

# DATA OF 99% OCCUPIED BAND WIDTH

UL Apex Co., Ltd.

Head Office EMC Lab. No.3 Measurement Room

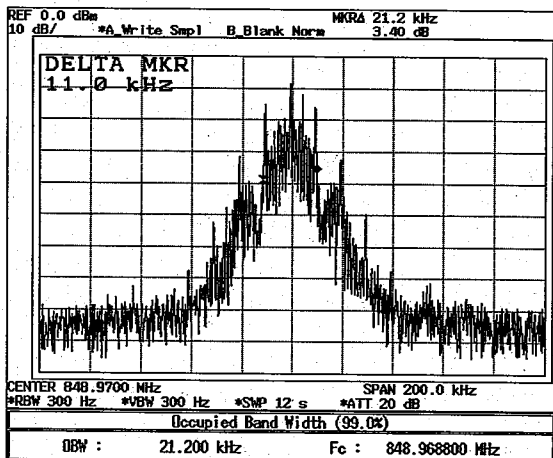
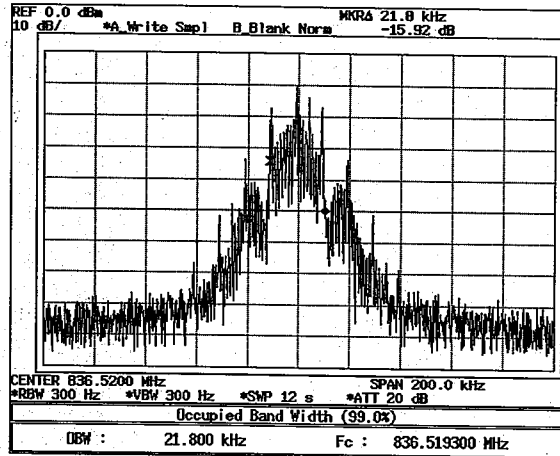
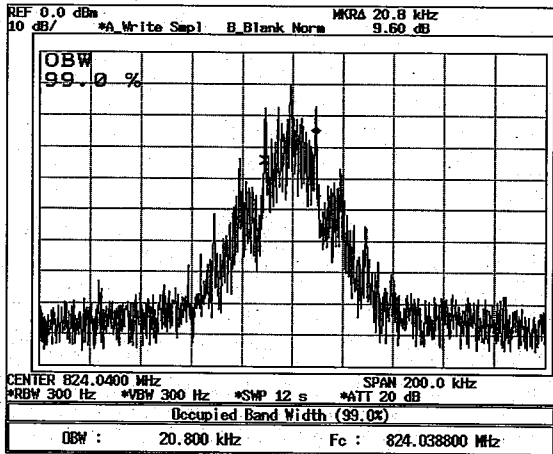
COMPANY : ALPS Electric Co., Ltd  
 EQUIPMENT : CDMA data module  
 MODEL : UGEA3A  
 S/N : 00000011  
 FCC ID : CWTUGEA3A  
 IC Number : -  
 POWER : DC3.6V  
 MODE : Tx (AMPS)  
 : Wide Band Data

REPORT NO : 23HE0073-HO-1  
 REGULATION : Fcc Part 22 Section 22.917(b)  
 TEST METHOD : Fcc Part 2 Section 2.1049  
 TEST DISTANCE : -  
 DATE : 10/16/2003  
 TEMPERATURE : 24°C  
 HUMIDITY : 50%

  
 \_\_\_\_\_  
 Engineer : Hiroka Umeyama

**PK DETECT(S/A: span 200kHz, RBW 300Hz, VBW 300Hz, sweep time 12sec)**

CH	FREQ	Bandwidth	Limit
	[MHz]	[kHz]	[kHz]
Low	824.04	20.800	-
Mid	836.52	21.800	-
High	848.97	21.200	-



# DATA OF EMISSION BANDWIDTH

UL Apex Co., Ltd.  
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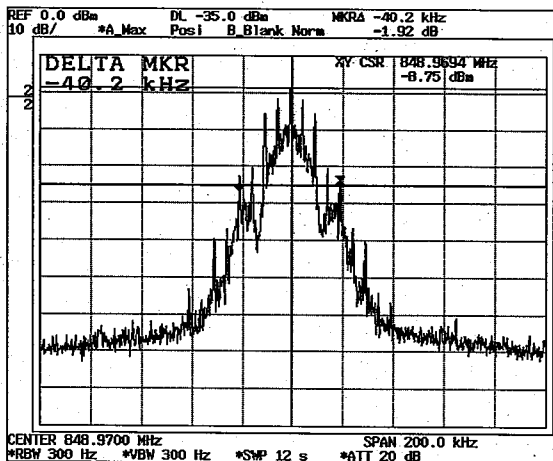
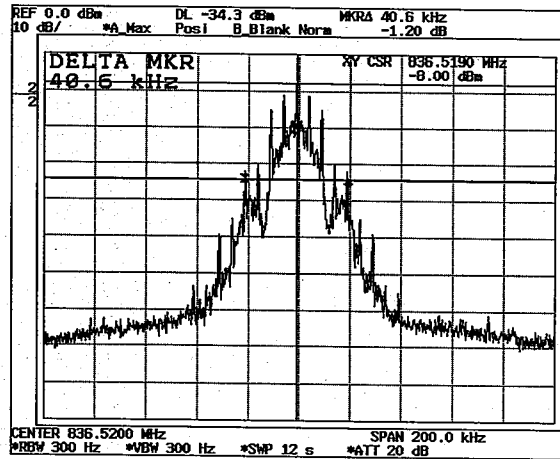
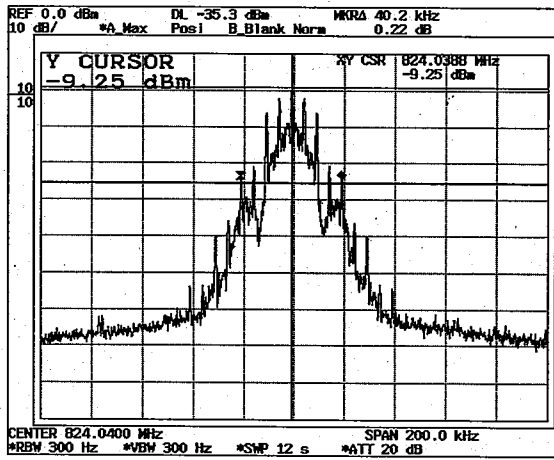
COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (AMPS)  
          : Wide Band Data

REPORT NO : 23HE0073-HO-1  
REGULATION : Fcc Part 22 Section 22.917(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 10/16/2003  
TEMPERATURE : 24°C  
HUMIDITY : 50%

  
 \_\_\_\_\_  
 Engineer : Hiroka Umeyama

**PK DETECT(S/A: span 200kHz, RBW 300Hz, VBW 300Hz, sweep time 12sec)**

CH	FREQ [MHz]	Bandwidth [kHz]	Limit [kHz]
Low	824.04	40.200	-
Mid	836.52	40.600	-
High	848.97	40.200	-



# DATA OF 99% OCCUPIED BAND WIDTH

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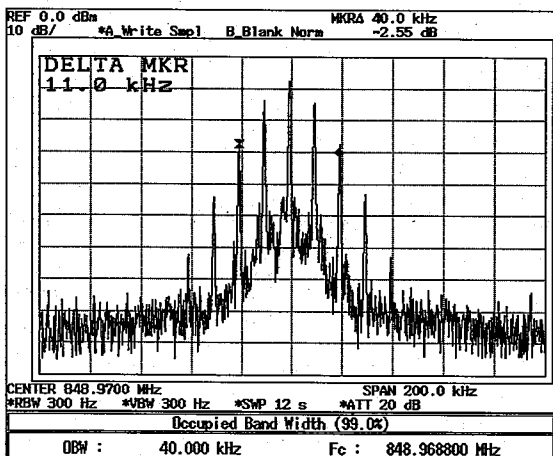
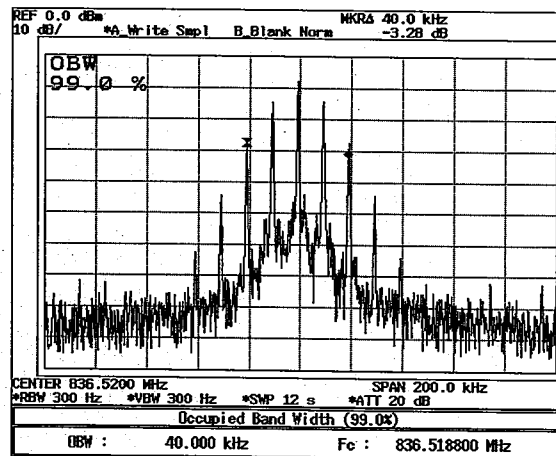
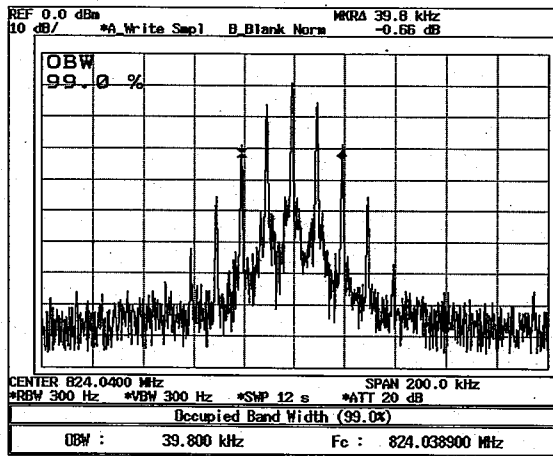
COMPANY : ALPS Electric Co., Ltd  
 EQUIPMENT : CDMA data module  
 MODEL : UGEA3A  
 S/N : 00000011  
 FCC ID : CWTUGEA3A  
 IC Number : -  
 POWER : DC3.6V  
 MODE : Tx (AMPS)  
       : Signaling Tone

