Agilent E8247/E8257C PSG CW and Analog Signal Generators

Configuration Guide

E8257C PSG analog signal generator

Agilent Technologies

Agilent Microwave PSG CW/Analog signal generators options

Step 1. Choose type of signal generator with frequency range (Mandatory)

Selection ✓	Ordering number	Description	Purpose	Not compatible	Recommended option(s)
❑	E8247C-520	PSG CW 250 kHz to 20 GHz	Provides an unmodulated continuous wave signal (can be used as a LO substitute)		
❑	E8257C-520	PSG analog 250 kHz to 20 GHz	Provides flexible analog modulation		
❑	E8247C-540	PSG CW 250 kHz to 40 GHz	Provides an unmodulated continuous wave signal (can be used as a LO substitute)		
❑	E8257C-540	PSG analog 250 kHz to 40 GHz	Provides flexible analog modulation		

Dynamic range

Step 2. Choose a step attenuator – option 1E1 (Not mandatory)

Selection ✓	Ordering number	Description	Purpose	Not compatible	Recommended option(s)
❑	E8247C-1E1	Adds output step attenuator down to −135 dBm	User's application requires power level below −20 dBm (standard)		
❑	E8257C-1E1	Adds output step attenuator down to −135 dBm	User's application requires power level below −20 dBm (standard)		

Highest output power

Step 3. Choose high output power - option 1EA (Not mandatory)

Selection ✓	Ordering number	Description	Purpose	Not compatible	Recommended option(s)
❑	E8247C-1EA	High RF output power	Provides +20 dBm RF output power at 20 GHz (typically +25 dBm) which eliminates the need for external amplifiers		
❑	E8257C-1EA	High RF output power	Provides +20 dBm RF output power at 20 GHz (typically +25 dBm) which eliminates the need for external amplifiers		

Lowest phase noise

Step 4. Choose enhanced phase noise – option UNR (Not mandatory)

Selection ✓	Ordering number	Description	Purpose	Not compatible	Recommended option(s)
❑	E8247C-UNR	Enhanced phase noise performance	User's application requires low close-in phase noise (i.e. –106 dBm (typical) at 1 kHz offset from 10 GHz carrier) approximately 24 dB improvement over standard		
❑	E8257C-UNR	Enhanced phase noise performance	User's application requires low close-in phase noise (i.e. –106 dBm (typical) at 1 kHz offset from 10 GHz carrier) approximately 24 dB improvement over standard		

Narrow pulse modulation

Step 5. Choose narrow pulse modulation - option 1E6 (Not mandatory)

Selection ✓	Ordering number	Description	Purpose	Not compatible	Recommended option(s)
❑	E8257C-1E6	Provides narrow pulse modulation below 3.2 GHz	Allows narrow pulses with fast rise & fall times of 10 ns from 500 MHz to the maximum frequency of the instrument		

Stimulus response capability with scalar network analyzer

Step 6. Choose ramp sweep – option 007 (Not mandatory)

Selection ✓	Ordering number	Description	Purpose	Not compatible	Recommended option(s)
❑	E8247C-007	Provides ramp sweep, scalar interface, Z-axis blanking, and markers	User's application requires stimulus response and utilizes 8757D scalar network analyzer		
❑	E8257C-007	Provides ramp sweep, scalar interface, Z-axis blanking, and markers	User's application requires stimulus response and utilizes 8757D scalar network analyzer		

Accessory options

Choose accessories or instrument connector configuration (Not mandatory)
Note: Standard 20 GHz models have a 3.5 mm (m) RF output connector on the front panel.
**   Standard 40 GHz models have a 2.4 mm (m) RF output connector on the front panel.**

Selection ✓	Ordering number	Description	Purpose	Not compatible	Recommended option(s)
❏	E8247C-1ED	Type-N (f) connector		E8247C-540	
❏	E8257C-1ED	Type-N (f) connector		E8257C-540	
❏	E8247C-1EM	Move all connectors to rear panel			
❏	E8257C-1EM	Move all connectors to rear panel			
❏	E8247C-1CM	Rack mount kit			
❏	E8257C-1CM	Rack mount kit			
❏	E8247C-1CN	Front handle kit			
❏	E8257C-1CN	Front handle kit			
❏	E8247C-1CP	Rack mount kit with front handle kit			
❏	E8257C-1CP	Rack mount kit with front handle kit			
❏	83554A	Millimeter-wave source module R-band	Banded solution for extending frequency from 26.5 to 40 GHz		E8247C-1EA or E8257C-1EA
❏	83555A	Millimeter-wave source module Q-band	Banded solution for extending frequency from 33 to 50 GHz		E8247C-1EA or E8257C-1EA
❏	83556A	Millimeter-wave source module U-band	Banded solution for extending frequency from 40 to 60 GHz		E8247C-1EA or E8257C-1EA
❏	83557A	Millimeter-wave source module V-band	Banded solution for extending frequency from 50 to 75 GHz		E8247C-1EA or E8257C-1EA
❏	83558A	Millimeter-wave source module W-band	Banded solution for extending frequency from 75 to 110 GHz		E8247C-1EA or E8257C-1EA
❏	8120-8806	Master/slave interface cable			

To add options to a product, use the following ordering scheme:

Model: E82x7C, where x = 4 or 5
Example model options: Option E8247C-520
Option E8257C-520

Manuals

Choose manuals (Not mandatory)
Standard products ship with electronic (CD-ROM) manuals. The CD-ROM includes a user's guide, programming and calibration guides, Intuilink and other product literature.

