 mA @ +15 V (warm-up), <50 mA @ -15V	
Power Consumption:		Max: 15 W steady state, <20 W warm-up	
Power and control connector:		Feed-through-capacitor	
Dimension and Weight:		105.4 x 69.0 x 31.2 mm^3 (WxHxD), approx. 325 g	

Specifications are subject to change

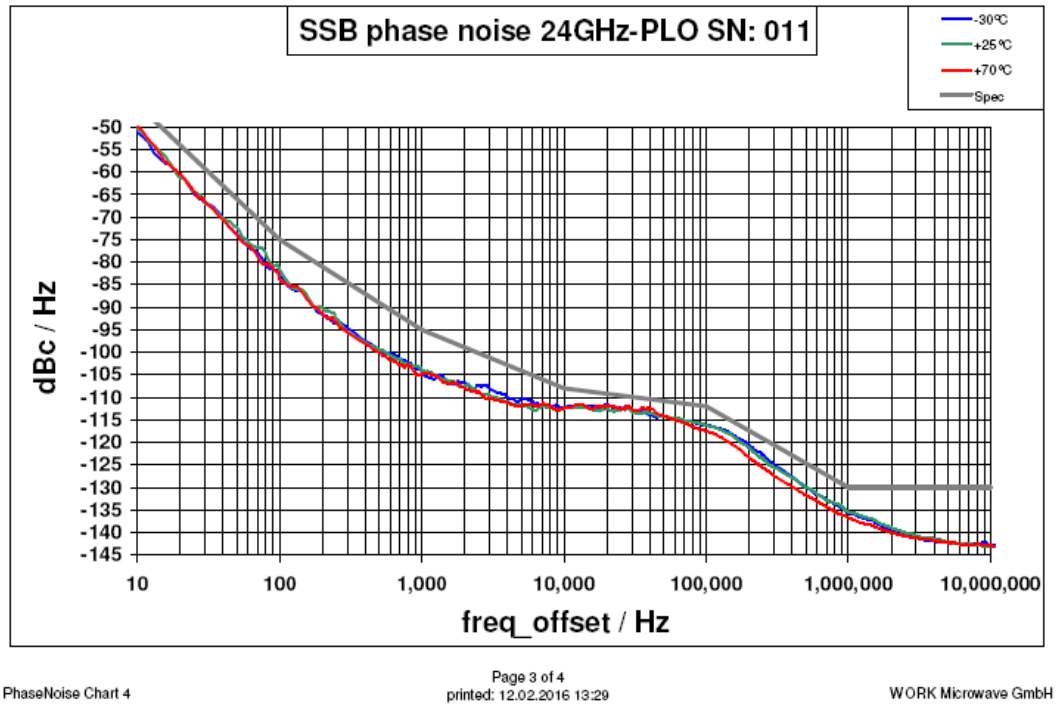

Figure 3: Typical phase noise over temperature.

6 Ordering information

Model-Nr	Description	Connector
PLO-CRO-xx.x-OCXO	PLO, xx.x = frequency in GHz	SMA

7 Company address

WORK Microwave GmbH
Rudolf-Diesel-Ring 2
D-83607 Holzkirchen
www.work-microwave.com