EUROQUARTZ TECHNICAL BULLETIN Issue 4

#### **CLEANROOM UPDATE**

Contracts have now been signed for the installation of our new cleanroom, laser marking system and a seam welding station, it is anticipated that the cleanroom development will be complete mid Q1 2019.

A new 7x5mm ceramic military clock oscillator is under development and is expected to be available from new our UK facility in July 2019.

NEW

This is an exciting opportunity for the company and will secure UK production post Brexit.

# ULTRA-LOW SUPPLY VOLTAGE OSCILLATORS

This new unique range of oscillators is Ideal for battery operated systems where power consumption is critical.

SUPPLY VOLTAGE	1.0V to +1.2V	PACKAGE SIZES	7x5/5x3.2/3.2/2.5 mm
FREQUENCY RANGE	0.25 to 60.0 MHz	PHASE JITTER	146 fS Typical. 12kHz~20MHz
PHASE NOISE	-60dBc/Hz at 10Hz	-147dBc/Hz at 10kHz	
	-92dBc/Hz at 100Hz	-155dBc/Hz at 100kHz	
	-123dBc/Hz at 1kHz	-160dBc/Hz at 1MHz	

## **ULTRA-LOW JITTER OSCILLATORS**



The HPK / HDK / HCK series of differential output, oscillators without PLL, offer three output types;LVPECL,LVDS and HCSL.

SUPPLY VOLTAGE	1.8V (LVDS/HCSL) +2.5V and 3.3V	PACKAGE SIZES	7x5/5x3.2/3.2/2.5 mm
FREQUENCY RANGE	10MHz to 200 MHz	PHASE JITTER	166 fS Typical. 12kHz~20MHz
PHASE NOISE 125MHz	-166dBc/Hz @1kHz	-149dBc/Hz @1MHz	
	-138dBc/Hz @10kHz	-150dBc/Hz @10MHz	
	-144dBc/Hz @100kHz		

## DIRECT REPLACEMENT FOR SILICON LABS PART - 4 Frequencies Switchable Clock

SUPPLY VOLTAGE	1.8V, +2.5V and 3.3V	PACKAGE SIZES	7x5mm
FREQUENCY RANGE	CMOS: 50 ~250MHz	PHASE JITTER	150fS Typical. 12kHz~20MHz
	LVDS:150MHz~2.1GHz LVPECL: 150MHz~2.1GHz HCSL:150~700MHz		

#### **HIGH PRESSURE TESTING OF OSCILLATORS**

Following enquiries from several customers regarding survivability of industrial oscillators under extreme pressure Euroquartz conducted a series of high pressure tests in order to compile some evidential benchmark data.

Smd ceramic clocks were subjected to pressures from 1bar to 500bar and then electrically tested. The package sizes tested were 7x5mm, 5x3.2mm and 3.2x2.5mm standard metal lidded ceramic types. The package size certainly had a bearing on the results due to surface area and flex of the lids. The photographic evidence in the report clearly shows the damage caused at various pressures.

A comprehensive report is available for engineers that are interested in the findings, please send requests to Adrian Whiteley. (awhiteley@euroquartz.co.uk)

#### EUROQUARTZ ARE EXHIBITING AT THE DPRTE DEFENCE PROCUREMENT EVENT NEC 28th March 2019 -STAND 64

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