

MU368060A

AWGN Unit

(For MG3681A Digital Modulation Signal Generator)



Supports IMT2000 System Receiver Test

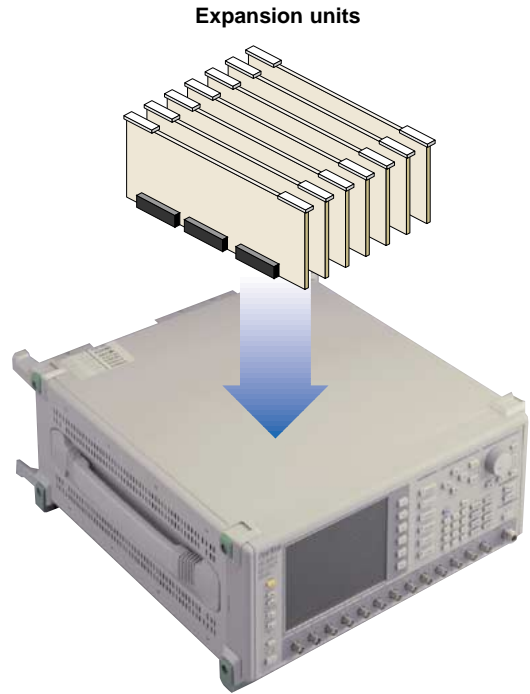
The 3GPP and 3GPP2 recommended dynamic range test for W-CDMA and CDMA2000 receivers requires AWGN (Additive White Gaussian Noise) to be mixed on the wanted modulated signal. When the MU368060A AWGN Unit is installed in the MG3681A Digital Modulation Signal Generator, AWGN can be generated at real time.

When both the MU368040A CDMA Modulation Unit that installed MX368041B W-CDMA Software is mounted, one MG3681A can be utilized as a wanted signal source (W-CDMA modulating), an interfering signal source (W-CDMA modulating, CW) and an AWGN source.

Furthermore, since mixed Uplink W-CDMA signal and AWGN internally can be outputted by setting the C/N in MX368041B, the base station receiver dynamic range test is realizable by one MG3681A.

When both the MU368030A Universal Modulation Unit that installed MX368033A CDMA2000 1xEV-DO Signal Generation Software or MX368031A Device Test Signal Generation Software is mounted, one MG3681A can be utilized as a wanted signal source (CDMA2000 modulating), an interfering signal source (CDMA2000 modulating, CW) and an AWGN source.

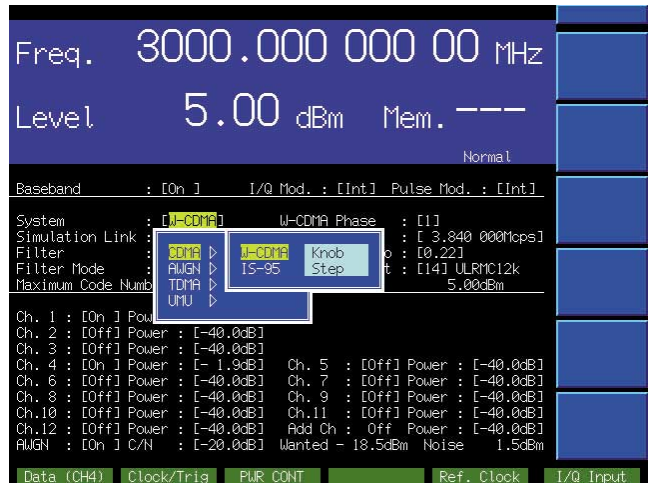
Furthermore, when both MU368040A CDMA Modulation unit are also mounted, since mixed CDMA2000 signal and AWGN internally can be outputted by setting the C/N in MX368033A or MX368031A, the base station receiver dynamic range test is realizable by one MG3681A.



