

## Specifications

FREQUENCY		HARMONICS (dBc)		Resolution:	
<b>Range:</b>		<b>Up to 100 MHz:</b>	-30 dBc	<b>Number of points:</b>	
LS3081/2/4B:	9 kHz to 3GHz	<b>100 MHz to 12 GHz:</b>	-50 dBc <sup>(2)</sup>	List:	2 to 4,096
LS6081/2/4B:	9 kHz to 6GHz			Step:	2 to 65,535
LS1291/2/4B:	9 kHz to 12GHz			<b>Step change:</b>	Linear
<b>Resolution:</b>	0.001 Hz			<b>Trigger:</b>	Free run, External, Bus, Timer
<b>Phase offset:</b>	0.01 deg				
<b>Switching speed:</b>					
Standard:	500 μs				
FS Option:	100 μs				
FREQUENCY REFERENCE		SUB-HARMONICS (dBc)		INPUTS	
<b>Temp. Stability:</b>	±25 ppb max.	<b>6 to 12 GHz:</b>	-55 dBm	MODULATION INPUT	
<b>Aging:</b>	± 3 ppm for 20 years			<b>Connector Type:</b>	BNC
<b>Warm up time:</b>	30 min			<b>Input Impedance:</b>	50Ω
				<b>Max. input voltage:</b>	±1V
				<b>Input damage level:</b>	±3.5V
				PULSE / TRIGGER INPUT	
				<b>Connector type:</b>	BNC (per channel)
				<b>Input Impedance:</b>	50Ω
				<b>Input voltage:</b>	TTL, CMOS compatible
				Threshold:	1.5V
				<b>Damage level:</b>	-0.42V or 5.42V
				EXTERNAL REFERENCE INPUT	
				<b>Connector type:</b>	BNC (per channel)
				<b>Input Impedance:</b>	50Ω
				<b>Waveform:</b>	Sine or Square
				<b>Frequency:</b>	10/100MHz
				<b>Power:</b>	-3 dBm to +10 dBm
				<b>Absolute Max. Level:</b>	+15 dBm
				<b>Locking Range:</b>	±2 ppm
				OUTPUTS	
				RF OUT	
				<b>Impedance:</b>	50Ω
				<b>Connector type:</b>	SMA
				<b>Number of outputs:</b>	
				LS3081/6081/1291B:	1
				LS3082/6082/1292B:	2
				LS3084/6084/1294B:	4
				REFERENCE OUT	
				<b>Impedance:</b>	50Ω
				<b>Connectors type:</b>	2 x BNC
				<b>Frequency:</b>	10 MHz or 100 MHz
				<b>Shape:</b>	Sine
				<b>Power:</b>	3 to 7 dBm
FREQUENCY MODULATION		NON-HARMONICS (dBc)			
<b>Maximum Deviation:</b>	10 MHz	<b>Up to 12 GHz:</b>	-90dBc (typ.) <sup>(3,4)</sup> -60dBc max. <sup>(5)</sup>		
Resolution:	0.1% or 1 Hz (the greater)				
<b>Modulation Rate:</b>	1 MHz				
Resolution:	1 Hz				
AMPLITUDE MODULATION					
<b>AM Depth:</b>					
Type:	Linear				
Maximum settable:	90%				
Resolution:	0.1% of depth				
Accuracy (1 kHz)	< ± 4% of setting				
<b>Modulation rate:</b>	DC to 100 kHz				
PHASE MODULATION					
<b>Peak Deviation:</b>	360 deg				
<b>Modulation Rate:</b>	DC to 100 kHz				
PULSE MODULATION (PLS OPTION)					
<b>On/off ratio:</b>	80 dB				
<b>Rise/fall time (10%-90%):</b>	15ns (typ.)				
<b>Resolution:</b>	6.4ns				
<b>Minimum Width:</b>	32ns				
<b>Repetition frequency:</b>	DC to 10 MHz				
PATTERN MODULATION (PAT OPTION)					
<b>Number of steps:</b>	1 to 2048				
<b>Step Repetition:</b>	1 to 65535				
<b>On/off time:</b>	32 ns to 20 days				
SWEEP					
<b>Range:</b>	Same as freq. range				
<b>Modes:</b>	Frequency step, Amplitude step, List				
<b>Dwell time:</b>	10 μs to 1000 s				

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

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GENERAL	
<b>Voltage Range:</b>	90VAC to 264VAC
<b>Frequency Range:</b>	47Hz to 63Hz
<b>Power Consumption:</b>	100W
<b>Display Type:</b>	5", TFT capacitive touch screen
<b>Interface:</b>	
Host:	2 x front panel USB type A 1 x rear panel USB type A
Device: USB: LAN:	1 x rear panel USB type B 1 x rear panel 1000/100/10 BASE-T
<b>Storage:</b>	Removable SD card
<b>Dimensions (W x H x D):</b>	
Without feet	315 X 88 x 425 mm
With feet	315 X 102 x 425 mm
<b>Weight:</b>	
Without Package:	6.0 kg
Shipping Weight:	6.5 kg
<b>Temperature:</b>	
Operating:	0°C to +40°C
Storage:	-40°C to +70°C
<b>Warm up time:</b>	15 minutes
<b>Humidity:</b>	85% RH, non-condensing
<b>Safety:</b>	CE Marked, EC61010-1:2010
<b>EMC:</b>	IEC 61326-1:2013
<b>Calibration:</b>	2 years
<b>Warranty:</b>	1 / 3 year warranty plan

ORDERING INFORMATION	
MODEL	DESCRIPTION
<b>LS3081B</b>	3GHz Single Channel RF Analog Signal Generator
<b>LS3082B</b>	3GHz Dual Channel RF Analog Signal Generator
<b>LS3084B</b>	3GHz Four Channel RF Analog Signal Generator
<b>LS6081B:</b>	6GHz Single Channel RF Analog Signal Generator
<b>LS6082B</b>	6GHz Dual Channel RF Analog Signal Generator
<b>LS6084B</b>	6GHz Four Channel RF Analog Signal Generator
<b>LS1291B</b>	12GHz Single Channel RF Analog Signal Generator
<b>LS1292B</b>	12GHz Dual Channel RF Analog Signal Generator
<b>LS1294B</b>	12GHz Four Channel RF Analog Signal Generator
OPTIONS	
<b>PLS</b>	Pulse Modulation
<b>PAT</b>	Pattern Modulation
<b>ELP</b>	Extended Low Power (-150dBc)
<b>EPR</b>	Extended Power Range (-130dBc to +27dB)
<b>FS</b>	Fast Switching
<b>EMU</b>	Emulator pack for Keysight, R&S, Anapico & Holzworth
<b>W-Rack</b>	Rack mount kit