REPORT NO : 23HE0073-HO-1  
 REGULATION : Fcc Part 22 Section 22.917(b)  
 TEST METHOD : Fcc Part 2 Section 2.1049  
 TEST DISTANCE : -  
 DATE : 10/16/2003  
 TEMPERATURE : 24°C  
 HUMIDITY : 50%

*[Signature]*  
 \_\_\_\_\_  
 Engineer : Hiroka Umeyama

**PK DETECT(S/A: span 200kHz, RBW 300Hz, VBW 300Hz, sweep time 12sec)**

CH	FREQ	Bandwidth	Limit
	[MHz]	[kHz]	[kHz]
Low	824.04	39.800	-
Mid	836.52	40.000	-
High	848.97	40.000	-



# DATA OF EMISSION BANDWIDTH

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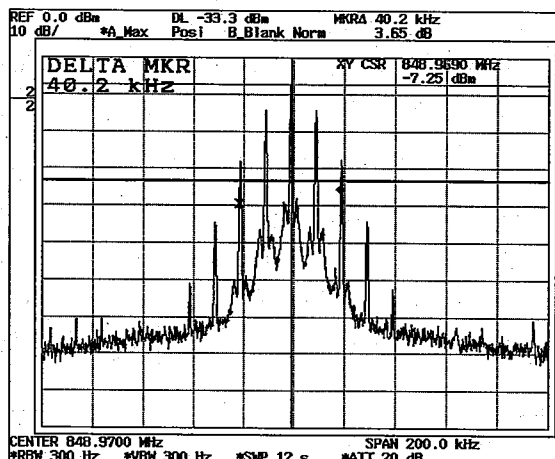
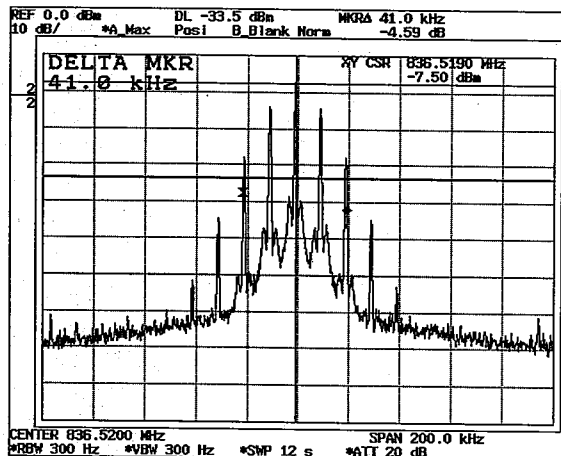
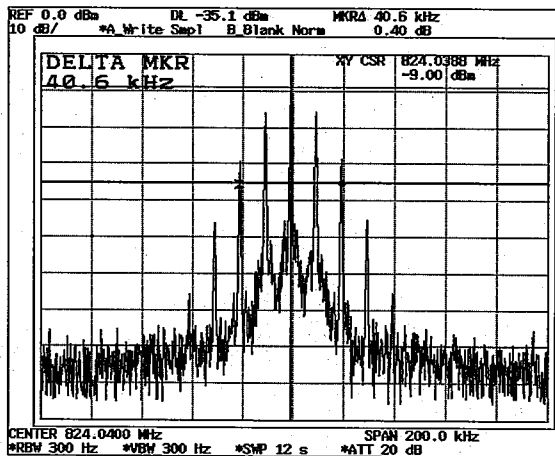
COMPANY : ALPS Electric Co., Ltd  
 EQUIPMENT : CDMA data module  
 MODEL : UGEA3A  
 S/N : 00000011  
 FCC ID : CWTUGEA3A  
 IC Number : -  
 POWER : DC3.6V  
 MODE : Tx (AMPS)  
       : Signaling Tone

REPORT NO : 23HE0073-HO-1  
 REGULATION : Fcc Part 22 Section 22.917(b)  
 TEST METHOD : Fcc Part 2 Section 2.1049  
 TEST DISTANCE : -  
 DATE : 10/16/2003  
 TEMPERATURE : 24°C  
 HUMIDITY : 50%

Engineer :  Hiroka Umeyama

**PK DETECT(S/A: span 200kHz, RBW 300Hz, VBW 300Hz, sweep time 12sec)**

CH	FREQ	Bandwidth	Limit
	[MHz]	[kHz]	[kHz]
Low	824.04	40.600	-
Mid	836.52	41.000	-
High	848.97	40.200	-



# DATA OF 99% OCCUPIED BAND WIDTH

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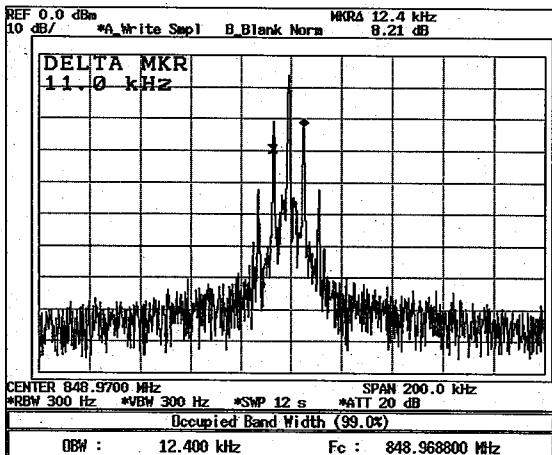
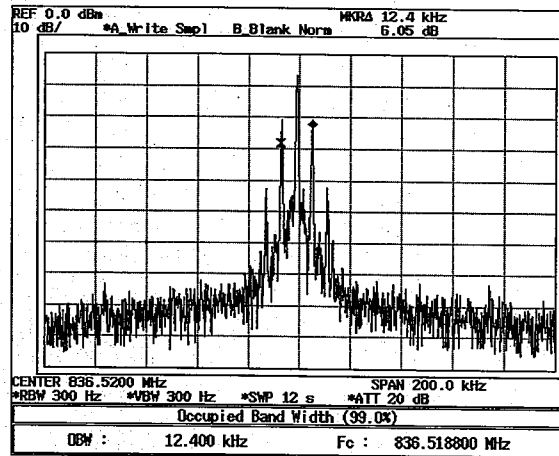
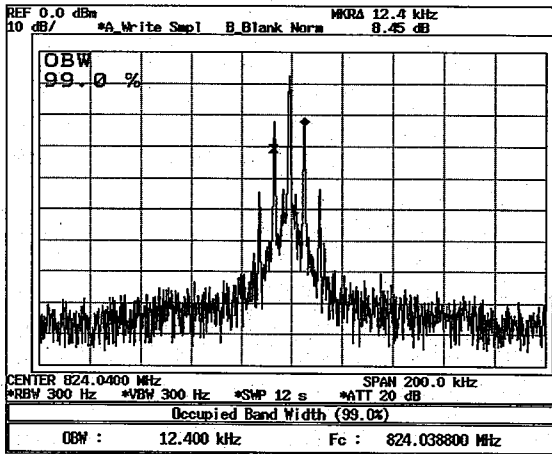
COMPANY : ALPS Electric Co., Ltd  
 EQUIPMENT : CDMA data module  
 MODEL : UGEA3A  
 S/N : 00000011  
 FCC ID : CWTUGEA3A  
 IC Number : -  
 POWER : DC3.6V  
 MODE : Tx (AMPS)  
 : Supervisory Audio Tone

REPORT NO : 23HE0073-HO-1  
 REGULATION : Fcc Part 22 Section 22.917(b)  
 TEST METHOD : Fcc Part 2 Section 2.1049  
 TEST DISTANCE : -  
 DATE : 10/16/2003  
 TEMPERATURE : 24°C  
 HUMIDITY : 50%

Engineer :  Hiroka Umeyama

**PK DETECT(S/A: span 200kHz, RBW 300Hz, VBW 300Hz, sweep time 12sec)**

CH	FREQ	Bandwidth	Limit
	[MHz]	[kHz]	[kHz]
Low	824.04	12.400	-
Mid	836.52	12.400	-
High	848.97	12.400	-



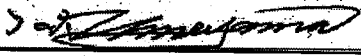
# DATA OF EMISSION BANDWIDTH

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Head Office EMC Lab. No.3 Measurement Room