• Configuration of Communication System Software and Expansion Unit

| Communication system | Applicable software | Expansion unit |
|---------------------------|---------------------|----------------------------|
| W-CDMA (3GPP) CDMA2000 | — | <p>MU368060A AWGN Unit</p> |

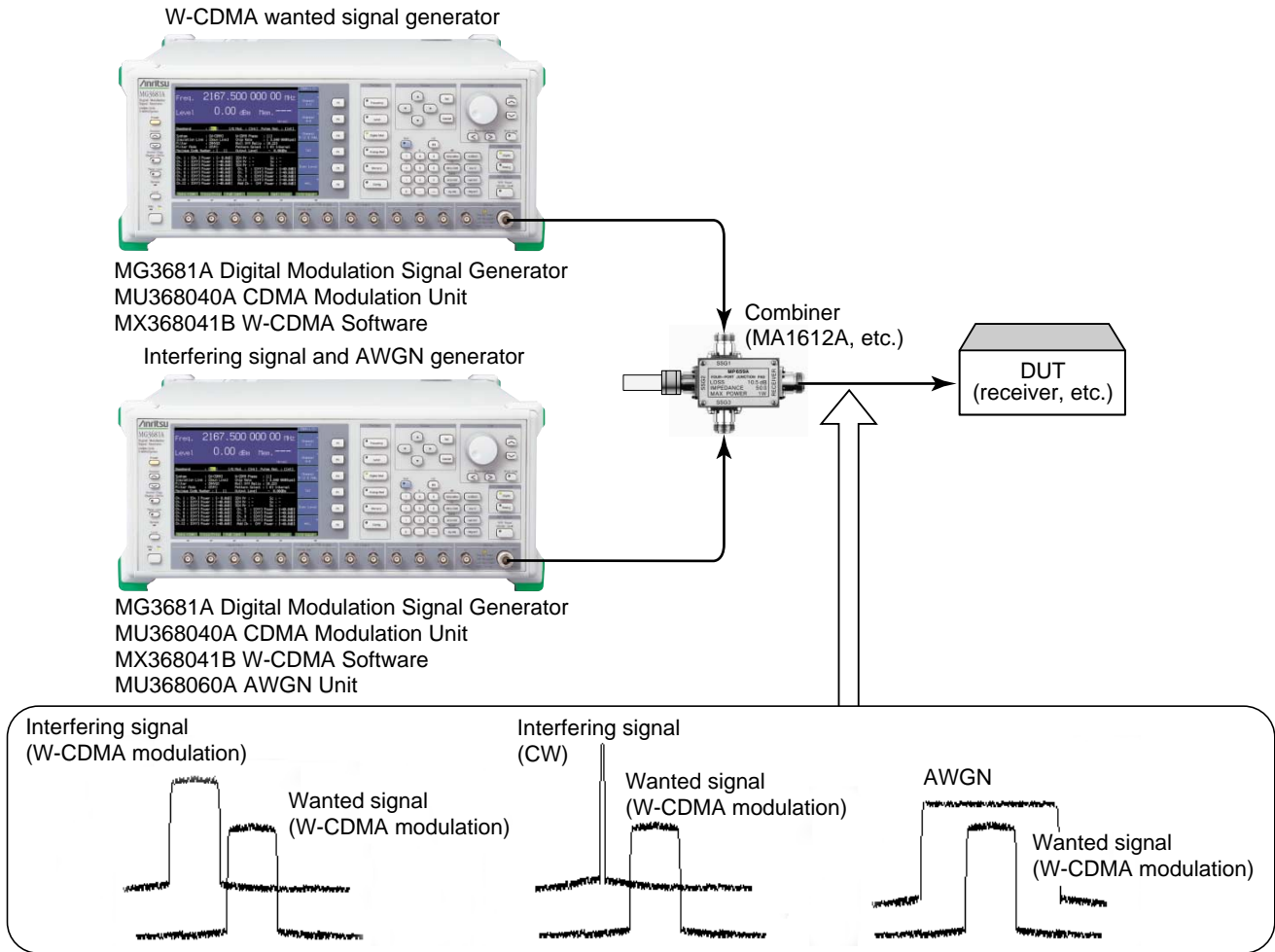
The expansion unit is installed in the MG3681A Digital Modulation Signal Generator mainframe.



