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Willtek 4200S

AM Signal Generator Option



Allows mid-level service on GSM mobile phones

Offers competitive advantage through standardised tests

Willtek 4200S Mobile Service Tester enables service technicians to perform mid-level service on GSM mobile phones. Now, technicians can achieve the next level in testing technology with the 4270 AM Signal Generator option. This option provides functionality normally offered by standard signal generators, but can be easily and fully integrated with the Mobile Tester 4200S. Combined with the standard suite of tests for GSM mobiles, mobile repair centres will gain competitive advantage through faster repair times and higher quality output.

The 4270 AM Signal Generator option also enables technicians to meet specific manufacturer testing requirements (Nokia, for example, requires an AM suppression test).

Why AM suppression?

Willtek 4270 AM Signal Generator option tests a mobile phone's behavior when a strong interfering (AM-modulated) signal is present at a distance of 10 MHz from the normal carrier (that is the traffic channel). The interfering signal provided by the Signal Generator is used to tune a set of internal digital filter parameters.

How does Willtek AM Signal Generator work?

A mobile phone is operated in a synchronous or test mode. When a mobile phone picks up an AM-modulated signal, it can interfere with the GSM signal. To measure this, only an interfering signal on frequency f_{AM} is used. In the receiving channel on frequency f_r there is no signal present. The distance between f_{AM} and f_r is 10 MHz. The mobile phone is then performing an RSSI measurement, which should not exceed a predefined limit.

The information in the following table covers only data relevant for the 4270 AM Signal Generator option of the Willtek 4200S GSM test set. Please refer to the 4200S Mobile Service Tester data sheet for more details.

Specifications

RF Generator

Frequency range	
GSM 900, E-GSM	925 to 960 MHz
GSM 1800	1805 to 1880 MHz
GSM 1900	1930 to 1990 MHz

Output level range

GSM 900	-21 dBm to -40 dBm
GSM 1800/1900	-24 dBm to -40 dBm
Resolution	0.1 dB

AM Modulation

Modulation frequency	1 to 10 kHz
Modulation frequency resolution	1 kHz
Modulation depth	50 to 90%
Modulation depth resolution	1%
Absolute Accuracy	±4%

Ordering details

4201S AM Signal Generator package (incl. Option)	M 101 351
4202S AM Signal Generator package (incl. Option)	M 101 352
4270 AM Signal Generator Option	M 248 507
4271 AM Signal Generator Upgrade	M 248 506

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Willtek Communications GmbH
85737 Ismaning
Germany
Tel: +49 (0) 89 996 41-0
Fax: +49 (0) 89 996 41-440
info@willtek.com

Willtek Communications Inc.
Indianapolis
USA
Tel: +1 317 595 2021
Tel: +1 866 willtek
Fax: +1 317 595 2023
willtek.us@willtek.com

Willtek Communications Ltd.
Chessington
United Kingdom
Tel: +44 (0) 20 8408 5720
Fax: +44 (0) 20 8397 6286
willtek.uk@willtek.com

Choose chan. and level

Channel	0061
Frequency (MHz)	947.2
BS Power Level (dBm)	-30.0
Pre-attenuation (dB)	001.5
Modulation	Off GMSK <input checked="" type="checkbox"/> AM
AM Mod. Freq. (kHz)	1
AM Mod. Depth (%)	83

Note:
If Modulation = GMSK is selected, the resulting frequency is channel frequency + 67 kHz

1900

4200 RF Generator screen with AM Signal Generator

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