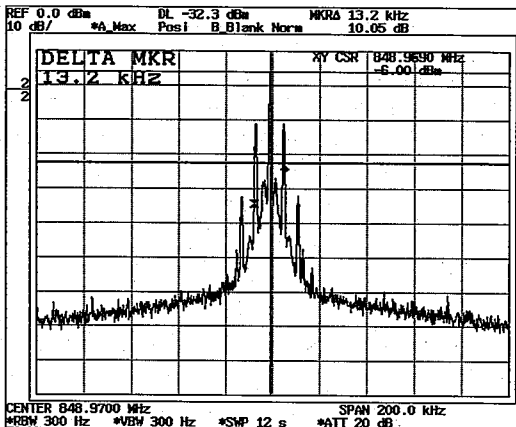
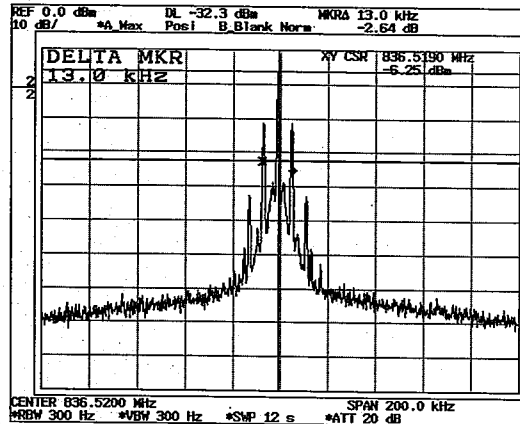
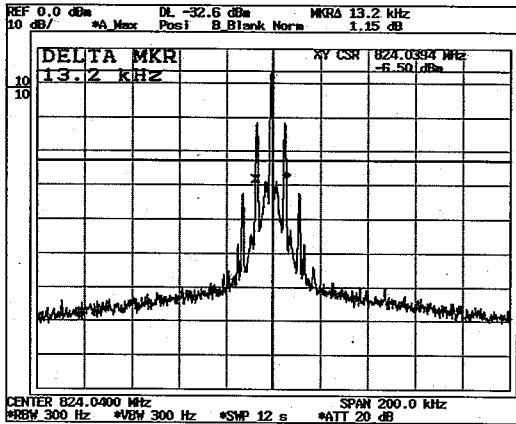
COMPANY : ALPS Electric Co., Ltd  
 EQUIPMENT : CDMA data module  
 MODEL : UGEA3A  
 S/N : 00000011  
 FCC ID : CWTUGEA3A  
 IC Number : -  
 POWER : DC3.6V  
 MODE : Tx (AMPS)  
 : Supervisory Audio Tone

REPORT NO : 23HE0073-HO-1  
 REGULATION : Fcc Part 22 Section 22.917(b)  
 TEST METHOD : Fcc Part 2 Section 2.1049  
 TEST DISTANCE : -  
 DATE : 10/16/2003  
 TEMPERATURE : 24°C  
 HUMIDITY : 50%

Engineer :  Hiroka Umeyama

**PK DETECT(S/A: span 200kHz, RBW 300Hz, VBW 300Hz, sweep time 12sec)**

CH	FREQ [MHz]	Bandwidth [kHz]	Limit [kHz]
Low	824.04	13.200	-
Mid	836.52	13.000	-
High	848.97	13.200	-



# DATA OF 99% OCCUPIED BAND WIDTH

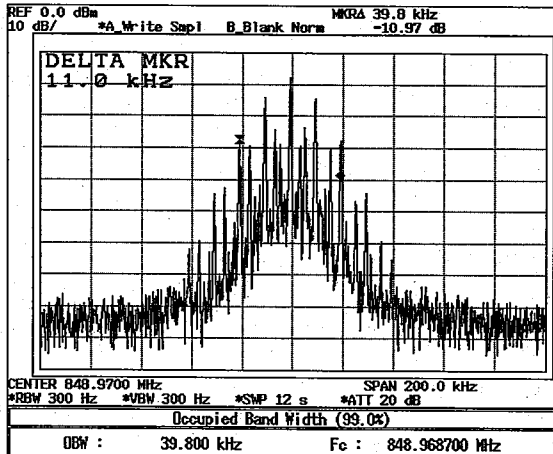
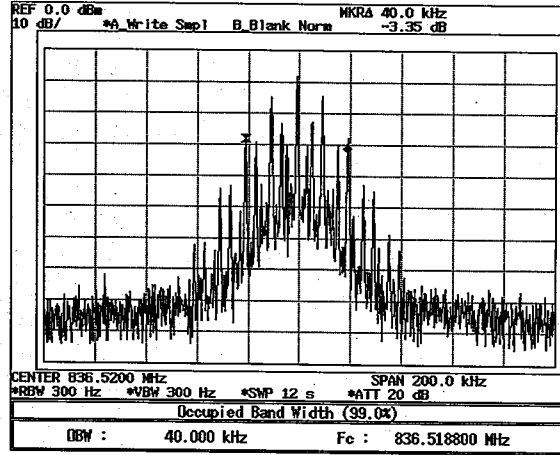
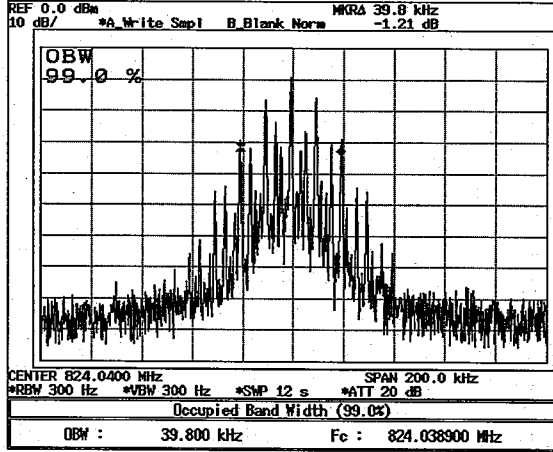
UL Apex Co., Ltd.  
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COMPANY : ALPS Electric Co., Ltd	REPORT NO : 23HE0073-HO-1
EQUIPMENT : CDMA data module	REGULATION : Fcc Part 22 Section 22.917(b)
MODEL : UGEA3A	TEST METHOD : Fcc Part 2 Section 2.1049
S/N : 00000011	TEST DISTANCE : -
FCC ID : CWTUGEA3A	DATE : 10/16/2003
IC Number : -	TEMPERATURE : 24°C
POWER : DC3.6V	HUMIDITY : 50%
MODE : Tx (AMPS)	
: Supervisory Audio Tone + Signaling Tone	

Engineer : Hiroka Umeyama

**PK DETECT(S/A: span 200kHz, RBW 300Hz, VBW 300Hz, sweep time 12sec)**

CH	FREQ	Bandwidth	Limit
	[MHz]	[kHz]	[kHz]
Low	824.04	39.800	-
Mid	836.52	40.000	-
High	848.97	39.800	-



# DATA OF EMISSION BANDWIDTH

UL Apex Co., Ltd.

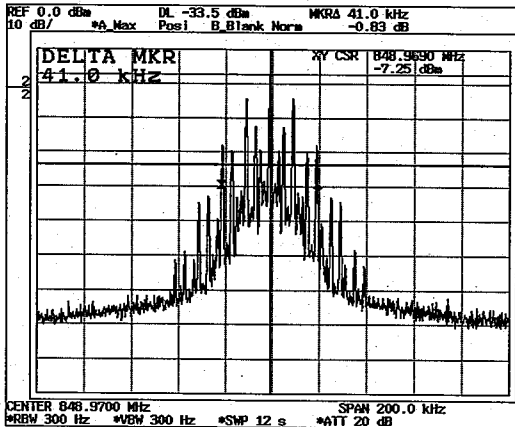
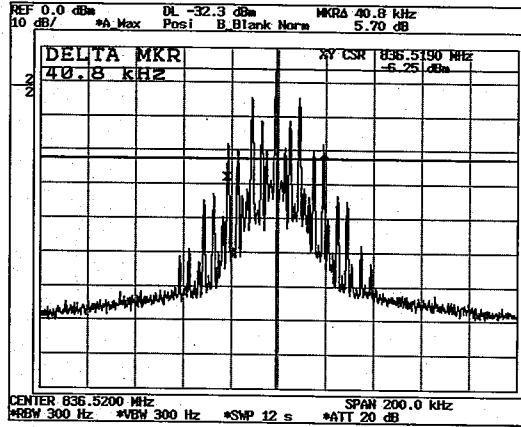
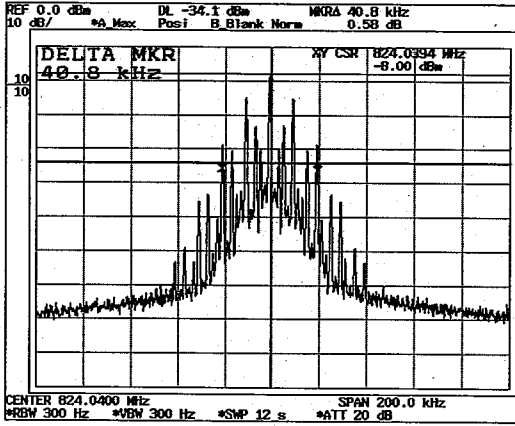
Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd	REPORT NO : 23HE0073-HO-1
EQUIPMENT : CDMA data module	REGULATION : Fcc Part 22 Section 22.917(b)
MODEL : UGEA3A	TEST METHOD : Fcc Part 2 Section 2.1049
S/N : 00000011	TEST DISTANCE : -
FCC ID : CWTUGEA3A	DATE : 10/16/2003
IC Number : -	TEMPERATURE : 24°C
POWER : DC3.6V	HUMIDITY : 50%
MODE : Tx (AMPS)	
	: Supervisory Audio Tone + Signaling Tone

