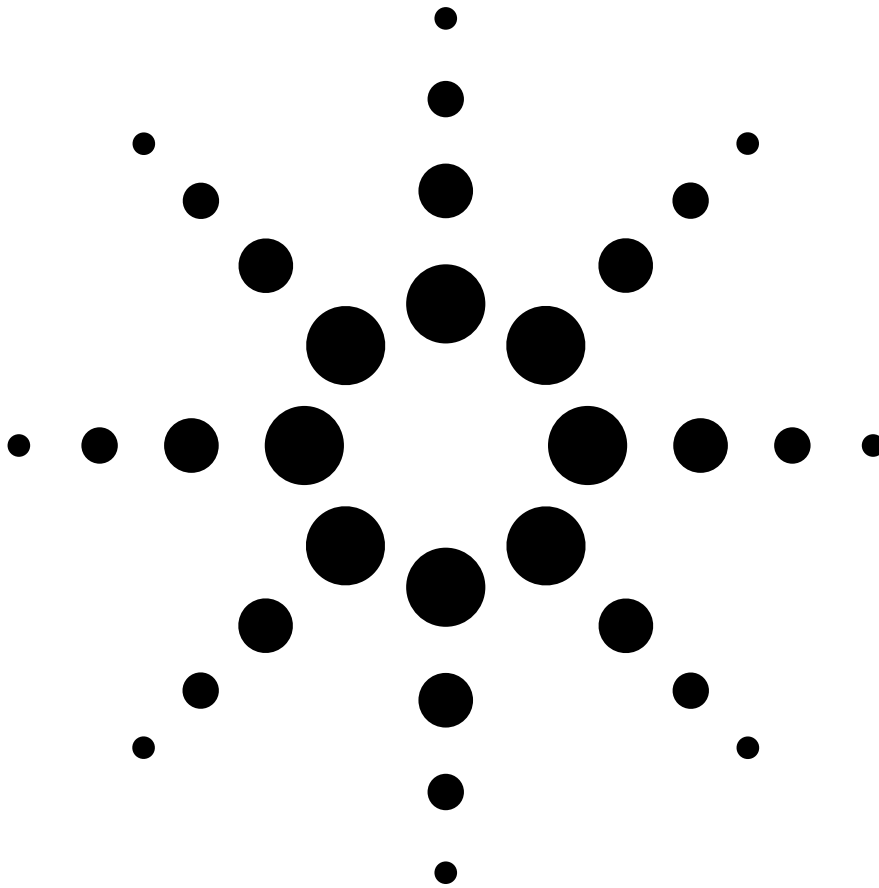


Agilent E8257D PSG Analog Signal Generator

Configuration Guide



This guide is intended to assist you with the ordering process of the PSG analog signal generators.

Standard product includes installation guide, electronic documentation set (CD-ROM), adapters, and country specific power cord.

Agilent PSG Analog Signal Generator Options

Step 1. Choose a frequency range

All frequency range options support underrange to 100 kHz. However, performance specifications are not provided between 100 kHz and 250 kHz. Additionally, Option 567 supports overrange to 70 GHz. Typical performance specifications are provided between 67 GHz and 70 GHz.

Ordering number	Description	Purpose	Requires
E8257D-520	Frequency range from 250 kHz to 20 GHz	Selects the maximum frequency of the signal generator.	
E8257D-532	Frequency range from 250 kHz to 31.8 GHz	Selects the maximum frequency of the signal generator.	
E8257D-540	Frequency range from 250 kHz to 40 GHz	Selects the maximum frequency of the signal generator.	
E8257D-550	Frequency range from 250 kHz to 50 GHz	Selects the maximum frequency of the signal generator.	
E8257D-567	Frequency range from 250 kHz to 67 GHz.	Selects the maximum frequency of the signal generator.	

Step 2. Choose modulation

Ordering number	Description	Purpose	Requires
Standard	CW signal generation	Generates continuous wave (CW) signals (i.e. no modulation).	
E8257D-UNT	AM, FM, phase modulation, and LF output	Generates analog modulated signals.	
E8257D-UNU ¹	Pulse modulation	Generates pulse modulated signals (150 ns minimum pulse width).	
E8257D-UNW ¹	Narrow pulse modulation	Generates pulse modulated signals (20 ns minimum pulse width).	E8257D-1E1

Step 3. Choose step attenuator

Ordering number	Description	Purpose	Requires
Standard	No step attenuator	Generates signals with output power levels ranging from -20 dBm to maximum power.	
E8257D-1E1	Step attenuator	Generates signals with output power levels below -20 dBm (20, 31.8, and 40 GHz models range from -135 dBm to their maximum power, and 50 and 67 GHz models range from -110 dBm to their maximum power).	

