

Precaution of Interference caused from poor Isolation outside MT8820B/C

MT8820B/C

Radio Communication Analyzer

Precaution of Interference caused from poor Isolation outside MT8820B/C

The precautions of the interference caused from poor isolation outside MT8820B/C, i.e. between UEs and RF cables, should be considered, Especially, in case of using MT8820B/C Parallel Phone Measurement (PPM) configuration which can do 2port-measurement independently by single unit, the interference problem may be occurred easier than 1 port/1 unit configuration since the UEs and/or RF cables tend to be located closely in the production line. Moreover TDD (Time Division Duplex) mode in TD-SCDMA, and TD-LTE technology tend to have the interference problem since TDD uses the same up and down frequencies. But there is also a possibility that FDD mode in WCDMA, GSM, C2K (C2K: Discontinued), and LTE FDD while the same frequency in a test is used between UEs. Meanwhile the MT8820C internal isolation between Phone 1 and Phone 2 is at least 138 dB min, which is enough against the interference.

The example of TD-SCDMA with MT8820B/C PPM configuration follows.

1. Precautions of the interference outside MT8820B/C PPM Configuration

Isolation precautions are required when measuring Maximum Output Power and Reference Sensitivity Level. If the UE at Phone1 is outputting a 24 dBm Uplink signal at Max Power and the MT8820C at Phone2 is outputting a -106.7 dBm Downlink signal, the isolation must be at least 130 dB.

Since the MT8820B/C internal isolation between Phone1 and Phone2 is 138 dB min, even if the UE at Phone1 outputs Max Power, there is no influence on the Phone2 Reference Sensitivity Level measurement. However, if the isolation between UEs or RF cables is inadequate, there may be some influence on the Phone2 Reference Sensitivity Level measurement.

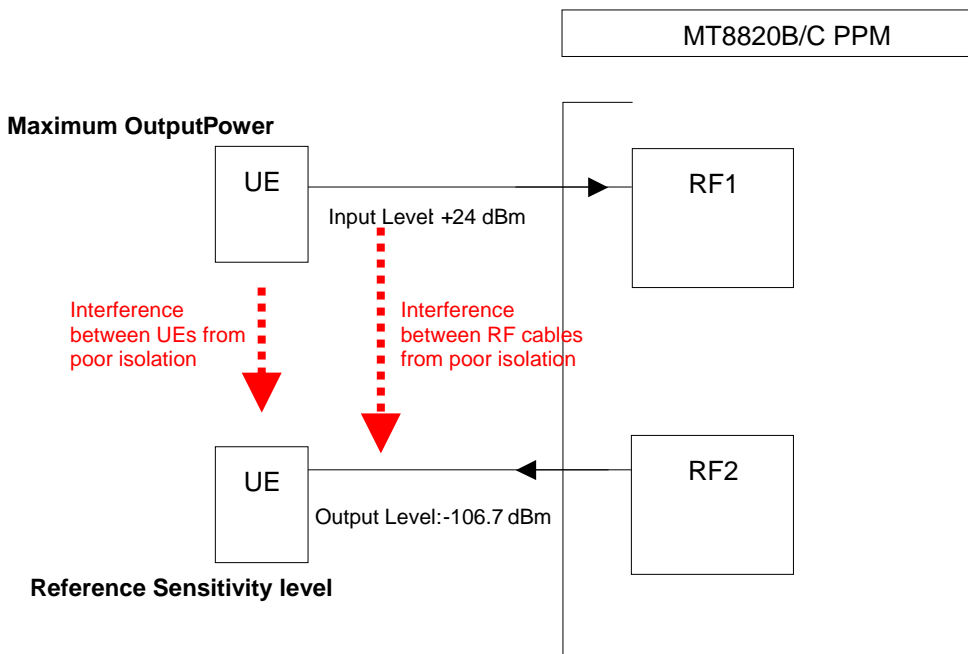


Figure 1. Inadequate Isolation between UEs or RF Cables

2. Problem Resolution

(1) Isolation between UEs

To assure isolation between UEs, we recommend using the Shield Box.

(2) Isolation between RF Cables

To assure isolation between RF cables, we recommended using either RF cables with high shielding performance or the Semi-Rigid Cable.

[Recommended RF Cables]

- Tensolite KU1818 Series
- HUBER+SUHNER SUCOFLEX 104

Note: To place a distance between UEs and RF Cables as much as possible is also recommended.