Engineer : Hiroka Umeyama

**PK DETECT(S/A: span 200kHz, RBW 300Hz, VBW 300Hz, sweep time 12sec)**

CH	FREQ	Bandwidth	Limit
	[MHz]	[kHz]	[kHz]
Low	824.04	40.800	-
Mid	836.52	40.800	-
High	848.97	41.000	-





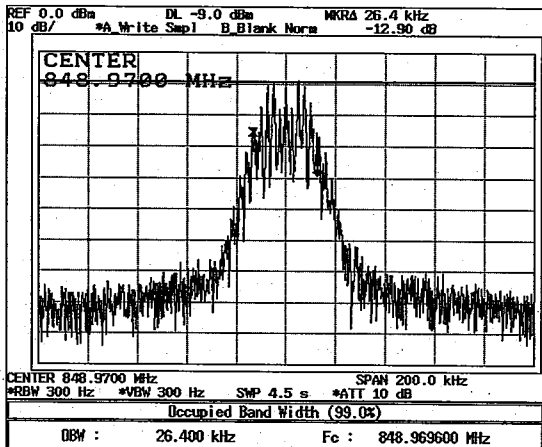
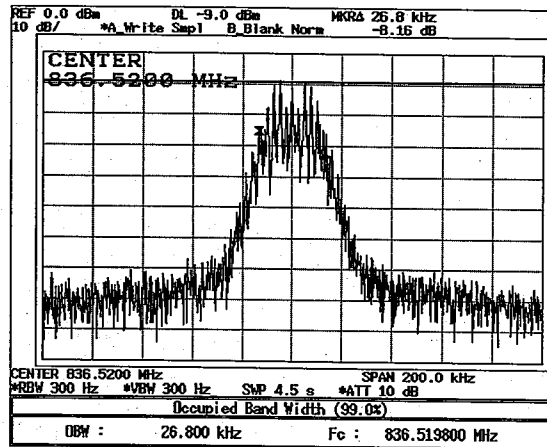
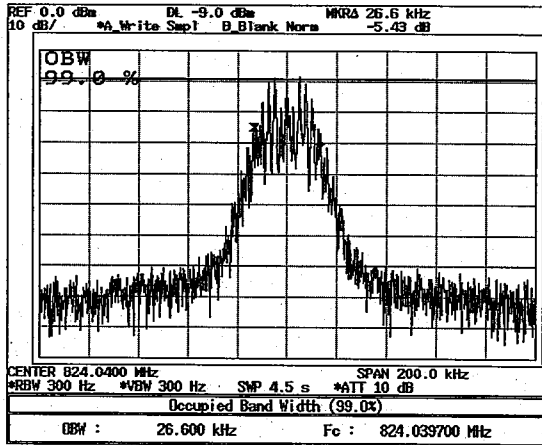
# DATA OF 99% OCCUPIED BAND WIDTH

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd	REPORT NO : 23HE0073-HO-1
EQUIPMENT : CDMA data module	REGULATION : Fcc Part 22 Section 22.917(b)
MODEL : UGEA3A	TEST METHOD : Fcc Part 2 Section 2.1049
S/N : 00000011	TEST DISTANCE : -
FCC ID : CWTUGEA3A	DATE : 10/16/2003
IC Number : -	TEMPERATURE : 24°C
POWER : DC3.6V	HUMIDITY : 50%
MODE : Tx (AMPS)	
: Voice + Supervisory Audio Tone	<i>Hiroka Umeyama</i>
Engineer :	Hiroka Umeyama

**PK DETECT(S/A: span 200kHz, RBW 300Hz, VBW 300Hz, sweep time 4.5sec)**

CH	FREQ	Bandwidth	Limit
	[MHz]	[kHz]	[kHz]
Low	824.04	26.600	-
Mid	836.52	26.800	-
High	848.97	26.400	-



# DATA OF EMISSION BANDWIDTH

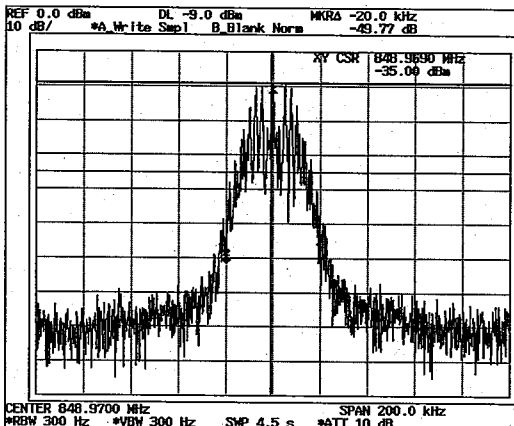
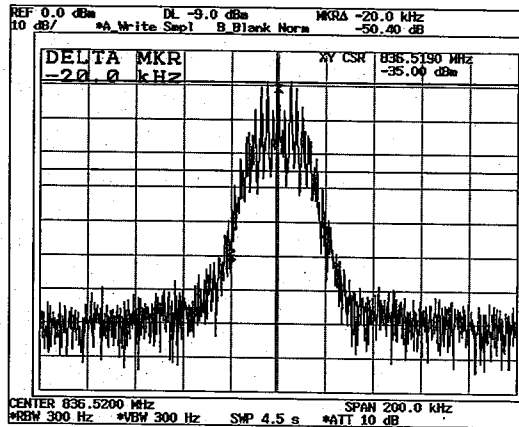
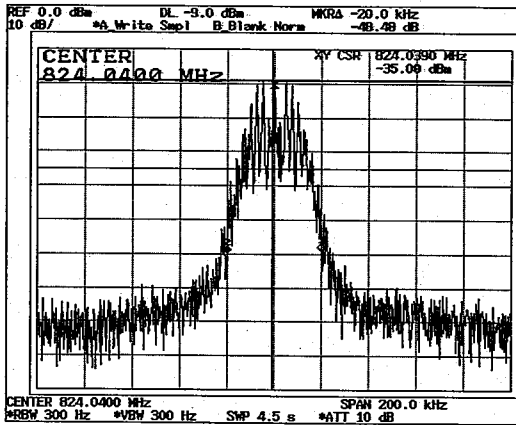
UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd	REPORT NO : 23HE0073-HO-1
EQUIPMENT : CDMA data module	REGULATION : Fcc Part 22 Section 22.917(b)
MODEL : UGEA3A	TEST METHOD : Fcc Part 2 Section 2.1049
S/N : 00000011	TEST DISTANCE : -
FCC ID : CWTUGEA3A	DATE : 10/16/2003
IC Number : -	TEMPERATURE : 24°C
POWER : DC3.6V	HUMIDITY : 50%
MODE : Tx (AMPS)	
: Voice + Supervisory Audio Tone	

  
 Engineer : Hiroka Umeyama

**PK DETECT(S/A: span 200kHz, RBW 300Hz, VBW 300Hz, sweep time 12sec)**

CH	FREQ	Bandwidth	Limit
	[MHz]	[kHz]	[kHz]
Low	824.04	40.000	-
Mid	836.52	40.000	-
High	848.97	40.000	-



# DATA OF 99% OCCUPIED BANDWIDTH

UL Apex Co., Ltd.  
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COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (CDMA)

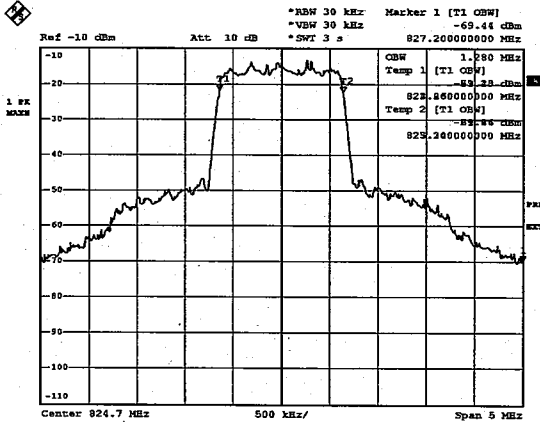
REPORT NO : 23HE0073-HO - 1  
REGULATION : Fcc Part 22 Section 22.917(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 06/16/2003  
TEMPERATURE : 22°C  
HUMIDITY : 60%

