

# Agilent 85726B

## Portable PHS Transmitter Tester

### Product Overview

**Agilent Technologies 85726B PHS Measurements Personality and Options 151 & 160 for the Agilent 8590 E-Series Spectrum Analyzers**

The performance you need to test your PHS personal and cell station to RCR STD-28' at a surprisingly low price.

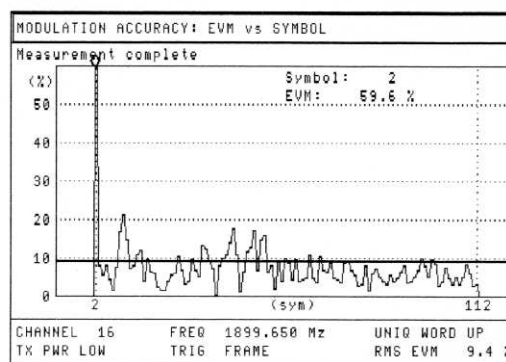
Now...

**Modulation accuracy measurements**

**Faster measurement speed**

If your job is to design, manufacture, install, or service Personal Handy Phone System (PHS) transmitters, you know that testing them provides some complex measurement challenges. Until now it has been a difficult process requiring a range of expensive test equipment.

With the 85726B measurements personality and a low cost 8590 E-series spectrum analyzer, it's easy to make key transmitter measurements for testing PHS personal and cell stations, and your test equipment investment is minimized.



PHS  
I-Q  
PATTERN  
8 POINT  
CONSTLN  
EVM  
vs SYM  
SINGLE  
CONT  
SAV MEAS  
ON OFF  
Demod  
Main  
RT



**Agilent Technologies**  
Innovating the HP Way

# Custom Transmitter Testing – One Package, One Low Price

## Quick, Easy, One-Button Measurements

With the push of a button, perform transmitter tests simply and efficiently from easy-to-follow screen menus. The PHS transmitter tester does the work for you. It automatically sets the analyzer controls and performs calculations required to test to RCR STD-28.

## High-Speed Production Testing

Reduce costs with increased test throughput and improved accuracy. Since all of the PHS measurements are programmable, each is executed with a single command. We've written the code for you.

Reducing test times in an automated manufacturing environment is an important reason to use Agilent's test personalities. Toward that end, the 85726B achieves as much as a 50% reduction in test times as compared to the 85726A.

## Reliable Accuracy

Measure transmitters with near power-meter accuracy. Option 052 provides absolute amplitude accuracy for the PHS band to within  $\pm 0.5\text{dB}$ !

## Product Development and Production Troubleshooting

Evaluate your design and thoroughly troubleshoot failures. Measurements can be run continuously, allowing real-time equipment adjustments and troubleshooting. Waveform and graphical results add key visual information to numerical results. Pass/fail messages draw attention quickly to system problems. Test limits can be modified from the front panel, external keyboard, or computer so that you can set your own test goals.

## Fit an Analyzer to Your Needs

Offering high quality spectrum analysis with customized measurements, the 8590 E-series provides the right combination of power and portability.

## ISO 9000

The 8590 E-series spectrum analyzer is manufactured in an ISO 9001 registered facility in concurrence with Agilent's quality commitment.

The 85726B PHS measurements personality provides the following transmitter tests:

RCR <sup>1</sup> -STD 28 Reference			
Test Name	Technical Requirement	Measurement Method	MKK <sup>2</sup> Measurement Method
Antenna power	3.4.2.1	7.1.4	no
Adjacent channel power	3.4.2.3	7.1.8	yes
Burst ramp-up and ramp-down power vs. time	3.4.2.4	7.1.6	NA
Carrier-off-time leakage power	3.4.2.5	7.1.5	yes
Spurious emission	3.4.2.6	7.1.2	yes
Occupied bandwidth	3.4.2.7	7.1.3	yes
Frequency stability	3.4.2.8	7.1.1.2	NA
Modulation accuracy	3.4.2.9	7.1.7	NA
Receiver spurious	3.4.3.7	7.2.5	yes

NA = not applicable

1 Research and Development Center for Radio Systems standard for Personal Handy Phone System, Version 1, issued December 20th, 1993