Selection ✓	Ordering number	Description	Purpose	Not compatible	Recommended option(s)
❑	E82x7C-ABA	English manual set (users, programming and calibration) (hardcopy – no CD)			
❑	E82x7C-ABD	German localized supplemental user's guide (hardcopy – no CD)			
❑	E82x7C-ABF	French localized supplemental user's guide (hardcopy – no CD)			
❑	E82x7C-ABJ	Japanese localized supplemental user's guide (hardcopy – no CD)			
❑	E82x7C-ABA	Korean localized supplemental user's guide (hardcopy – no CD)			
❑	E82x7C-CD1	CD-ROM documentation includes PDF files of user's guide, calibration guide, service guide, SCPI command reference guide, error messages, key reference guide, and additional product literature)			
❑	E82x7C-OBW	Adds the service manual (assembly level)			
❑	E82x7C-UK6	Commercial calibration certificate with test data			

Choose documentation (Not mandatory)
If you want to order the PSG's documentation separately

Selection ✓	Documentation part number	Title
❑	E8251-90259	Service Guide
❑	E8251-90251	User's Documentation on CD-ROM
❑	E8251-90252	Installation Guide
❑	E8251-90258	Calibration Guide
❑	E8251-90253	User's Guide
❑	E8251-90254	Key and Data Field Reference
❑	E8251-90255	Programming Guide
❑	E8251-90256	SCPI Command Reference
❑	E8251-90257	Error Messages

Warranty, service and calibration options

Choose a warranty plan (Not mandatory)
For warranty and service of 5 years, please order 60 months of R-51B (quantity = 60).
Standard warranty is 36 months.

Selection ✓	Ordering number	Description	Purpose	Not compatible	Recommended option(s)
❏	R-51B	Return-to-Agilent warranty and service plan			

Choose a calibration plan[1] (Not mandatory)
For 3 years, order 36 months of the appropriate calibration plan shown below.
For 5 years specify 60 months.

Selection ✓	Ordering number	Description	Purpose	Not compatible	Recommended option(s)
❏	R-50C-001	Standard calibration			
❏	R-50C-002	Standards compliant calibration			

Upgradeable options

If an option is not mentioned that you would like to have upgraded on your PSG (E8267/E8257/E8247C only), please contact your local Agilent representative about our customized upgradeable options.

Factory upgradeable options for the E8247C or E8257C signal generators.
To add upgradeable options to a model, use the following ordering scheme:

	Example
Model # F	E8247CF
Model # - option number	E8247C-1E1
Model # - option number	E8247C-1EA

Choose factory upgradeable options (Not mandatory)

Selection ✓	Upgradeable options	Send instrument back to the factory for upgrade
❏	E8247CF-1E1	Yes
❏	E8257CF-1E1	Yes
❏	E8247CF-1E6	Yes
❏	E8257CF-1E6	Yes
❏	E8247CF-1EA	Yes
❏	E8257CF-1EA	Yes
❏	E8247CF-1ED	Yes
❏	E8257CF-1ED	Yes
❏	E8247CF-1EM	Yes
❏	E8257CF-1EM	Yes
❏	E8247CF-UNR	Yes
❏	E8257CF-UNR	Yes
❏	E8247CF-007	Yes
❏	E8257CF-007	Yes

Customer and service center installable upgrade kits for the E8247C and E8257C
signal generators. To add upgradeable options to a model, use the following ordering scheme:

	Example
Model # K	E8257CK
Model # - option number	E8257C-1E1
Model # - option number	E8257C-1EA

Choose customer and service center installable upgrade kits (Not mandatory)
Service center can install upgrade kits for an additional cost.
Please consult your local Agilent representative for futher information.

Selection ✓	Upgradeable options	Upgrade kit will be sent to the customer for installation
❏	E8247CF-1EA	Yes
❏	E8257CF-1EA	Yes
❏	E8247CF-1E1[2]	Yes
❏	E8257CF-1E1[2]	Yes
❏	E8247CF-007	Yes
❏	E8257CF-007	Yes

1. Options not available in all countries.
2. User needs calibration capability when installing option 1E1. The factory and service centers have this capability.

Related Agilent literature

PSG Signal Generator Brochure
Literature number 5988-7538EN

Agilent E8247/57C
PSG CW and Analog Signal Generator Data Sheet
Literature number 5988-7454EN

Agilent E8267C
PSG Vector Signal Generator Data Sheet
Literature number 5988-6632EN

Agilent E8267C
PSG Vector Signal Generator
Configuration Guide
Literature number 5988-7541EN

PSG Series Product Note: Millimeter Head
Literature number 5988-2567EN

PSG Two-tone and Multi-tone Application Note
Application Note 1410
Literature number 5988-7689EN

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http://buyalternatives.tm.agilent.com/

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www.agilent.com/find/mta

Free Agilent software:

• Latest software and drivers for the PSG
    • Upgrade your PSG with the latest software enhancements

• PSG/ESG Download assistant software
    • Download waveforms directly from the MATLAB® environment into the signal generator for playback

• Agilent IntuiLink connectivity software
    • Connectivity software solution that links test and measurement instrument data to PC applications

The above free software can be found by selecting the Software, Firmware, & Drivers embedded link located on each of the PSG E8267C, PSG E8257C or PSG E8247C (where applicable). For more information visit:

www.agilent.com/find/psg

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