*[Handwritten Signature]*

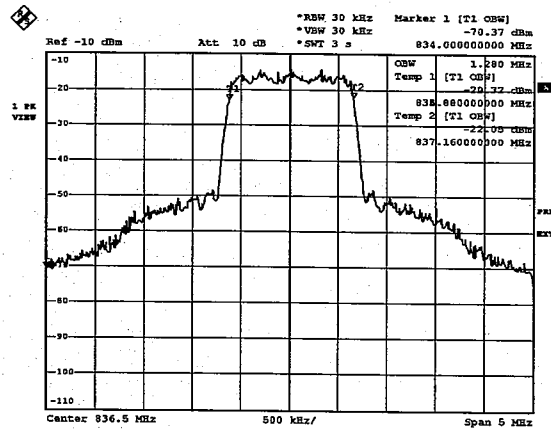
Engineer : Hiroka Umeyama

**PK DETECT(S/A: span 5MHz, RBW 30kHz, VBW 30kHz, sweep time 3sec)**

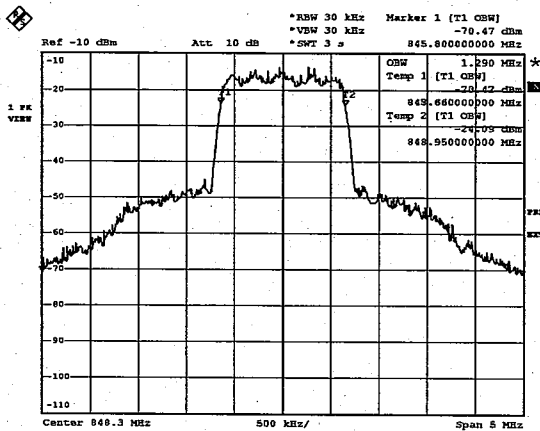
CH	FREQ	Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	824.7	1.280	-
Mid	836.5	1.280	-
High	848.3	1.290	-



Date: 16.JUN.2003 12:00:08



Date: 16.JUN.2003 12:04:30



Date: 16.JUN.2003 12:09:11

# DATA OF EMISSION BANDWIDTH

UL Apex Co., Ltd.  
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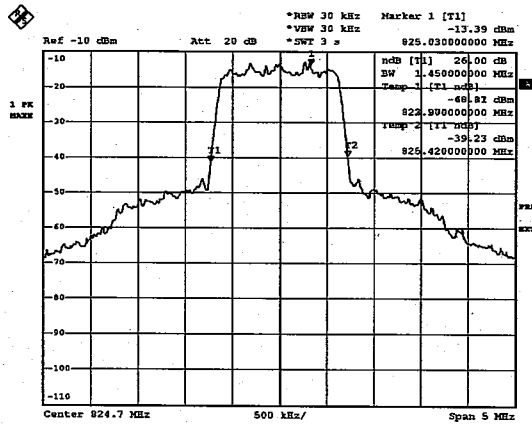
COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (CDMA)

REPORT NO : 23HE0073-HO-1  
REGULATION : Fcc Part 22 Section 22.917(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 06/04/2003  
TEMPERATURE : 25°C  
HUMIDITY : 50%

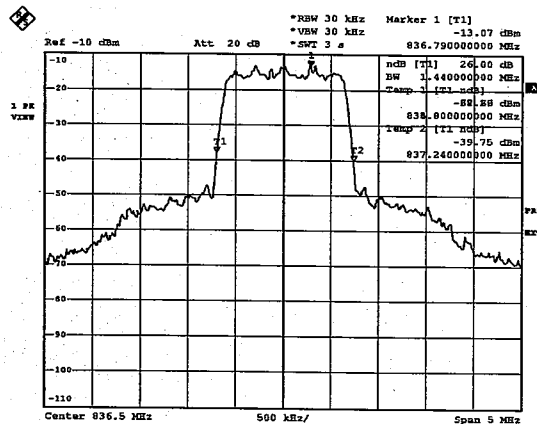
Engineer : Hiroka Umeyama

**PK DETECT(S/A: span 5MHz, RBW 30kHz, VBW 30kHz, sweep time 3sec)**

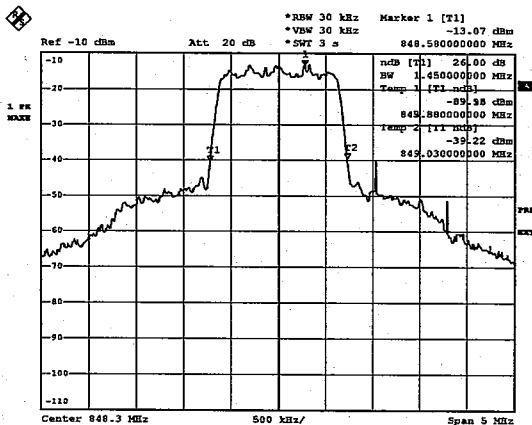
CH	FREQ	Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	824.7	1.450	-
Mid	836.5	1.440	-
High	848.3	1.450	-



Date: 4.JUN.2003 14:36:46



Date: 4.JUN.2003 14:31:13



Date: 4.JUN.2003 14:15:25

# DATA OF 99% OCCUPIED BANDWIDTH

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (CDMA 1X)

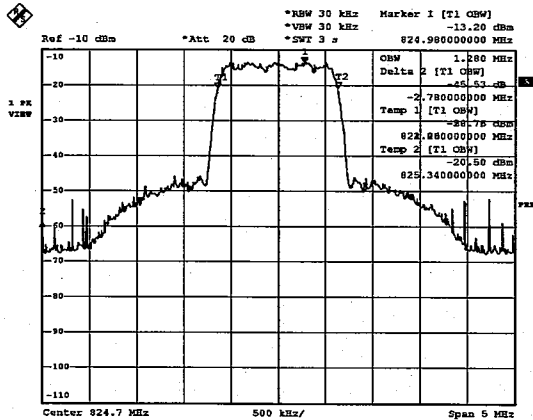
REPORT NO : 23HE0073-HO - 1  
REGULATION : Fcc Part 22 Section 22.917(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 06/16/2003  
TEMPERATURE : 22°C  
HUMIDITY : 60%

*Hiroka Umeyama*

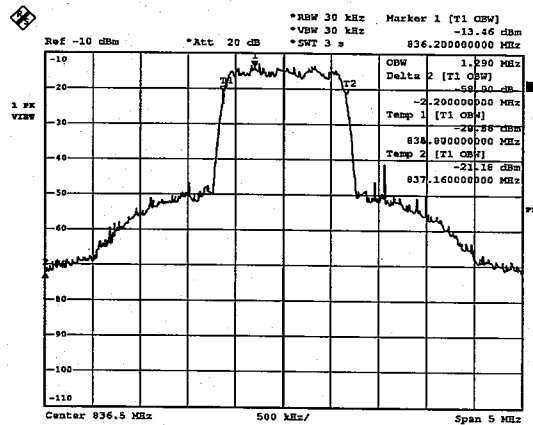
Engineer : Hiroka Umeyama

**PK DETECT(S/A: span 5MHz, RBW 30kHz, VBW 30kHz, sweep time 3sec)**

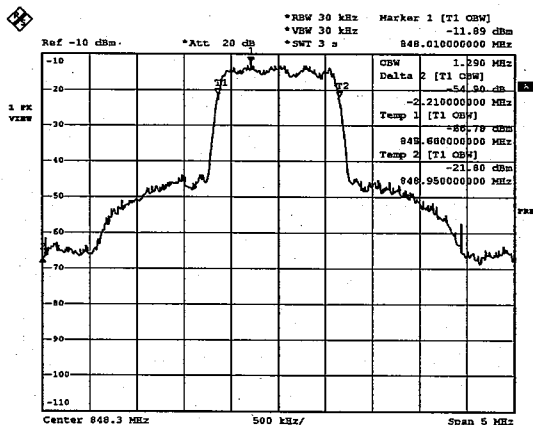
CH	FREQ	Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	824.7	1.280	-
Mid	836.5	1.290	-
High	848.3	1.290	-



Date: 16.JUN.2003 15:50:53



Date: 16.JUN.2003 15:59:00



Date: 16.JUN.2003 16:05:15

# DATA OF EMISSION BANDWIDTH

UL Apex Co., Ltd.

Head Office EMC Lab. No.3 Measurement Room

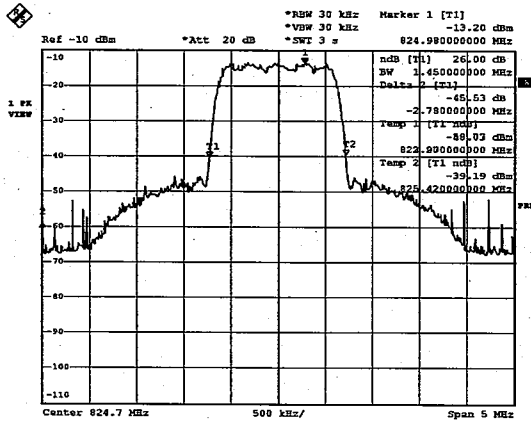
COMPANY : ALPS Electric Co., Ltd  
 EQUIPMENT : CDMA data module  
 MODEL : UGEA3A  
 S/N : 00000011  
 FCC ID : CWTUGEA3A  
 IC Number : -  
 POWER : DC3.6V  
 MODE : Tx (CDMA 1X)

REPORT NO : 23HE0073-HO-1  
 REGULATION : Fcc Part 22 Section 22.917(b)  
 TEST METHOD : Fcc Part 2 Section 2.1049  
 TEST DISTANCE : -  
 DATE : 06/16/2003  
 TEMPERATURE : 22°C  
 HUMIDITY : 60%