2 Musen setsubi Kensa Mentei-kyoukai (Radio Equipment Inspection and Certification Institute)

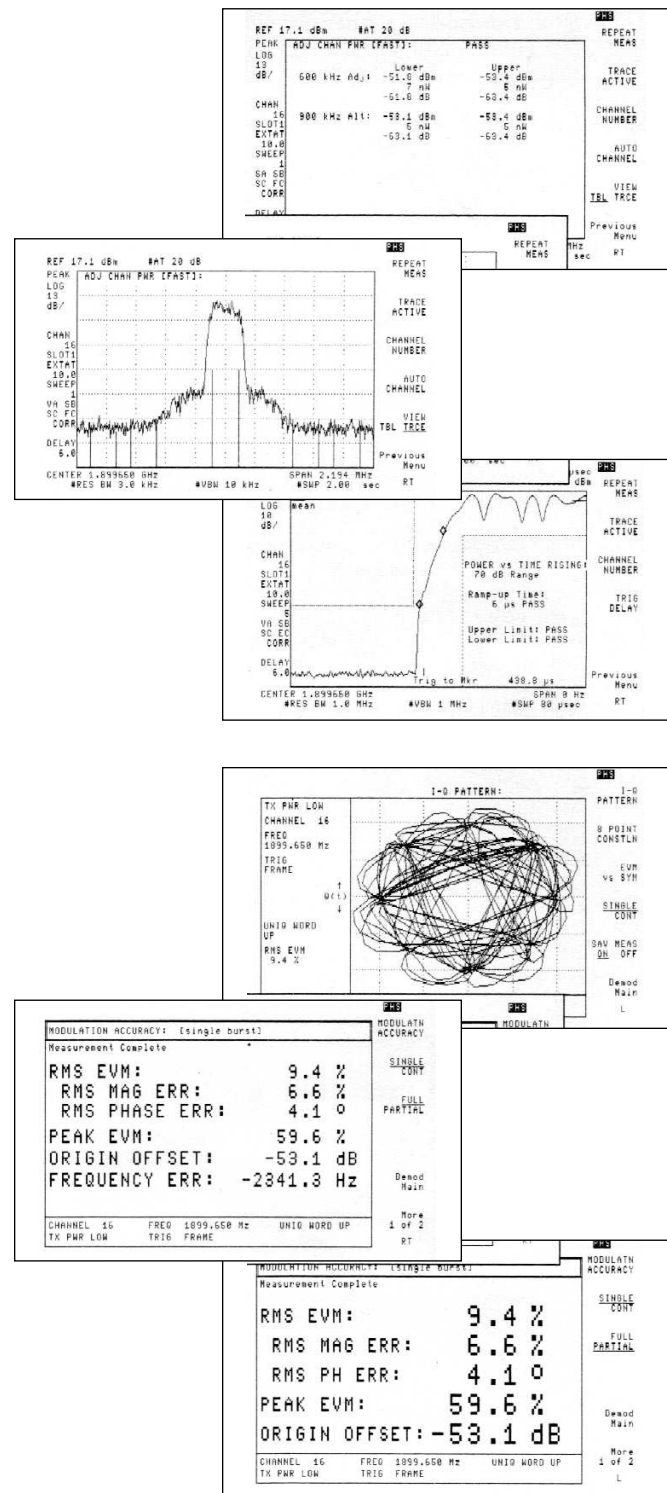
# Comprehensive Transmitter Measurements at the Press of a Button

## Power, Frequency and Timing Measurements

- Tuning by channel number
- Automatic channel search
- Antenna power
- Carrier off-time leakage power
- Channel power
- Occupied bandwidth
- Adjacent channel leakage power
- Burst ramp-up and ramp-down power vs. time
- Transmitter spurious and harmonic emissions
- Receiver spurious and harmonic emissions
- Frequency-band monitoring

## Modulation Accuracy Measurements

- RMS error vector magnitude (EVM)
- EVM vs. symbol
- RMS magnitude error
- RMS phase error
- Peak EVM
- I-Q origin offset
- Carrier frequency error



The performance you need to test to RCR STD-28

## Ordering Information\*

**Recommended Configurations: 8593E, 8594E, 8595E, or 8596E**  
**Portable Spectrum Analyzer<sup>1</sup>**

**Option BD4** Personal handyphone system

This option includes:

**Option 004** Precision frequency reference<sup>2</sup>

**Option 052** Improved amplitude accuracy for PHS band<sup>3</sup>

**Option 105** Time-gated spectrum analysis<sup>4</sup>

**Option 151** Fast ADC and digital demodulator<sup>5</sup>

**Option 160** PDC/PHS/NADC/CDMA firmware for Option 151<sup>5</sup>

**85726B** PHS measurements personality

*If modulation accuracy measurements are not needed<sup>6</sup>*

**Option 101** Fast time domain sweeps

**85902A** Burst carrier trigger<sup>7</sup>

### **Related spectrum analyzer options:**

**Option 010** Built-in tracking generator

**Option 040** Front panel protective cover

**Option 041** GPIB plus parallel printer interface

**Option 042** Protective soft carrying case

**Option 043** RS-232 plus parallel printer interface

Note: Retrofit kits are available for ALL of the listed 8590 E-series options.

### **Related products:**

**11770A** Link measurement personality

**85712D** EMC measurements personality

**85713A** Digital radio measurements personality

**85714A** Scalar measurements personality

**85715B** GSM900 transmitter measurements personality

**85717A** CT2-CAI measurements personality

**85718B** NADC-TDMA measurements personality

**85719A** Noise figure measurements personality

**85722B** DCS1800 transmitter measurements personality

**85722B#H19** DCS1900 measurements personality

**85723A** DECT measurements personality

**85720C** PDC measurements personality

**85725B** CDMA measurements personality

**8920DT** Digital RF communications system for PHS and PDC

**778D** Dual directional coupler

**8498A** Option 030 fixed 30 dB attenuator

**11667A** Power splitter, dc-18 GHz

**87405A** Preamp, 0.01-3 GHz, 22 dB gain, 6.5 dB NF

**85901A** Portable ac power source

**C1405B** Option ABA keyboard

**C1405-60015** Keyboard connector adapter

\* Most options are available for an additional charge.

1. The 85726B is supported on the 8590 E-series with firmware date coded 940822 or later. 8590 E-series spectrum analyzers conform to the environmental specifications of MIL-T-28800, Class 5.

2. Required unless 10 MHz external precision frequency reference is available

3. Provides amplitude accuracy to  $\pm 0.5$  dB

4. Option 105 is required if the gated method (RCR or MKK) carrier-off-time leakage power measurement is used.

5. If modulation accuracy measurements are NOT needed, Options 151 and 160 are not required.

6. If Options 151 and 160 are not ordered, Option 101 and 85902A are required for proper operation of the 85726B for burst power vs. time, carrier-off-time leakage power and spurious measurements.

7. The 85902A is recommended for spurious measurements when Options 151 and 160 are not installed.

## **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 on-site education and training, as well as design, system integration, project management, and other professional 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.

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