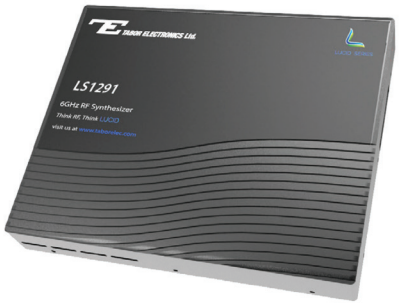
LS3081D/LS6081D/LS1291D-DST

3, 6 or 12 GHz RF Analog Signal Generator Desktop Modules



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 & 12GHz RF analog 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
- Extra small, compact module platform
- Multi instrument synchronization capability
- Flexible modular platform for OEM and custom requirements and applications, to satisfy specific customer demands.
- AM, FM, PM & Sweep

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.

Fast Switching

In today's world, time is a crucial factor, whether in design, on the production floor or inside ATE systems. Tabor's All-New Lucid Series ensures maximum measurements at minimum time, setting the industry's highest throughput standard.

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.

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Specifications

FREQUENCY

Range:	
LS3081D-DST:	100 kHz to 3GHz
LS6081D-DST:	100 kHz to 6GHz
LS1291D-DST:	100 kHz to 12GHz
Resolution:	0.001 Hz
Phase offset:	0.01 deg
Switching speed:	500µs

FREQUENCY REFERENCE

Temp. Stability:	±100 ppb,
Aging:	± 1.25 ppm over 10y
Warm up time:	30 min
INTERNAL	
Output Frequency:	10/100 MHz
Output Wave	Sine
Output Power:	+5 ±2 dBm
Reference Mute:	-60 dBm
Locking Range:	± 2.0 ppm
Output Impedance:	50Ω
EXTERNAL	
Input Frequency:	10 / 100 MHz
Input Power:	-5 to +10 dBm
Max. Input Level:	+15 dBm
Input Impedance:	50Ω
Locking Range:	20Hz
Wave shape:	Sine or Square

AMPLITUDE

Range:	+15 dBm to -20dBm
Resolution:	0.01 dB
Power Mute:	-65dBm
Output Return Loss:	-10dBm
Switching speed:	500µs
Accuracy (dB):	±0.5 (up to 10dBm)

PHASE NOISE (dBc/Hz)

up to 1.5 GHz:	-136 typ (-132 max)
1.5 to 3 GHz:	-130 typ (-125 max)
3 to 6 GHz:	-124 typ (-120 max)
6 to 12 GHz:	-118 typ (-114 max)

HARMONICS (dBc)

up to 12 GHz:	-40dBc

NON HARMONICS (dBc)

up to 12 GHz:	-60dBc

MODULATION

COMMON CHARACTERISTICS	
Carrier Frequency:	Full scale
Modulation Source:	Internal
FREQUENCY MODULATION	
Modulation Rate:	1 MHz
Resolution:	0.1% or 1 Hz (the greater)
Maximum Deviation:	
0.05*f:	(<1.5GHz)
25MHz:	(1.25 to 2.5 GHz)
50MHz:	(2.5 to 5GHz)
100MHz:	(5 to 10GHz)
200MHz:	(>10GHz)
AMPLITUDE MODULATION	
Modulation rate:	DC to 100 kHz
AM Depth Linear:	+15 dBm
Max settable:	90%
Resolution:	0.1% of depth
Accuracy (1kHz):	< ± 4% of setting
AM Depth Exponential:	
Max. Settable:	40 dB
Resolution:	0.01 dB
Accuracy (1kHz):	< ± 4% of setting
PHASE MODULATION	
Modulation Rate:	1 MHz
Resolution:	TBD
Peak Deviation:	300 rad
DIGITAL SWEEP MODE (FREQ. & AMP.)	
Dwell time:	10us to 1000s
Resolution:	1us
Number of points:	2 to 65535
Step change:	Linear or logarithmic
Trigger:	Continious, External, Bus, Timer

INPUTS

TRIGGER INPUT	
Connector type:	MMCX
Input Impedance:	50Ω or 10kΩ
Input voltage:	TTL, CMOS
Damage level:	±5V
EXTERNAL REFERENCE INPUT	
Connector type:	SMA
Input Impedance:	50Ω
Waveform:	Sine or Square
Frequency:	10/100MHz

OUTPUTS

RF OUT	
Impedance	50Ω
Connector type	SMA
REFERENCE OUT	
Impedance	50Ω
Connector type	SMA

GENERAL

Voltage:	+12.0 to +12.6 VDC
Supply Voltage:	+15 V DC
Power Consumption:	24W max. (18W typ)
Interface:	MICRO-USB, SPI
Dimensions (WxHxD):	12 x 16 x 2.5 cm
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 Desktop Module
LS6081D-DST	6GHz RF Analog Signal Generator Desktop Module
LS1291D-DST	12GHz RF Analog Signal Generator Desktop Module