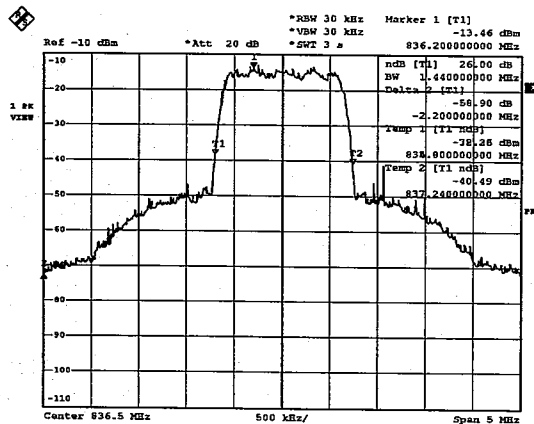
Engineer :   
 Hiroka Umeyama

**PK DETECT(S/A: span 5MHz, RBW 30kHz, VBW 30kHz, sweep time 3sec)**

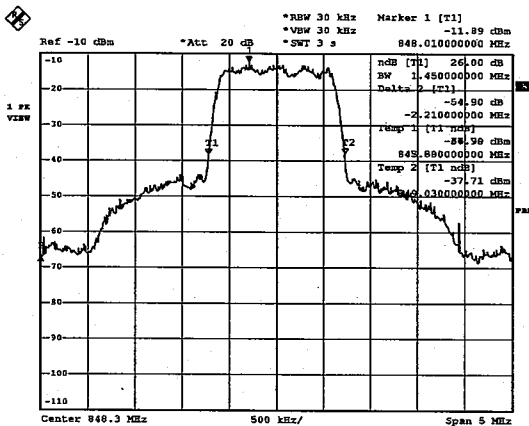
CH	FREQ	Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	824.7	1.450	-
Mid	836.5	1.440	-
High	848.3	1.450	-



Date: 16.JUN.2003 15:49:26



Date: 16.JUN.2003 15:59:53



Date: 16.JUN.2003 16:04:22

# DATA OF 99% OCCUPIED BAND WIDTH

UL Apex Co., Ltd.

Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd  
 EQUIPMENT : CDMA data module  
 MODEL : UGEA3A  
 S/N : 00000011  
 FCC ID : CWTUGEA3A  
 IC Number : -  
 POWER : DC3.6V  
 MODE : Tx (PCS)

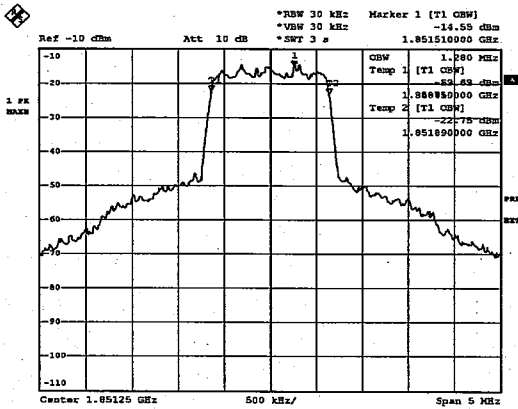
REPORT NO : 23HE0073-HO - 1  
 REGULATION : Fcc Part 24 Section 24.238(b)  
 TEST METHOD : Fcc Part 2 Section 2.1049  
 TEST DISTANCE : -  
 DATE : 06/16/2003  
 TEMPERATURE : 22°C  
 HUMIDITY : 60%

*[Handwritten Signature]*

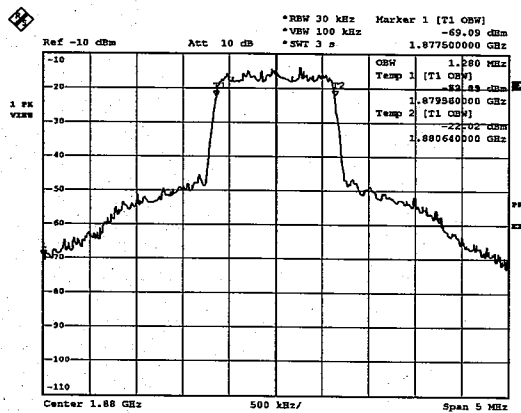
Engineer : Hiroka Umeyama

**PK DETECT(S/A: span 5MHz, RBW 30kHz, VBW 30kHz, sweep time 3sec)**

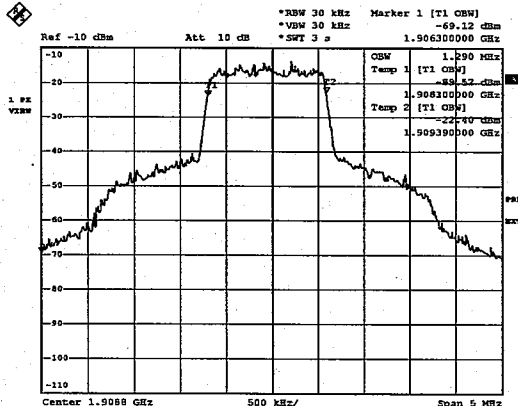
CH	FREQ	Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	1851.3	1.280	-
Mid	1880.0	1.280	-
High	1908.8	1.300	-



Date: 16.JUN.2003 11:43:32



Date: 16.JUN.2003 11:46:07



Date: 16.JUN.2003 12:12:51

# DATA OF EMISSION BANDWIDTH

UL Apex Co., Ltd.

Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd  
 EQUIPMENT : CDMA data module  
 MODEL : UGEA3A  
 S/ N : 00000011  
 FCC ID : CWTUGEA3A  
 IC Number : -  
 POWER : DC3.6V  
 MODE : Tx (PCS)

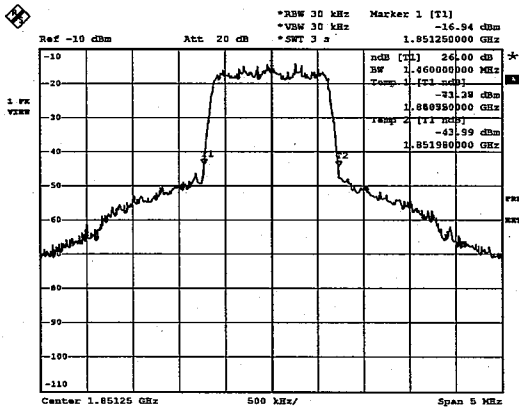
REPORT NO : 23HE0073-HO- 1  
 REGULATION : Fcc Part 24 Section 24.238(b)  
 TEST METHOD : Fcc Part 2 Section 2.1049  
 TEST DISTANCE : -  
 DATE : 06/06/2003  
 TEMPERATURE : 24°C  
 HUMIDITY : 39%

*Hiroka Umeyama*

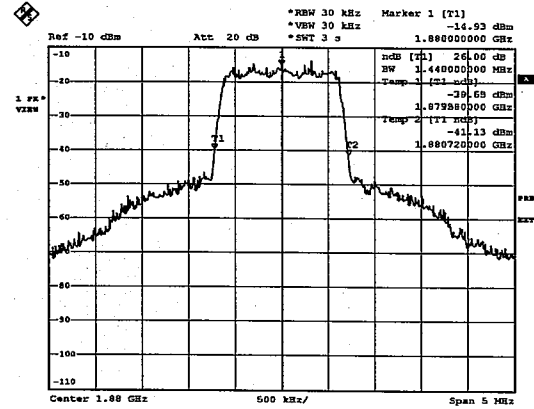
Engineer : Hiroka Umeyama

**PK DETECT(S/A: span 5MHz, RBW 30kHz, VBW 30kHz, sweep time 3sec)**

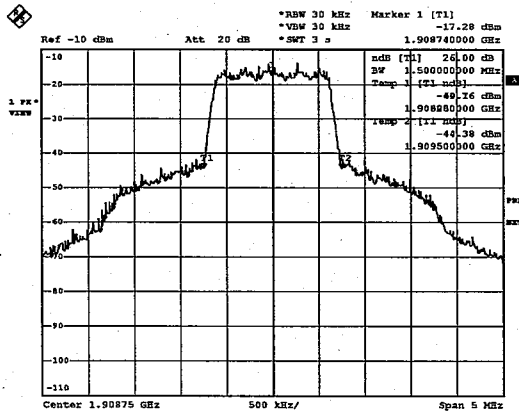
CH	FREQ	Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	1851.3	1.460	-
Mid	1880.0	1.440	-
High	1908.8	1.500	-



Date: 6.JUN.2003 12:32:14



Date: 6.JUN.2003 12:22:21



Date: 6.JUN.2003 12:19:47



# DATA OF 99% OCCUPIED BAND WIDTH

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

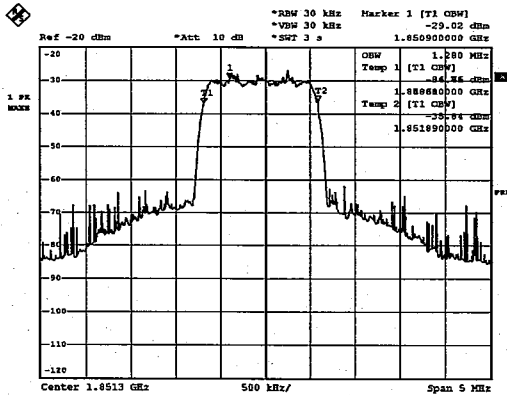
COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (PCS 1X)

