



# Agilent E8247/E8257C PSG CW and Analog Signal Generators

## Configuration Guide



E8257C PSG analog signal generator



**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)
<input type="checkbox"/>	E8247C-520	PSG CW 250 kHz to 20 GHz	Provides an unmodulated continuous wave signal (can be used as a LO substitute)		
<input type="checkbox"/>	E8257C-520	PSG analog 250 kHz to 20 GHz	Provides flexible analog modulation		
<input type="checkbox"/>	E8247C-540	PSG CW 250 kHz to 40 GHz	Provides an unmodulated continuous wave signal (can be used as a LO substitute)		
<input type="checkbox"/>	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)
<input type="checkbox"/>	E8247C-1E1	Adds output step attenuator down to -135 dBm	User's application requires power level below -20 dBm (standard)		
<input type="checkbox"/>	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)
<input type="checkbox"/>	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		
<input type="checkbox"/>	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)
<input type="checkbox"/>	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		
<input type="checkbox"/>	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)
<input type="checkbox"/>	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)
<input type="checkbox"/>	E8247C-007	Provides ramp sweep, scalar interface, Z-axis blanking, and markers	User's application requires stimulus response and utilizes 8757D scalar network analyzer		
<input type="checkbox"/>	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)
<input type="checkbox"/>	E8247C-1ED	Type-N (f) connector		E8247C-540	
<input type="checkbox"/>	E8257C-1ED	Type-N (f) connector		E8257C-540	
<input type="checkbox"/>	E8247C-1EM	Move all connectors to rear panel			
<input type="checkbox"/>	E8257C-1EM	Move all connectors to rear panel			
<input type="checkbox"/>	E8247C-1CM	Rack mount kit			
<input type="checkbox"/>	E8257C-1CM	Rack mount kit			
<input type="checkbox"/>	E8247C-1CN	Front handle kit			
<input type="checkbox"/>	E8257C-1CN	Front handle kit			
<input type="checkbox"/>	E8247C-1CP	Rack mount kit with front handle kit			
<input type="checkbox"/>	E8257C-1CP	Rack mount kit with front handle kit			
<input type="checkbox"/>	83554A	Millimeter-wave source module R-band	Banded solution for extending frequency from 26.5 to 40 GHz		E8247C-1EA or E8257C-1EA
<input type="checkbox"/>	83555A	Millimeter-wave source module Q-band	Banded solution for extending frequency from 33 to 50 GHz		E8247C-1EA or E8257C-1EA
<input type="checkbox"/>	83556A	Millimeter-wave source module U-band	Banded solution for extending frequency from 40 to 60 GHz		E8247C-1EA or E8257C-1EA
<input type="checkbox"/>	83557A	Millimeter-wave source module V-band	Banded solution for extending frequency from 50 to 75 GHz		E8247C-1EA or E8257C-1EA
<input type="checkbox"/>	83558A	Millimeter-wave source module W-band	Banded solution for extending frequency from 75 to 110 GHz		E8247C-1EA or E8257C-1EA
<input type="checkbox"/>	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)
<input type="checkbox"/>	E82x7C-ABA	English manual set (users, programming and calibration) (hardcopy – no CD)			
<input type="checkbox"/>	E82x7C-ABD	German localized supplemental user's guide (hardcopy – no CD)			
<input type="checkbox"/>	E82x7C-ABF	French localized supplemental user's guide (hardcopy – no CD)			
<input type="checkbox"/>	E82x7C-ABJ	Japanese localized supplemental user's guide (hardcopy – no CD)			
<input type="checkbox"/>	E82x7C-ABA	Korean localized supplemental user's guide (hardcopy – no CD)			
<input type="checkbox"/>	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)			
<input type="checkbox"/>	E82x7C-OBW	Adds the service manual (assembly level)			
<input type="checkbox"/>	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
<input type="checkbox"/>	E8251-90259	Service Guide
<input type="checkbox"/>	E8251-90251	User's Documentation on CD-ROM
<input type="checkbox"/>	E8251-90252	Installation Guide
<input type="checkbox"/>	E8251-90258	Calibration Guide
<input type="checkbox"/>	E8251-90253	User's Guide
<input type="checkbox"/>	E8251-90254	Key and Data Field Reference
<input type="checkbox"/>	E8251-90255	Programming Guide
<input type="checkbox"/>	E8251-90256	SCPI Command Reference
<input type="checkbox"/>	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)
<input checked="" type="checkbox"/>					
<input type="checkbox"/>	R-51B	Return-to-Agilent warranty and service plan			