1. Option E8257D-UNU and E8257D-UNW are mutually exclusive; choose one or the other or neither. However, option E8257D-UNU can be upgraded to E8257D-UNW.

Step 4. Choose high output power

Ordering number	Description	Purpose	Requires
Standard	Standard output power	Generates standard level RF output power.	
E8257D-1EA	High output power	Generates high power signals.	

Step 5. Choose spectral purity

Ordering number	Description	Purpose	Requires
Standard	Standard spectral purity	Provides low phase noise.	
E8257D-UNX	Ultra low phase noise	Improves phase noise performance at carrier frequency offsets ranging from 1 Hz to 10 kHz.	
E8257D-1EH	Improved harmonics below 2 GHz	Improves harmonic performance for carrier frequencies below 2 GHz.	

Step 6. Choose ramp sweep

Ordering number	Description	Purpose	Requires
E8257D-007	Analog ramp sweep	Generates a fully synthesized ramp (analog) sweep of frequency and amplitude.	

Step 7. Choose Special Options ¹

Special options add unique capabilities to the signal generator for specific applications.

Ordering number	Description	Purpose	Requires
E8257D-H30	Add internal mixer for up conversion capability in the 20 GHz and 40 GHz models	Enable up conversion of complex modulated signals to frequencies up to 46 GHz	E8257D-1E1
E8257D-H60	Add internal mixer for up conversion capability in the 50 GHz and 67 GHz models	Enable up conversion of complex modulated signals to frequencies up to 65 GHz	E8257D-1E1
E8257D-HCC	Add input and output of phase reference LO	Provides multi-source phase coherency	Z5623A-Kxx Distribution Network (recommended)
E8257D-H1G	Add 1 GHz external phase reference	Provides multi-source phase coherency for carrier frequencies 100 kHz to 250 MHz	
E8257D-HSM ²	Add scan modulation	Provides deeper AM signals	E8257D-UNT E8257D-520
E8257D-H1S	Add 1 GHz external frequency reference input and output	Enables use of an external frequency reference to improve spectral purity	

1. All specified performance attributes of special options are tested at 25 °C (±3 °C) unless otherwise noted. For more information contact Agilent Technologies.

2. Option HSM cannot be ordered with the Option UNU.

Step 8. Choose instrument connector configuration and accessories

Note: Standard 20 GHz models include a 3.5 mm (m) RF output connector on the front panel.

Standard 31.8, 40, and 50 GHz models include a 2.4mm (m) RF output connector on the front panel.

Standard 67 GHz models include a 1.85 mm (m) RF output connector on the front panel.

Ordering number	Description	Purpose	Requires
Standard with E8257D-520	3.5 mm (f) to 3.5 mm (f)	Adapter set is included with the purchase of the 20 GHz models to connect to 3.5 mm (m).	
Standard with E8257D-540, E8257D-532, and E8257D-550	2.4 mm (f) to 2.4 mm (f)	Adapter set is included with the purchase of the 40 and 50 GHz models to connect to 2.4 mm (m).	
Standard with E8257D-567	1.85 mm (f) to 1.85 mm (f)	Adapter set is included with the purchase of the 67 GHz models to connect to 1.85 mm (m).	
E8257D-1ED ¹	Type-N (f) RF output connector	Type-N (m) to 3.5 mm (f) adapter set is included with the purchase of the type-N (m) connector.	
E8257D-1EM	Moves all front panel connectors to the rear panel	Simplifies cable management in rack mount environments.	
E8257D-C09	Moves all front panel connectors to the rear panel except the RF output connector	Simplifies cable management in rack mount environments.	
E8257D-1CM	Rackmount flange kit	Provides a flange kit to mount the signal generator into a standard EIA.	
E8257D-1CN	Front handle kit	Provides front handles for carrying the instrument (not for rack mount).	
E8257D-1CP	Rackmount flange and front handle kit	Provides front handles and a flange kit to mount the signal generator into a standard EIA 19" rack.	
9211-2656	Transit case	Provides a hard transit case to protect the instrument during transit.	
9211-7481	Transit case with wheels	Provides a hard transit case with wheels to protect the instrument during transit.	
8120-8806	Master/slave interface cable	Provides an interface cable to use two PSG's in master/slave mode.	
E8257D-S15	OML Inc. ² model number S15MS-AG	Millimeter source module, 50 GHz to 75 GHz at +8 dBm	E8257D-1EA
E8257D-S12	OML Inc. ² model number S12MS-AG	Millimeter source module, 60 GHz to 90 GHz at +6 dBm	E8257D-1EA
E8257D-S10	OML Inc. ² model number S10MS-AG	Millimeter source module, 75 GHz to 110 GHz at +5 dBm	E8257D-1EA
E8257D-S08	OML Inc. ² model number S08MS-AG	Millimeter source module, 90 GHz to 140 GHz at -2 dBm	E8257D-1EA
E8257D-S06	OML Inc. ² model number S06MS-AG	Millimeter source module, 110 GHz to 170 GHz at -6 dBm	E8257D-1EA
E8257D-S05	OML Inc. ² model number S05MS-AG	Millimeter source module, 140 GHz to 220 GHz at -12 dBm	E8257D-1EA
E8257D-S03	OML Inc. ² model number S03MS-AG	Millimeter source module, 220 GHz to 325 GHz at -25 dBm	E8257D-1EA