REPORT NO : 23HE0073-HO-1  
REGULATION : Fcc Part 24 Section 24.238(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 06/16/2003  
TEMPERATURE : 22°C  
HUMIDITY : 60%

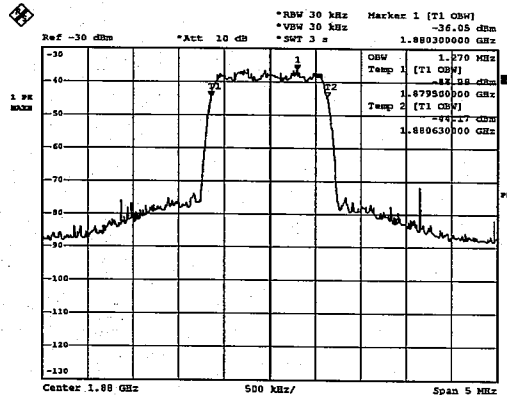
Engineer :   
Hiroka Umeyama

**PK DETECT(S/A: span 5MHz, RBW 30kHz, VBW 30kHz, sweep time 3sec)**

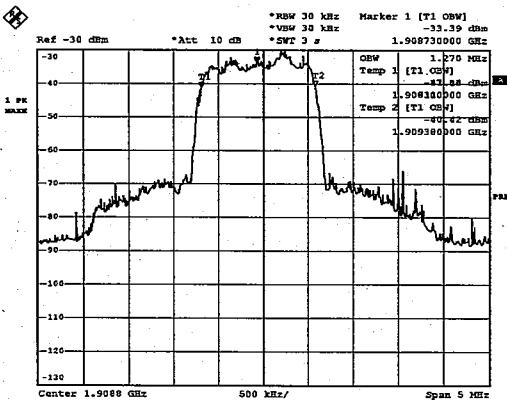
CH	FREQ	Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	1851.3	1.280	-
Mid	1880.0	1.270	-
High	1908.8	1.270	-



Date: 16.JUN.2003 22:42:50



Date: 16.JUN.2003 22:44:14



Date: 16.JUN.2003 22:39:56

# DATA OF EMISSION BANDWIDTH

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

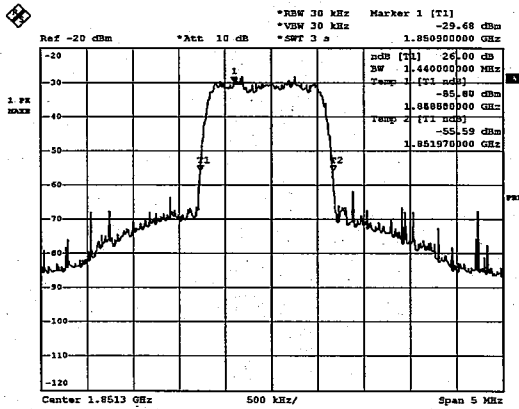
COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (PCS 1X)

REPORT NO : 23HE0073-HO - 1  
REGULATION : Fcc Part 24 Section 24.238(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 06/16/2003  
TEMPERATURE : 22°C  
HUMIDITY : 60%

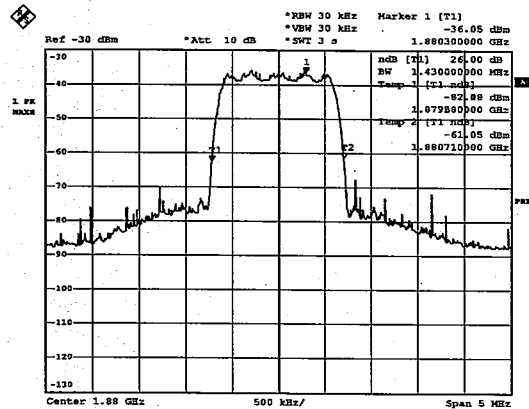
*Hiroka Umeyama*  
Engineer : Hiroka Umeyama

**PK DETECT(S/A: span 5MHz, RBW 30kHz, VBW 30kHz, sweep time 3sec)**

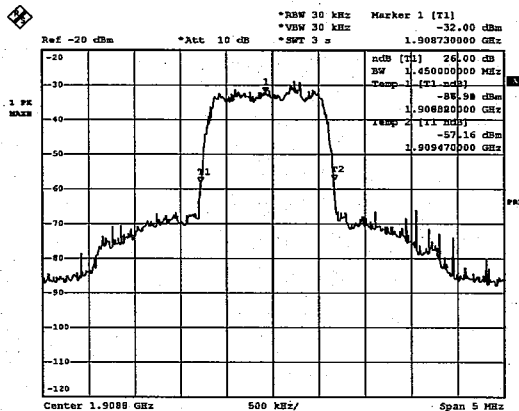
CH	FREQ	Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	1851.3	1.440	-
Mid	1880.0	1.430	-
High	1908.8	1.450	-



Date: 16.JUN.2003 22:41:40



Date: 16.JUN.2003 22:45:19



Date: 16.JUN.2003 22:40:44

# DATA OF BAND EDGES(CONDUCTED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (AMPS)  
Wide Band Data

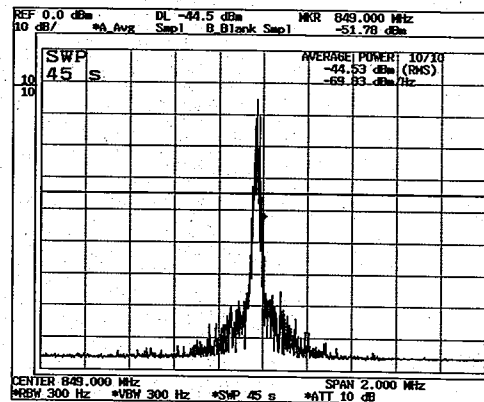
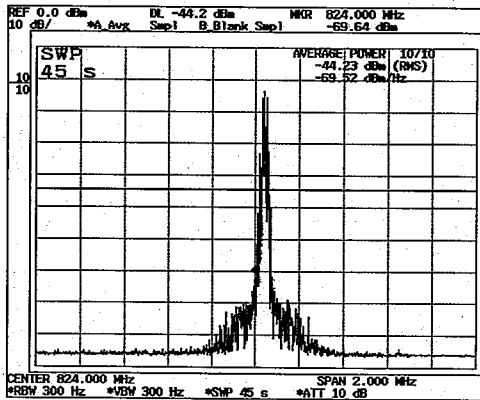
REPORT NO : 23HE0073-HO-1  
REGULATION : Fcc Part 22 Section 22.917(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 10/16/2003  
TEMPERATURE : 24°C  
HUMIDITY : 50%

*Hiroka Umeyama*  
\_\_\_\_\_  
Engineer : Hiroka Umeyama

**PK DETECT(S/A :Span 2MHz, RBW 300Hz, VBW 300Hz, sweep time 45sec )**

Frequency [MHz]	Reading [dBm]	Atten. [dB]	Cable Loss [dB]	Result [dBm]	Limit [dBm]
824.0	-69.6	30.0	1.4	-38.3	-13.0
849.0	-51.8	30.0	1.4	-20.4	-13.0

Sample Calculation : Result = Reading + Atten. + Cable Loss



# DATA OF BAND EDGES(CONDUCTED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (AMPS)  
: Signaling Tone

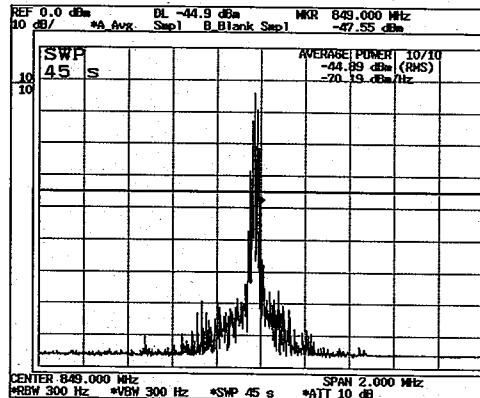
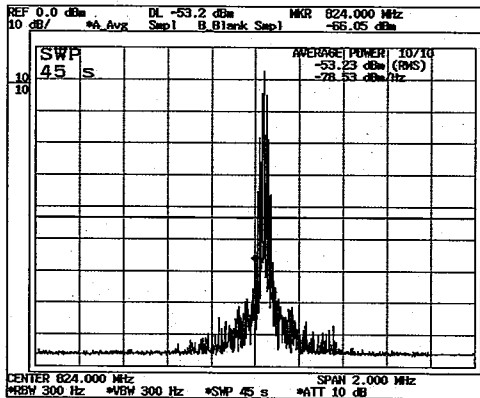
REPORT NO : 23HE0073-HO-1  
REGULATION : Fcc Part 22 Section 22.917(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 10/16/2003  
TEMPERATURE : 24°C  
HUMIDITY : 50%

*Hiroka Umeyama*  
Engineer : Hiroka Umeyama

**PK DETECT(S/A :Span 2MHz, RBW 300Hz, VBW 300Hz, sweep time 45sec)**

Frequency	Reading	Atten.	Cable Loss	Result	Limit
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]
824.0	-66.1	30.0	1.4	-34.7	-13.0
849.0	-47.6	30.0	1.4	-16.2	-13.0