### Choose a calibration plan<sup>1</sup> (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)
<input checked="" type="checkbox"/>					
<input type="checkbox"/>	R-50C-001	Standard calibration			
<input type="checkbox"/>	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
<input checked="" type="checkbox"/>		
<input type="checkbox"/>	E8247CF-1E1	Yes
<input type="checkbox"/>	E8257CF-1E1	Yes
<input type="checkbox"/>	E8247CF-1E6	Yes
<input type="checkbox"/>	E8257CF-1E6	Yes
<input type="checkbox"/>	E8247CF-1EA	Yes
<input type="checkbox"/>	E8257CF-1EA	Yes
<input type="checkbox"/>	E8247CF-1ED	Yes
<input type="checkbox"/>	E8257CF-1ED	Yes
<input type="checkbox"/>	E8247CF-1EM	Yes
<input type="checkbox"/>	E8257CF-1EM	Yes
<input type="checkbox"/>	E8247CF-UNR	Yes
<input type="checkbox"/>	E8257CF-UNR	Yes
<input type="checkbox"/>	E8247CF-007	Yes
<input type="checkbox"/>	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 further information.

Selection	Upgradeable options	Upgrade kit will be sent to the customer for installation
<input checked="" type="checkbox"/>		
<input type="checkbox"/>	E8247CF-1EA	Yes
<input type="checkbox"/>	E8257CF-1EA	Yes
<input type="checkbox"/>	E8247CF-1E1 <sup>2</sup>	Yes
<input type="checkbox"/>	E8257CF-1E1 <sup>2</sup>	Yes
<input type="checkbox"/>	E8247CF-007	Yes
<input type="checkbox"/>	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

For further information about renting, leasing and/or financing Agilent's latest technology, visit

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

When you are looking for an accessory, you need to find it fast. Agilent Technologies has designed this site to help you quickly find the accessory that is just right for your job:

[www.agilent.com/find/mta](http://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](http://www.agilent.com/find/psg)

### **Agilent Technologies' Test and Measurement Support, Services, and Assistance**

Agilent Technologies aims to maximize the value you receive, while minimizing your risk and problems. We strive to ensure that you get the test and measurement capabilities you paid for and obtain the support you need. Our extensive support resources and services can help you choose the right Agilent products for your applications and apply them successfully. Every instrument and system we sell has a global warranty. Support is available for at least five years beyond the production life of the product. Two concepts underlie Agilent's overall support policy: "Our Promise" and "Your Advantage."

#### **Our Promise**

Our Promise means your Agilent test and measurement equipment will meet its advertised performance and functionality. When you are choosing new equipment, we will help you with product information, including realistic performance specifications and practical recommendations from experienced test engineers. When you use Agilent equipment, we can verify that it works properly, help with product operation, and provide basic measurement assistance for the use of specified capabilities, at no extra cost upon request. Many self-help tools are available.

#### **Your Advantage**

Your Advantage means that Agilent offers a wide range of additional expert test and measurement services, which you can purchase according to your unique technical and business needs. Solve problems efficiently and gain a competitive edge by contracting with us for calibration, extra-cost upgrades, out-of-warranty repairs, and onsite education and training, as well as design, system integration, project management, and other professional engineering services. Experienced Agilent engineers and technicians worldwide can help you maximize your productivity, optimize the return on investment of your Agilent instruments and systems, and obtain dependable measurement accuracy for the life of those products.

#### **Agilent T&M Software and Connectivity**

Agilent's Test and Measurement software and connectivity products, solutions and developer network allows you to take time out of connecting your instruments to your computer with tools based on PC standards, so you can focus on your tasks, not on your connections. Visit [www.agilent.com/find/connectivity](http://www.agilent.com/find/connectivity) for more information.

**By internet, phone, or fax, get assistance with all your test & measurement needs**

#### **Phone or Fax**

**United States:**  
(tel) 800 452 4844

**Canada:**  
(tel) 877 894 4414  
(fax) 905 282 6495

**China:**  
(tel) 800 810 0189  
(fax) 800 820 2816

**Europe:**  
(tel) (31 20) 547 2323  
(fax) (31 20) 547 2390

**Japan:**  
(tel) (81) 426 56 7832  
(fax) (81) 426 56 7840

#### **Korea:**

(tel) (82 2) 2004 5004  
(fax) (82 2) 2004 5115

**Latin America:**  
(tel) (305) 269 7500  
(fax) (305) 269 7599

**Taiwan:**  
(tel) 0800 047 866  
(fax) 0800 286 331

#### **Other Asia Pacific**

**Countries:**  
(tel) (65) 6375 8100  
(fax) (65) 6836 0252

Email:  
tm\_asia@agilent.com

#### **Online Assistance:**

[www.agilent.com/find/assist](http://www.agilent.com/find/assist)

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

© Agilent Technologies, Inc. 2002

Printed in USA, September 20, 2002

5988-7879EN



## **Agilent Email Updates**

[www.agilent.com/find/emailupdates](http://www.agilent.com/find/emailupdates)

Get the latest information on the products and applications you select.

MATLAB® is a U.S. registered trademark of The Math Works, Inc.



**Agilent Technologies**