1. Option 1ED is not compatible with frequency options E8257D-532, -540, -550, or -567.

2. Oleson Microwave Labs, Inc.

Step 9. Choose documentation

Standard products ship with an installation guide and an electronic documentation set (CD-ROM). The CD-ROM includes: user's guide, installation guide, programming guide, service guide, SCPI command reference, error messages, key reference, data sheets, and additional product literature.

Ordering number	Description
E8257D-CD1	CD-ROM containing the English documentation set
E8257D-ABA	Printed copy of the English documentation set (user's guide, programming guide, SCPI reference, key reference, and data sheets)
E8257D-AB2	Printed copy of the Chinese User's Guide
E8257D-0BW	Printed copy of the assembly-level service guide
E8257D-UK6	Commercial calibration certificate and test data

Step 10. Choose a warranty plan

Ordering number	Description
Standard	1-year return-to-Agilent warranty and service
3 years	Extended return-to-Agilent warranty and service
5 years	Extended return-to-Agilent warranty and service

Step 11. Choose a calibration plan

There is no calibration plan standard with the E8257D. For a calibration plan, specify 3 or 5 years for one of the appropriate plans below when ordering. For more information, please visit: www.agilent.com/find/services_upfront_options.

Plan

Agilent Calibration Upfront Plan

Agilent Calibration Plus Upfront Plan

Z540 Calibration Upfront Plan

Step 12. Choose extended support life

This option provides a license, stored within the E8257D, to guarantee support of the unit for a longer period of time than standard. This is not a warranty; the unit's owner will have to pay for repairs, but Agilent will carry sufficient parts inventory and maintain test and calibration capability to service the licensed unit.

Ordering number	Description
E8257D-1EZ	Extends support life from 5 years to 10 years after product discontinuance

Upgradeable Options

Customer-installable and service center-installable upgrade kits are available for the E8257D signal generators. If an option is not mentioned that you would like to have upgraded on your PSG, please contact your local Agilent representative about our customized upgradeable options.

Choose customer-installable upgrade kits^{1,3}

Ordering number	Upgrade description	Information required with order
E8257DK-1E1 ²	Complete upgrade kit with installation guide	
E8257DK-1ED ²	Complete upgrade kit with installation guide	
E8257DK-1EH ²	Complete upgrade kit with installation guide	
E8257DK-UNX ²	Complete upgrade kit with installation guide	
E8257DK-UNW ²	Complete upgrade kit with installation guide	
E8257DK-007	License key (alphanumeric)	Customer's email address
E8257DK-1EA	License key (alphanumeric)	Customer's email address
E8257DK-UNT	License key (alphanumeric)	Customer's email address
E8257DK-UNU	License key (alphanumeric)	Customer's email address
E8257DK-1EZ	License key (alphanumeric)	Customer's email address

1. Latest firmware is recommended for upgrades. Firmware can be found at www.agilent.com/find/upgradeassistant.

2. Calibration required.

3. Calibration and installation costs are not included in the price of upgrade installation performed at a service center. Consult your sales representative for details..

Web Resources

For additional product information, visit: www.agilent.com/find/psg

For information about renting, leasing or financing Agilent's latest technology, visit: www.agilent.com/find/buyalternatives

For accessory information, visit: www.agilent.com/find/accessories

Related Agilent Literature

Agilent PSG Signal Generators

Brochure, Literature number 5989-1324EN

E8257D PSG Analog Signal Generator

Data Sheet, Literature number 5989-0698EN

E8267D PSG Vector Signal Generator

Data Sheet, Literature number 5989-0697EN

E8267D PSG Vector Signal Generator

Configuration Guide, Literature number 5989-1326EN

Agilent Software

Agilent software can be found by selecting the Software, Firmware, & Drivers embedded link located on each of the PSG E8257D and PSG E8267D web pages.



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