Application Examples

• 3GPP Recommended Dynamic Range and Interference Tests

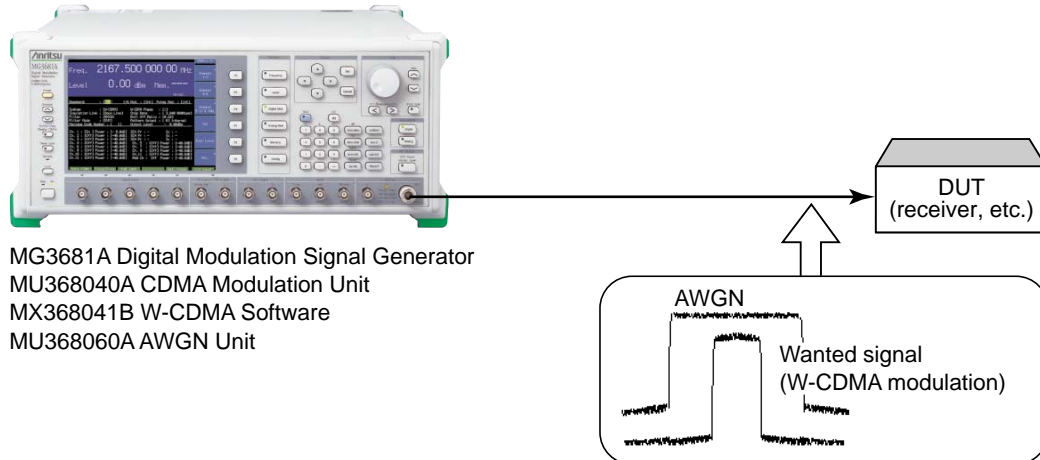
This test does not require a separate signal generator for both interfering signal and AWGN.



• Dynamic Range Test by mixed Uplink W-CDMA signal and AWGN internally

Since AWGN is mixed digitally, the C/N ratio accuracy and stability are excellent.

Signal generator for wanted signal and AWGN



Specifications

| | |
|-----------------|---|
| Frequency range | 100 to 3000 MHz |
| RF output | Level range: -143 to -3 dBm (total power at W-CDMA and AWGN internal addition*1) Level accuracy: Within ± 3.0 dB compared with CW output level. *1920 to 2170 MHz, noise bandwidth: 7.68 MHz, -3 dBm, ALC on, continuous mode: off |
| Noise | Probability distribution: Gaussian distribution Crest factor: ≥ 14 dB (1920 to 2170 MHz, -3 dBm, ALC on, continuous mode: off) Bandwidth: 1.5 to 16 MHz *2 Calculated bandwidth: 10% to 80% of noise bandwidth setting In-band power calculation accuracy (Accuracy of in-band calculated power ratio to total power of RF output) : * 18° to 35°C ± 0.6 dB (noise bandwidth setting: 1.5 to 4 MHz, typical) ± 0.6 dB (1920 to 2170 MHz, noise bandwidth setting: 4 to 8 MHz) ± 2.0 dB (1920 to 2170 MHz, noise bandwidth setting: 8 to 16 MHz) C/N setting range*1: -30.0 to -20.0 dB (resolution: 0.2 dB), -19.9 to -8.0 dB (resolution: 0.1 dB) |

*1: AWGN internal addition function can be used only at uplink when the MU368040A and MX368041B are both installed in the MG3681A.

