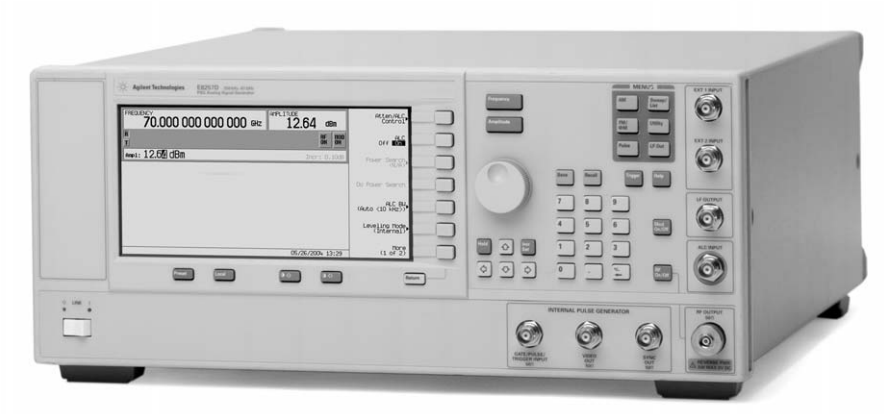
Agilent E8257D PSG Analog Signal Generator

Configuration Guide



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

Agilent Technologies

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	
E8257D-HHP	Higher output power below 3.2 GHz	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 frequency offsets ranging from 1 Hz to 10 kHz	Improves phase noise performance at carrier	
E8257D-1EH	Improved harmonics below 2 GHz frequencies below 2 GHz	Improves harmonic performance for carrier	
E8257D-HAR	Improved phase noise below 500 MHz	Improves phase noise for carrier frequencies below 500 MHz	

Step 6. Choose ramp sweep

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

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 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	Z5623AKxx Distribution Network (recommended)
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	E8257D-UNX

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. 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 2.4 mm (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 5063-9215	Rackmount flange kit	Provides a flange kit to mount the signal generator into a standard EIA.	
E8257D-1CN 5063-9228	Front handle kit	Provides front handles for carrying the instrument (not for rack mount).	
E8257D-1CP 5063-9222	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.	
E8257DS15	OML Inc. [2] model number S15MS-AG	Millimeter source module, 50 GHz to 75 GHz at +8 dBm	E8257D-1EA
E8257DS12	OML Inc. [2] model number S12MS-AG	Millimeter source module, 60 GHz to 90 GHz at +6 dBm	E8257D-1EA
E8257DS10	OML Inc. [2] model number S10MS-AG	Millimeter source module, 75 GHz to 110 GHz at +5 dBm	E8257D-1EA
E8257DS08	OML Inc. [2] model number S08MS-AG	Millimeter source module, 90 GHz to 140 GHz at –2 dBm	E8257D-1EA
E8257DS06	OML Inc. [2] model number S06MS-AG	Millimeter source module, 110 GHz to 170 GHz at –6 dBm	E8257D-1EA
E8257DS05	OML Inc. [2] model number S05MS-AG	Millimeter source module, 140 GHz to 220 GHz at –12 dBm	E8257D-1EA
E8257DS03	OML Inc. [2] model number S03MS-AG	Millimeter source module, 220 GHz to 325 GHz at –25 dBm	E8257D-1EA
Z5623AKxx	Distribution network	Distribute master LO signal to multiple signal generators for phase coherent applications	

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-ABD	Printed copy of the German User's Guide
E8257D-ABJ	Printed copy of the Japanese 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 and a calibration plan

Ordering number	Description
R-51B-001-C	Standard 1-year Return-to-Agilent warranty and service
R-51B-001-3C	1 year Return-to-Agilent warranty extended to 3 years
R-51B-001-5C	1 year Return-to-Agilent warranty extended to 5 years
R-50C-001-3	Return-to-Agilent Calibration Upfront Support Plan 3 year coverage
R-50C-016-3	Return-to-Agilent 17025 Calibration Upfront Support Plan 3 year coverage
R-50C-021-3	Return-to-Agilent Z540 Calibration Upfront Support Plan 3 year coverage
E8257D-UK6	Commercial calibration certificate and test data

Step 11. Choose start up assistance options

Ordering number	Description
PS-S10	Remote scheduled assistance 1-999 hours
PS-S20	Daily productivity assistance
PS-T10-ASG	Signal generator and source basics; .05 day, Max. 8 students on site
PS-X10	Custom services to be qualified by Agilent

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

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

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Product specifications and descriptions in this document subject to change without notice.

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