LS3081B/LS6081B/LS1291B-DST

3, 6 or 12 GHz RF Analog Benchtop Signal Generator

The all-new Lucid Series benchtop platform offers 3, 6 and 12 GHz models in single channel. Featuring extremely high power, fast switching speed, superior signal integrity and purity, removable memory card for maximum security, all the necessary modulated signals for analog communication systems, with built in LAN and 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 Benchtop 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

USB and LAN interfaces

Extra high power of up to 30dBm

Easy to use benchtop platform with 5" user friendly touch screen

Removable SD card for instrument security

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.

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.

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Specifications

FREQUENCY

Range:	
LS3081B:	9 kHz to 3GHz
LS6081B:	9 kHz to 6GHz
LS1291B:	9 kHz 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:	+30 dBm
Calibrated:	+25 dBm [1]
Min output power:	
Settable:	-90 dBm
Calibrated:	-70 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 [2]

SUB-HARMONICS (dBc)

6 to 12 GHz:	-55 dBm

NON-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 MODULATION	
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

INPUTS

MODULATION INPUT	
Connector Type:	BNC
Input Impedance:	50Ω
Max. input voltage:	±1V
Input damage level:	±3.5V
PULSE / TRIGGER INPUT	
Connector type:	BNC
Input Impedance:	50Ω
Input voltage:	TTL, CMOS compatible
Threshold:	1.5V
Damage level:	-0.42V or 5.42V
EXTERNAL REFERENCE INPUT	
Connector type:	BNC
Input Impedance:	50Ω
Waveform:	Sine or Square
Frequency:	10/100MHz
Power:	-3 dBm to +10 dBm
Absolute Max. Level:	+15 dBm
Locking Range:	±2 ppm

OUTPUTS

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

GENERAL

Voltage Range:	90VAC to 264VAC
Frequency Range	47Hz to 63Hz
Power Consumption	100W
Display Type	5", TFT capacitive touch screen
Interface:	
USB Host:	2 x front panel type A 1 x rear panel type A
USB Device:	1 x rear panel, type B
LAN:	1 x 1000/100/10 BASE-T
Storage:	Removable SD card
Dimensions (WxHxD):	315 X 88 x 425 mm
Weight:	
Without Package:	6 kg
Shipping Weight:	6.5 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
LS3081B-DST	3GHz RF Analog Signal Generator
LS6081B-DST	6GHz RF Analog Signal Generator
LS1291B-DST	12GHz RF Analog Signal Generator

[1] Above 25kHz; [2] 750MHz to 900MHz -35dBc (typ.); [3] -60dBm max. @ 1GHz, 1.5GHz, 2.5GHz and 3GHz;
[4] -75dBm max. @ -15dBm to +15dBm and f>6GHz; [5] Boundary spurs which may apear @ -100MHz to +100MHz offset from CW