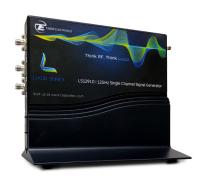


#### LS3081D/LS6081D/LS1291D-DST

3, 6 or 12 GHz Single Channel Desktop RF Signal Generator



The all-new Lucid Series offers the most advanced features and industry leading performance in the most compact form factor. The series feature 3, 6 and 12 GHz single channel versions, all sharing the very same industry leading highlighted features, in a compact, small footprint module. Featuring fast switching speed, superior signal integrity and purity, all the necessary modulated signals for analog communication systems, with built in SPI and micro-USB interface, the Lucid Series is designed to meet today's most demanding specifications, needed from the R&D benches to the production lines.



3, 6 or 12 GHz Single Channel Desktop RF Signal Generator Remotely programmable via MATLAB, Python, LabVIEW and other software programming environments



Exceptionally Low Phase Noise of -145dBc/Hz @100MHz and 10kHz offset



Fast Switching speed



SPI and micro-USB integrated interfaces

Flexible modular platform for OEM and custom requirements and applications, to satisfy specific customer demands.



Extra small, compact module platform



Multi instrument synchronization capability

# Signal Integrity and Purity

One of the most important requirement in today's testing and measurement applications is high signal quality. With a typical SSB phase noise of -145dBc at 100MHz, and -132dBc at 1GHz, at 10 kHz carrier offset, Tabor's All-New Lucid Series platform delivers one of the best quality signals available on the market today, answering the ever-growing demand for clear and precise signals.

# High Power 30dBm

Many test applications require high power signals or they are needed to overcome losses in the test system. The Lucid RF generator offers an extended power range that can drive signals up to +30dBm. The ability to drive high power signals eliminates the need for external power amplifiers and produces high quality, accurate signals.

### **Modulation Schemes**

Signal bursts and chirps have become common need in the daily life of any aerospace or defense application. With Tabor's All-New Lucid Series, any modulation is possible, no matter if its AM, FM, PM and Sweep.

### Multiple Ways to Control the Unit

Tabor's Lucid Series comes with its own dedicated software to control the instrument functions, modes and features via a graphical user interface (GUI) as well as a complete set of drivers, allowing you to write your application in various environments including Labview, Python, CVI, C++, VB and MATLab. You may also link the supplied dll to other Windows-based API's or use low-level SCPI commands to program the instrument.



#### LS3081D/LS6081D/LS1291D-DST

### 3, 6 or 12 GHz Single Channel Desktop RF Signal Generator

# **Specifications**

FREQUENCY	
Range:	
LS3081D:	10 MHz to 3GHz
LS6081D:	10 MHz to 6GHz
LS1291D:	10 MHz to 12GHz
Resolution:	0.001 Hz
Phase offset:	0.01 deg
Switching speed:	500 μs

FREQUENCY REFERENCE	
Temp. Stability:	±25 ppb max.
Aging:	± 3 ppm for 20 years
Warm up time:	30 min

AMPLITUDE	
Max output power:	
Settable:	+20 dBm
Calibrated:	+15 dBm
Min output power:	
Settable:	-30 dBm
Calibrated:	-20 dBm
Resolution:	0.01 dB
Power Mute:	-95 dBm
Output Return Loss:	-10 dBm
Accuracy (dB):	
Up to 100MHz:	±0.3 (typ.)
100MHz to 3GHz:	±0.4 (typ.)
3GHz to 9GHz:	±0.7 (typ.)
Above 9GHz:	±1 (typ.)

PHASE NOISE (dBc/Hz)		
Measured @ 10kHz offset		
1 GHz:	-138 (typ.)	
2 GHz:	-133 (typ.)	
3 GHz:	-130 (typ.)	
6 GHz:	-124 (typ.)	
12 GHz:	-118 (typ.)	

HARMONICS (dBc)	
Up to 100 MHz:	-30 dBc
100 MHz to 12 GHz:	-50 dBc <sup>(2)</sup>

-55 dBm

NON HARMONICS	(dpc)
NON-HARMONICS	(UDC)

**SUB-HARMONICS (dBc)** 

Up to 12 GHz:	-90dBc (typ.) (3,4) -60dBc max. (5)

MODULATION		
FREQUENCY MODULATION		
Maximum Deviation:	10 MHz	
Resolution:	0.1% or 1 Hz (the greater)	
Modulation Rate:	1 MHz	
Resolution:	1 Hz	
AMPLITUDE MODULA	ATION	
AM Depth:		
Type:	Linear	
Maximum settable:	90%	
Resolution:	0.1% of depth	
Accuracy (1 kHz)	< ± 4% of setting	
Modulation rate:	DC to 100 kHz	
PHASE MODULATION		
Peak Deviation:	360 deg	
Modulation Rate:	DC to 100 kHz	
SWEEP		
Range:	Same as freq. range	
Modes:	Frequency and amplitude	
Dwell time:	10 μs to 1000 s	
Resolution:	1 μs	
Number of points:	2 to 65535	
Step change:	Linear	
Trigger:	Free run, External, Bus, Timer	

INFUIS		
MODULATION INPUT		
Connector Type:	MMCX	
Input Impedance:	50Ω	
Max. input voltage:	±1V	
Input damage level:	±3.5V	
PULSE / TRIGGER INPUT		
Connector type:	MMCX	
Input Impedance:	50Ω	
Input voltage:	TTL, CMOS compatible	
Threshold:	1.5V	
Damage level:	-0.42V or 5.42V	
EXTERNAL REFERENCE INPUT		
Connector type:	SMA	
Input Impedance:	50Ω	
Waveform:	Sine or Square	
Frequency:	10/100MHz	
Power:	-3 dBm to +10 dBm	

Absolute Max. Level: +15 dBm

Locking Range:

OUTPUTS		
RF OUT		
Impedance:	50Ω	
Connector type:	SMA	
Number of channels:	1	
REFERENCE OUT		
Impedance:	50Ω	
Connectors type:	2 x SMA	
Frequency:	10 MHz or 100 MHz	
Shape:	Sine	
Power:	3 to 7 dBm	

GENERAL	
Voltage:	+12.0 to +12.6 VDC
Supply Voltage:	+15 V DC
Power Consumption:	24W max. (18W typ)
Interface:	microUSB, SPI
Dimensions (WxHxD):	120 x 160 x 24 mm
Weight:	
Without Package:	1 kg
Shipping Weight:	1.5 kg
Temperature:	
Operating:	0°C to +40°C
Storage:	-40°C to +70°C
Warm up time:	15 minutes
Humidity:	85%, non-condensing
Safety:	CE Marked, IEC61010-1:2010
EMC:	IEC 61326-1:2013
Calibration:	1 years
Warranty:	1 year

ORDERING INFORMATION	
MODEL	DESCRIPTION
LS3081D-DST	3GHz RF Analog Signal Generator
LS6081D-DST	6GHz RF Analog Signal Generator
LS1291D-DST	12GHz RF Analog Signal Generator

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INPUTS

6 to 12 GHz:

±2 ppm

 $<sup>^{(1)}</sup>$  750MHz to 900MHz -35dBc (typ.);  $^{(2)}$  -60dBm max. @ 1GHz, 1.5GHz, 2.5GHz and 3GHz;  $^{(3)}$  -75dBm max. @ -15dBm to +15dBm and f>6GHz;  $^{(4)}$  Boundary spurs which may apear @ -100MHz to +100MHz offset from CW