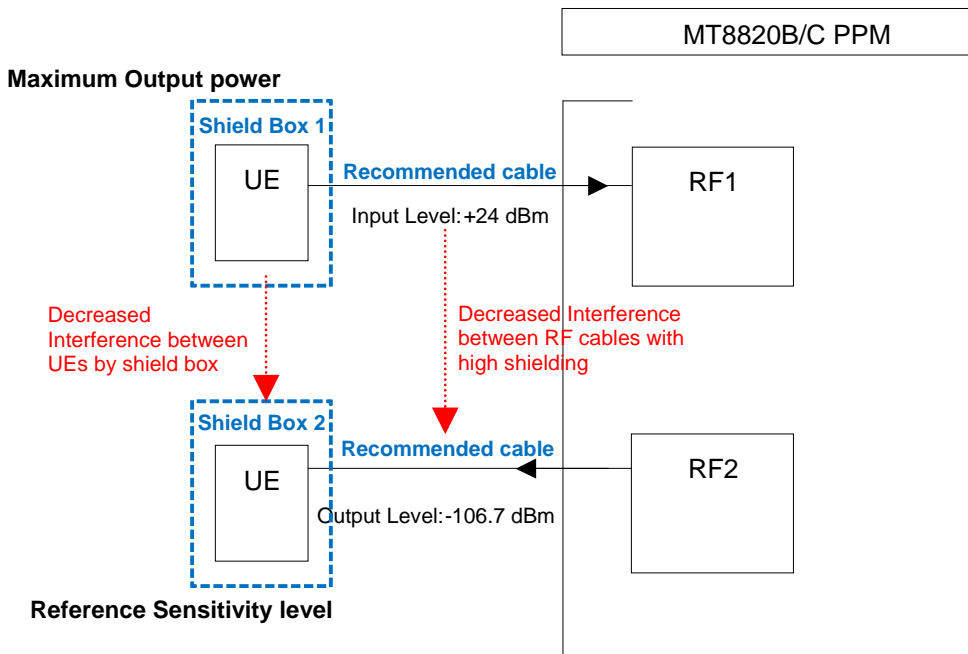


Figure 2. Improving Isolation between UEs and RF Cables

- **United States**

Anritsu Americas Sales Company

450 Century Parkway, Suite 190, Allen, TX 75013 U.S.A.
Phone: +1-800-Anritsu (1-800-267-4878)

- **Canada**

Anritsu Electronics Ltd.

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

- **Brazil**

Anritsu Eletronica Ltda.

Praça Amadeu Amaral, 27 - 1 Andar
01327-010 - Bela Vista - Sao Paulo - SP, Brazil
Phone: +55-11-3283-2511
Fax: +55-11-3288-6940

- **Mexico**

Anritsu Company, S.A. de C.V.

Blvd Miguel de Cervantes Saavedra #169 Piso 1, Col. Granada
Mexico, Ciudad de Mexico, 11520, MEXICO
Phone: +52-55-4169-7104

- **United Kingdom**

Anritsu EMEA Ltd.

200 Capability Green, Luton, Bedfordshire, LU1 3LU, U.K.
Phone: +44-1582-433200
Fax: +44-1582-731303

- **France**

Anritsu S.A.

12 avenue du Québec, Bâtiment Iris 1- Silic 612,
91140 VILLEBON SUR YVETTE, France
Phone: +33-1-60-92-15-50
Fax: +33-1-64-46-10-65

- **Germany**

Anritsu GmbH

Nemetschek Haus, Konrad-Zuse-Platz 1,
81829 München, Germany
Phone: +49-89-442308-0
Fax: +49-89-442308-55

- **Italy**

Anritsu S.r.l.

Via Elio Vittorini 129, 00144 Roma, Italy
Phone: +39-6-509-9711
Fax: +39-6-502-2425

- **Sweden**

Anritsu AB

Isafjordsgatan 32C, 164 40 KISTA, Sweden
Phone: +46-8-534-707-00

- **Finland**

Anritsu AB

Teknobulevardi 3-5, FI-01530 VANTAA, Finland
Phone: +358-20-741-8100
Fax: +358-20-741-8111

- **Denmark**

Anritsu A/S

c/o Regus Winghouse, Ørestads Boulevard 73, 4th floor,
2300 Copenhagen S, Denmark
Phone: +45-7211-2200

- **Russia**

Anritsu EMEA Ltd.

Representation Office in Russia

Tverskaya str. 16/2, bld. 1, 7th floor.
Moscow, 125009, Russia
Phone: +7-495-363-1694
Fax: +7-495-935-8962

- **Spain**

Anritsu EMEA Ltd.

Representation Office in Spain

Paseo de la Castellana, 141. Planta 5, Edificio Cuzco IV
28046, Madrid, Spain
Phone: +34-91-572-6761

- **United Arab Emirates**

Anritsu EMEA Ltd.

Dubai Liaison Office

902, Aurora Tower, P O Box: 500311- Dubai Internet City
Dubai, United Arab Emirates
Phone: +971-4-3758479
Fax: +971-4-4249036

- **India**

Anritsu India Private Limited

6th Floor, Indiqube ETA, No.38/4, Adjacent to EMC2,
Doddanekundi, Outer Ring Road, Bengaluru - 560048, India
Phone: +91-80-6728-1300
Fax: +91-80-6728-1301

- **Singapore**

Anritsu Pte. Ltd.

11 Chang Charn Road, #04-01, Shriro House, Singapore 159640
Phone: +65-6282-2400
Fax: +65-6282-2533

- **Vietnam**

Anritsu Company Limited

Room No. 1635, 16th Floor, ICON 4 Tower, 243A De La Thanh Street,
Lang Thuong Ward, Dong Da District, Hanoi, Vietnam
Phone: +84-24-3760-6216
Fax: +84-24-6266-2608

- **P.R. China (Shanghai)**

Anritsu (China) Co., Ltd.

Room 2701-2705, Tower A, New Caohejing International
Business Center No. 391 Gui Ping Road Shanghai, 200233, P.R. China
Phone: +86-21-6237-0898
Fax: +86-21-6237-0899

- **P.R. China (Hong Kong)**

Anritsu Company Ltd.

Unit 1006-7, 10/F., Greenfield Tower, Concordia Plaza,
No. 1 Science Museum Road, Tsim Sha Tsui East,
Kowloon, Hong Kong, P.R. China
Phone: +852-2301-4980
Fax: +852-2301-3545

- **Japan**

Anritsu Corporation

8-5, Tamura-cho, Atsugi-shi, Kanagawa, 243-0016 Japan
Phone: +81-46-296-6509
Fax: +81-46-225-8352

- **Korea**

Anritsu Corporation, Ltd.

5FL, 235 Pangyojeok-ro, Bundang-gu, Seongnam-si,
Gyeonggi-do, 13494 Korea
Phone: +82-31-696-7750
Fax: +82-31-696-7751

- **Australia**

Anritsu Pty. Ltd.

Unit 20, 21-35 Ricketts Road, Mount 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 114, Taiwan
Phone: +886-2-8751-1816
Fax: +886-2-8751-1817

