




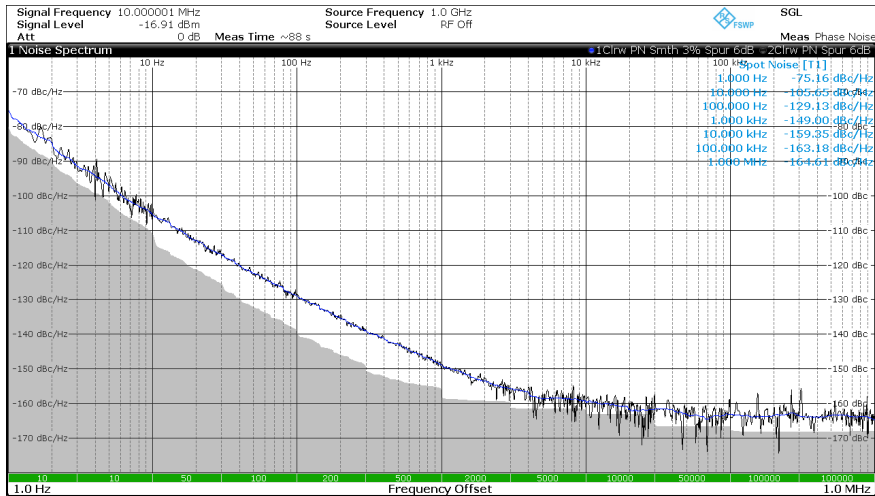


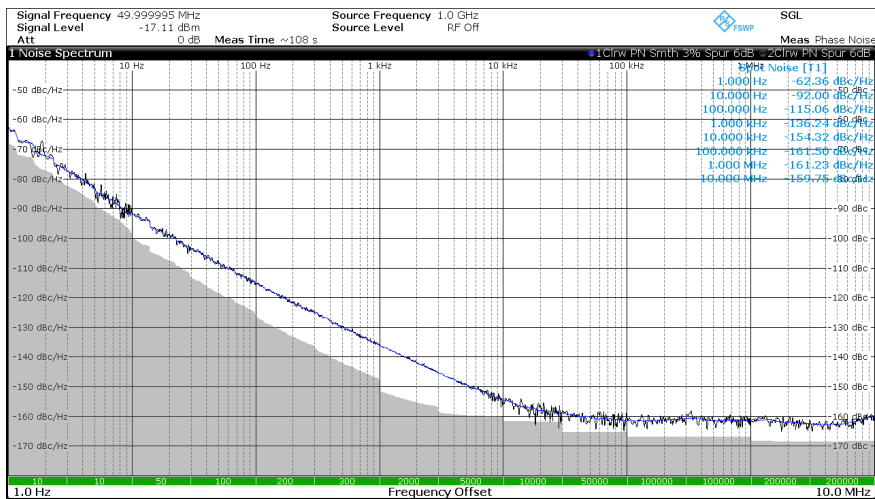
<b>Model</b>					
	<b>AXLE5032S</b>	<b>AXLE5032S-H</b>	<b>AXLE7050S</b>	<b>AXLE7050S-H</b>	<b>AXIS45SH</b>
<b>Product type</b>	TCXO				VCXO
<b>Category</b>	New Space (Space COTS) – Customizable to match mission requirements				
<b>Features</b>	LEO and New Space Applications - Low Noise & High Stability Radiation tested (TID & SEE) – Different product levels available				
<b>Radiation hardness</b>	40 krad (TID) – SEL immune				
<b>Frequency range</b>	10 ~ 50 MHz				10 ~ 100 MHz
<b>Output</b>	CSW	HCMOS	CSW	HCMOS	Sine wave
<b>Stability</b>	±1 ppm				±5 ppm
<b>Temperature range</b>	-40°C to +85°C				-30°C to +70°C
<b>Supply voltage</b>	3.3 V				3.3 ~ 5 V
<b>Manufacturing</b>	MIL-PRF-55310 Product Level “S” or tailored to customer requirements				
<b>Size</b>	5 x 3.2 mm SMD Ceramic	5 x 3.2 mm SMD Ceramic	7 x 5 mm SMD Ceramic	7 x 5 mm SMD Ceramic	20 x 13 mm (CO 02)



## TCXO Phase noise Performance



10 MHz



50 MHz

## Design, Manufacturing and Quality

### Space COTS "New Space Category"

Specially selected commercial components & materials (COTS) / Suitable semiconductor technology for improved radiation hardness

Quartz crystal with High Q material (Low inclusion & etch channel density)

### Class 1 "Classical Space Category"

Component selection based on ECSS-Q-ST-60C Class 1

Material selection based on ECSS-Q-ST-70C / ECSS-Q-70-71

Quartz crystal based on ESCC3501 with swept material

Manufacturing IAW ECSS-Q-ST-70-08C / ECSS-Q-ST-70-38C

ESA certified personnel in Clean-Room environment (ISO Class 3)

Pre-cap inspection (Optional)

Pre-cap inspection of Crystal & Oscillator

Destructive Physical Analysis DPA (Optional)

Manufacturing IAW MIL-PRF-55310 Product Level "S" including

Screening, Group-B

Screening, Group A-, B- and C-inspection

Full traceability of all critical components (Quartz, Semiconductors & PCB)

Complete traceability of all components, materials and manufacturing steps

## Heritage

- **PLATiNO Satellite Platform:** 10 MHz Ultra-Low Noise OCXO
- **One Sat Satellite Platform:** 100 MHz Ultra-Low Noise OCXO
- **LEO & New Space Missions:** ESA, DSO Singapore, South-Korea etc.
- **Many other Cube and Small Satellite Missions**



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