

# Keysight Technologies




## Signal Generator

### Special Export Options

#### Maximum performance with minimum order processing time N5183A, E8257D, E8267D

Certain PSG (E8257D and E8267D) and MXG (N5183A) signal generator options require a US export license as a condition of sale. Keysight Technologies, Inc. has created a series of special options (HNS, HNY, HBQ, HBR, HFA and HNZ), which tailor these signal generators to set the performance as high as possible without requiring an export license. By choosing these options you will eliminate all processing time associated with the export license process, thereby dramatically reducing the amount of time it takes to receive your new instrument.

#### Keysight signal generators

E8257D PSG Analog signal generator	E8267D PSG Vector signal generator	N5183A MXG Analog signal generator
		
<ul style="list-style-type: none"> <li>- Industry-leading output power, level accuracy, and phase noise performance up to 67 GHz (operational to 70 GHz).</li> <li>- High output power and superior level accuracy often eliminate the need for an external amplifier for testing high power devices and minimize test uncertainty to identify errors early in the design process.</li> </ul>	<ul style="list-style-type: none"> <li>- Industry's first integrated microwave vector signal generator with I/Q modulation up to 44 GHz.</li> <li>- High output power, outstanding phase noise, and advanced wideband internal baseband generator capable of flexible arbitrary waveform playback or sophisticated real-time signal generation.</li> </ul>	<ul style="list-style-type: none"> <li>- Ideal for broadband component manufacturing up to 40 GHz with frequency switching speeds for improved test times for applications like antenna test, with a small size (2RU) to better utilize rack space.</li> <li>- Excellent power and level accuracy make the MXG microwave a reliable stimulus for driving high power devices.</li> </ul>
<p><a href="http://www.keysight.com/find/E8257D">www.keysight.com/find/E8257D</a></p>	<p><a href="http://www.keysight.com/find/E8267D">www.keysight.com/find/E8267D</a></p>	<p><a href="http://www.keysight.com/find/N5183A">www.keysight.com/find/N5183A</a></p>

## Signal generator special options

### E8257D

Option		HNS						
Required options	540, 550, 567	Minimum pulse width	F ≤ 31.8 GHz			F > 31.8 GHz		
Replaces option	UNW	ALC On	1 μs			1 μs		
Modifies the standard instrument to allow narrow pulse modulation up to 31.8 GHz. For frequencies greater than 31.8 GHz, minimum pulse widths are limited to 150 ns.		ALC Off						
		50 to 400 MHz	30 ns			150 ns		
		> 400 MHz	20 ns			150 ns		
Option		HNY						
Required options	1E1 and 520, 532 or 540	Absolute SSB phase noise (dBc/Hz) (CW)	Offset from carrier, optimized for less than 150 kHz (mode 1), dBc/Hz					
Incompatible options	1EM, 1ED, 1SM or any custom hardware options							
Replaces option	UNY		1 Hz	10 Hz	100 Hz	1 kHz	10 kHz	100 kHz
Exportable ultra-low phase noise		Frequency	Spec (typ)	Spec (typ)	Spec (typ)	Spec (typ)	Spec (typ)	Spec (typ)
		250 kHz to 250 MHz	-58 (-66)	-87 (-94)	-104 (-115)	-121 (-131)	-136 (-142)	-141 (-145)
		> 250 to 500 MHz	-61 (-70)	-88 (-98)	-106 (-112)	-123 (-129)	-136 (-142)	-137 (-141)
		> 500 MHz to 1 GHz	-57 (-63)	-84 (-93)	-101 (-110)	-121 (-124)	-134 (-138)	-131 (-136)
		> 1 to 2 GHz	-51 (-58)	-79 (-86)	-96 (-103)	-113 (-118)	-129 (-132)	-126 (-130)
		> 2 to 3.2 GHz	-46 (-54)	-74 (-82)	-92 (-94)	-108 (-118)	-125 (-131)	-122 (-128)
		> 3.2 to 10 GHz	-37 (-44)	-65 (-72)	-81 (-80)	-99 (-104)	-116 (-121)	-114 (-118)
		> 10 to 20 GHz	-31 (-38)	-59 (-66)	-75 (-79)	-93 (-98)	-110 (-115)	-108 (-112)
		> 20 to 40 GHz	-25 (-32)	-53 (-60)	-69 (-73)	-87 (-92)	-105 (-109)	-103 (-106)