*2: Set a chip rate of x 1.5 or x 2 at AWGN internal addition

Ordering Information

Please specify the model/order number, name, and quantity when ordering.

| Model/Order No. | Name |
|------------------------------|---|
| MG3681A *1 | Main frame Digital Modulation Signal Generator (250 kHz to 3000 MHz) |
| MU368060A | Expansion unit AWGN Unit |
| W1955AE | Standard accessory MU368060A operation manual: 1 copy |
| MU368060A-90 MU368060A-91 | Maintenance service Extended three year warranty service Extended five year warranty service |

| Model/Order No. | Name |
|--|---|
| MU368030A *1 MU368040A *1 | Expansion unit Universal modulation Unit CDMA Modulation Unit |
| MX368031A *1 MX368033A *1 MX368041B *1 | Software Device Test Signal Generation Software (for MU368030A) CDMA2000 1xEV-DO Signal Generation Software (for MU368030A) W-CDMA Software (for MU368040A) |

*1: For details of the MG3681A, MU368030A, MU368040A, MX368031A, MX368033A and MX368041B, refer to the relevant catalogs



Specifications are subject to change without notice.

ANRITSU CORPORATION

1800 Onna, Atsugi-shi, Kanagawa, 243-8555 Japan
Phone: +81-46-223-1111
Fax: +81-46-296-1264

● U.S.A.

ANRITSU COMPANY

North American Region Headquarters

1155 East Collins Blvd., Richardson, TX 75081, U.S.A.
Toll Free: 1-800-ANRITSU (267-4878)
Phone: +1-972-644-1777
Fax: +1-972-671-1877

● Canada

ANRITSU ELECTRONICS LTD.

700 Silver Seven Road, Suite 120, Kanata,
ON K2V 1C3, Canada
Phone: +1-613-591-2003
Fax: +1-613-591-1006

● Brasil

ANRITSU ELETRÔNICA LTDA.

Praca Amadeu Amaral, 27 - 1 andar
01327-010 - Paraiso, Sao Paulo, Brazil
Phone: +55-11-2283-2511
Fax: +55-21-2886940

● U.K.

ANRITSU LTD.

200 Capability Green, Luton, Bedfordshire LU1 3LU, U.K.
Phone: +44-1582-433280
Fax: +44-1582-731303

● Germany

ANRITSU GmbH

Grafenberger Allee 54-56, 40237 Düsseldorf, Germany
Phone: +49-211-96855-0
Fax: +49-211-96855-55

● France

ANRITSU S.A.

9, Avenue du Québec Z.A. de Courtabœuf 91951 Les
Ulis Cedex, France
Phone: +33-1-60-92-15-50
Fax: +33-1-64-46-10-65

● Italy

ANRITSU S.p.A.

Via Elio Vittorini, 129, 00144 Roma EUR, Italy
Phone: +39-06-509-9711
Fax: +39-06-502-24-25

● Sweden

ANRITSU AB

Botvid Center, Fittja Backe 1-3 145 84 Stockholm,
Sweden
Phone: +46-853470700
Fax: +46-853470730

● Singapore

ANRITSU PTE LTD.

10, Hoe Chiang Road #07-01/02, Keppel Towers,
Singapore 089315
Phone: +65-6282-2400
Fax: +65-6282-2533

● Hong Kong

ANRITSU COMPANY LTD.

Suite 923, 9/F., Chinachem Golden Plaza, 77 Mody
Road, Tsimshatsui East, Kowloon, Hong Kong, China
Phone: +852-2301-4980
Fax: +852-2301-3545

● P. R. China

ANRITSU COMPANY LTD.

Beijing Representative Office

Room 1515, Beijing Fortune Building, No. 5 North Road,
the East 3rd Ring Road, Chao-Yang District
Beijing 100004, P.R. China
Phone: +86-10-6590-9230

● Korea

ANRITSU CORPORATION

8F Hyun Juk Bldg. 832-41, Yeoksam-dong,
Kangnam-ku, Seoul, 135-080, Korea
Phone: +82-2-553-6603
Fax: +82-2-553-6604~5

● Australia

ANRITSU PTY LTD.

Unit 3/170 Forster Road Mt. Waverley, Victoria, 3149,
Australia
Phone: +61-3-9558-8177
Fax: +61-3-9558-8255

● Taiwan

ANRITSU COMPANY INC.

7F, No. 316, Sec. 1, NeiHu Rd., Taipei, Taiwan
Phone: +886-2-8751-1816
Fax: +886-2-8751-1817

030617