Agilent 85902A

Burst Carrier Trigger for Digital Wireless Communications

Product Overview

Simplify your test set-up for time-dependent measurements on burst carrier transmitters

Take the misery out of performing transmitter tests such as power versus time and adjacent channel power. No longer do you need to search for a timing signal or waste your efforts on homemade trigger circuits. Never again will you have to wire into your radio-under-test.

The Agilent Technologies 85902A burst carrier trigger provides a TTL timing reference that allows your spectrum analyzer to reliably trigger directly off the RF signal when performing transmitter tests. With an input range of 60 dB and a separate built-in preamplifier for greater sensitivity, you have the ability to trigger on a wide range of transmitter power levels.

Rugged, reliable, repeatable

Designed under Agilent's stringent quality and environmental standards, the 85902A gives you the precision and repeatability you want for R&D and manufacturing of transmitters, with the ruggedness and reliability you need for installation and field service.

Works with ALL digital communication formats

The 85902A burst carrier trigger works with NADC-TDMA, E-TDMA, JDC, GSM, DCS-1800, CT2-CAI, DECT, PHP, and CDMA digital communications formats. You can use the burst carrier trigger with the Agilent 8590 and 8560 series digital communications analyzers. Measurement personalities for the 8590 series analyzers are available in NADC-TDMA, JDC, DCS-1800, CT2-CAI, GSM, and DECT formats to give your analyzer even more measurement power and flexibility.

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Specifications

Specifications describe the instrument's fully warranted performance. **Characteristics** provide information about non-warranted instrument performance in the form of nominal values.

Electrical characteristics

Trigger	
Frequency range	10 MHz to 2000 MHz
Burst	
Burst RF rate	25 Hz to 500 Hz
Minimum burst width	100 µs
Trigger output	
Delay	<20 µs for RF input > –25 dBm
Jitter	<2 µs (on a consistent burst signal)
Level	TTL/CMOS logic level
RF input amplitude range	–30 dBm to +30 dBm
Preamplifier	
Frequency range	10 MHz to 2000 MHz
Gain versus frequency	
10 to 350 MHz	>18 dB
350 to 1000 MHz	>16 dB
1000 to 2000 MHz	>12 dB
Noise figure	<10 dB
Output power at 1 dB gain compression	>+10 dBm

Front and rear panel characteristics

Front panel inputs and outputs	
Preamp in	50 Ohm, BNC female
Preamp out	50 Ohm, BNC female
RF input	50 Ohm, BNC female
Rear panel outputs and features	
Trigger out	TTL/CMOS, BNC female
Input trigger threshold adjustment	Screwdriver adjustable potentiometer
Trigger indicator	LED, red

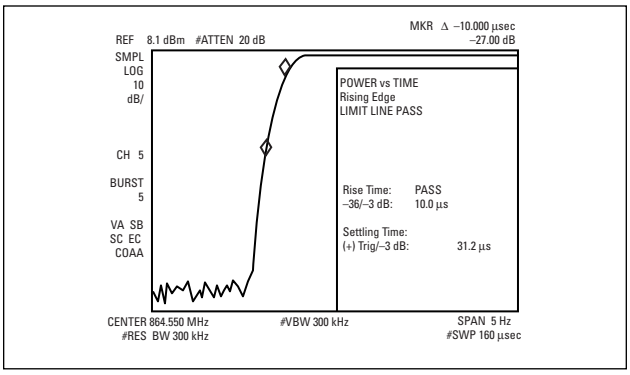
Environmental

Temperature range	
Operating	0 °C to +55 °C
Storage	–40 °C to +75 °C
Humidity	95% relative humidity (MIL-T28800E class 3)

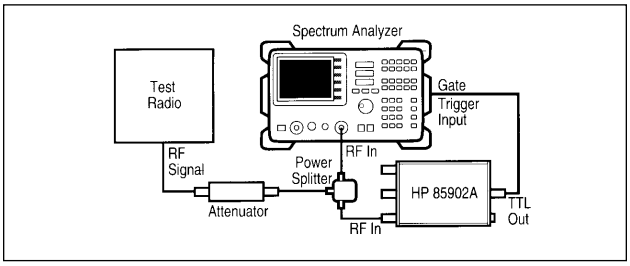
Power requirements[1]

+15 Vdc at 100 mA
–12.6 Vdc at 40 mA

Dimensions (nominal)	
Length	150 cm (6 in.), width: 80 cm (3 in.)
Height	30 cm (1 in.)
Weight (nominal)	341 g (12 oz)



Example of CT2-CAI transmitter rise time test using the Agilent 85902A Burst Carrier Trigger accessory



A typical measurement set-up for burst carrier transmitters using the Agilent 85902A trigger accessory

Ordering information

85902A burst carrier trigger (includes 122 mm long and 23 mm long BNC cables, operating/service manual)

Option 001 adds mounting flanges
Option OBN extra manual

Recommended Spectrum Analyzers

8590A series with option 105
8590E series with option 105
8560E series

Mobile communication measurement personalities for Agilent 8590 series spectrum analyzers

85715B GSM
85717A CT2-CAI
85718B NADC-TDMA
85720C PDC
85722B DCS-1800
85723A DECT
85725B CDMA
85726B PHS

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