### E8267D

Option		HNS					
Required options	544	Minimum pulse width	F ≤ 31.8 GHz			F > 31.8 GHz	
Replaces option	UNW	ALC On	1 μs			1 μs	
Modifies the standard instrument to allow narrow pulse modulation up to 31.8 GHz. For frequencies greater than 31.8 GHz, minimum pulse widths are limited to 150 ns.		ALC Off					
		50 to 400 MHz	30 ns			150 ns	
		> 400 MHz	20 ns			150 ns	
Option		HBQ					
Replaces option	016	Operating frequency	3.2 GHz to max frequency of instrument				
300 MHz BW differential IQ inputs. Bandwidth limited above 3.2 GHz carrier frequency		Bandwidth	3 dB: > 300 MHz (typ), 35 dB: < 550 MHz (typ)				
Option		HBR					
Required options	HFA	Operating frequency	3.2 to 10.35 GHz				
Replaced option	016						
1.3 GHz BW differential IQ inputs. Bandwidth limited above 3.2 GHz		Bandwidth	3 dB: >1.3 GHz (typ), 35 dB: <1.6 GHz (typ)				
Option		HFA					
Required options	HBR, 520	Max frequency	10.35 GHz				
Replaced option	520						
Limits upper frequency to 10.35 GHz.							

### N5183A

Option		HNS					
Required options	540	Minimum pulse width	F ≤ 31.8 GHz			F > 31.8 GHz	
Replaced option	UNW	ALC On	1 μs			1 μs	
Modifies the standard instrument to allow narrow pulse modulation up to 31.8 GHz. For frequencies greater than 31.8 GHz, minimum pulse widths are limited to 150 ns.		ALC Off					
		50 to 400 MHz	30 ns			150 ns	
		> 400 MHz	20 ns			150 ns	
Option		HNZ					
Replaces option	UNZ	Frequency switching speed	SCPI mode			List mode	
Optimized frequency switching speed.			Spec (typ)			Spec (typ)	
		Option 520	1.4 ms (1 ms)			1.15 ms (850 μs)	
		Option 532	1.4 ms (1 ms)			1.15 ms (850 μs)	
		Option 540	1.65 ms (1.25 ms)			1.4 ms (1.1 ms)	

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**Related Literature**

*Keysight PSG Signal Generators Brochure,*  
Literature number 5989-1324EN

*Keysight E8257D Microwave Analog Signal Generator Data Sheet,*  
Literature number 5989-0698EN

*Keysight E8267D Vector Signal Generator Data Sheet,*  
Literature number 5989-0697EN

*Keysight N5183A MXG Microwave Analog Signal Generator Data Sheet,* Literature number 5989-7572EN

**Web Resources**

- [www.keysight.com/find/E8257D-HNS](http://www.keysight.com/find/E8257D-HNS)
- [www.keysight.com/find/E8257D-HNY](http://www.keysight.com/find/E8257D-HNY)
- [www.keysight.com/find/E8267D-HNS](http://www.keysight.com/find/E8267D-HNS)
- [www.keysight.com/find/E8267D-HBQ](http://www.keysight.com/find/E8267D-HBQ)
- [www.keysight.com/find/E8267D-HBR](http://www.keysight.com/find/E8267D-HBR)
- [www.keysight.com/find/E8267D-HFA](http://www.keysight.com/find/E8267D-HFA)
- [www.keysight.com/find/N5183A-HNS](http://www.keysight.com/find/N5183A-HNS)
- [www.keysight.com/find/psg](http://www.keysight.com/find/psg)
- [www.keysight.com/find/n5183a](http://www.keysight.com/find/n5183a)

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