Sample Calculation : Result = Reading + Atten. + Cable Loss



# DATA OF BAND EDGES(CONDUCTED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (AMPS)  
Supervisory Audio Tone

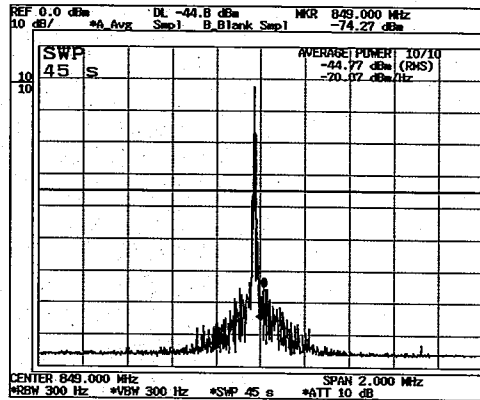
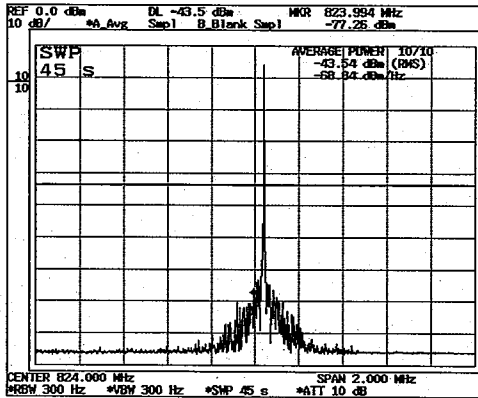
REPORT NO : 23HE0073-HO-1  
REGULATION : Fcc Part 22 Section 22.917(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 10/16/2003  
TEMPERATURE : 24°C  
HUMIDITY : 50%

*Hiroka Umeyama*  
\_\_\_\_\_  
Engineer : Hiroka Umeyama

**PK DETECT(S/A :Span 2MHz, RBW 300Hz, VBW 300Hz, sweep time 45sec )**

Frequency [MHz]	Reading [dBm]	Atten. [dB]	Cable Loss [dB]	Result [dBm]	Limit [dBm]
824.0	-77.3	30.0	1.4	-45.9	-13.0
849.0	-74.3	30.0	1.4	-42.9	-13.0

Sample Calculation : Result = Reading + Atten. + Cable Loss



# DATA OF BAND EDGES(CONDUCTED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

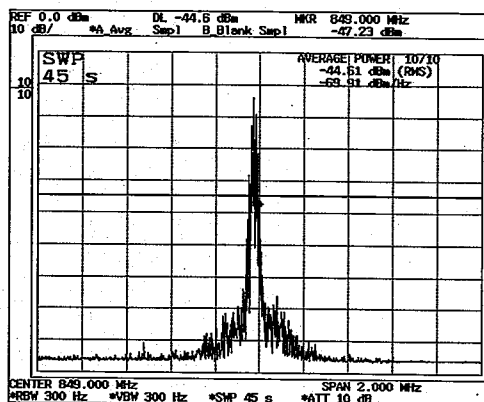
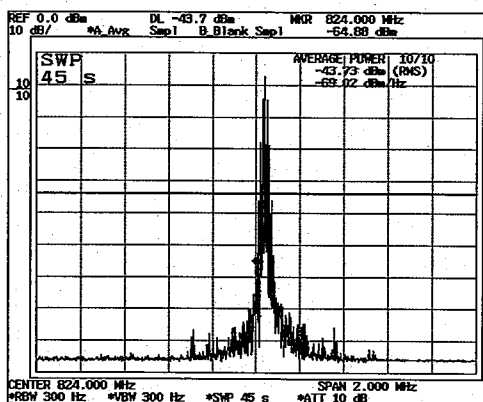
COMPANY	: ALPS Electric Co., Ltd	REPORT NO	: 23HE0073-HO-1
EQUIPMENT	: CDMA data module	REGULATION	: Fcc Part 22 Section 22.917(b)
MODEL	: UGEA3A	TEST METHOD	: Fcc Part 2 Section 2.1049
S/N	: 00000011	TEST DISTANCE	: -
FCC ID	: CWTUGEA3A	DATE	: 10/16/2003
IC Number	: -	TEMPERATURE	: 24°C
POWER	: DC3.6V	HUMIDITY	: 50%
MODE	: Tx (AMPS)		
	: Supervisory Audio Tone + Signaling Tone		

Engineer :   
Hiroka Umeyama

**PK DETECT(S/A :Span 2MHz , RBW 300Hz , VBW 300Hz, sweep time 45sec )**

Frequency	Reading	Atten.	Cable Loss	Result	Limit
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]
824.0	-64.9	30.0	1.4	-33.5	-13.0
849.0	-47.2	30.0	1.4	-15.9	-13.0

Sample Calculation : Result = Reading + Atten. + Cable Loss



# DATA OF BAND EDGES(CONDUCTED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

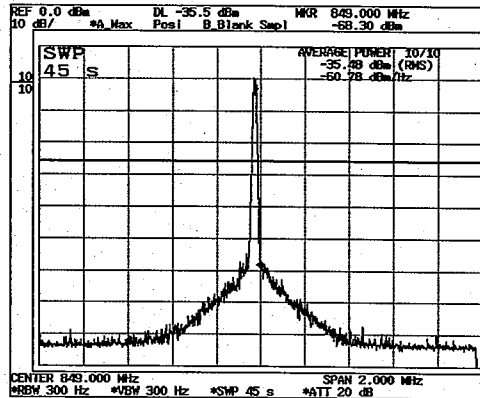
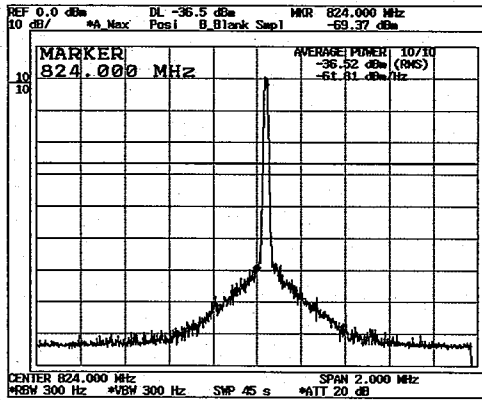
COMPANY	: ALPS Electric Co., Ltd	REPORT NO	: 23HE0073-HO-1
EQUIPMENT	: CDMA data module	REGULATION	: Fcc Part 22 Section 22.917(b)
MODEL	: UGEA3A	TEST METHOD	: Fcc Part 2 Section 2.1049
S/N	: 00000011	TEST DISTANCE	: -
FCC ID	: CWTUGEA3A	DATE	: 10/16/2003
IC Number	: -	TEMPERATURE	: 24°C
POWER	: DC3.6V	HUMIDITY	: 50%
MODE	: Tx (AMPS)		
	: Voice + Supervisory Audio Tone		

  
 Engineer : Hiroka Umeyama

**PK DETECT(S/A :Span 2MHz, RBW 300Hz, VBW 300Hz, sweep time 45sec )**

Frequency	Reading	Atten.	Cable Loss	Result	Limit
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]
824.0	-48.9	30.0	1.4	-17.6	-13.0
849.0	-68.3	30.0	1.4	-37.0	-13.0

Sample Calculation : Result = Reading + Atten. + Cable Loss



# DATA OF BAND EDGES(CONDUCTED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (CDMA)

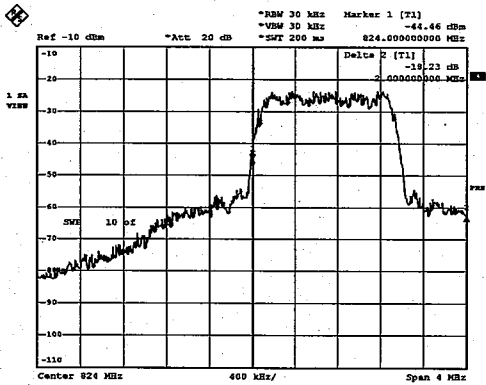
REPORT NO : 23HE0073-HO-1  
REGULATION : Fcc Part 22 Section 22.917(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 06/16/2003  
TEMPERATURE : 22°C  
HUMIDITY : 60%

  
 Engineer : Hiroka Umeyama

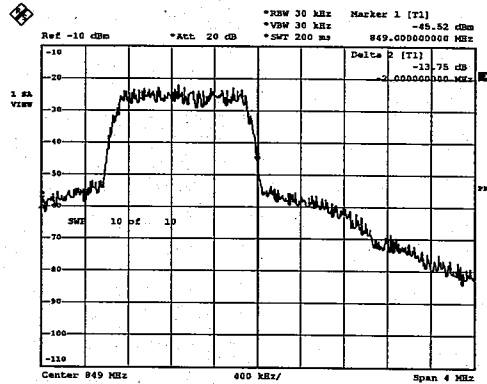
**PK DETECT(S/A :Span 4MHz, RBW 30kHz, VBW 30kHz, sweep time 200msec)**

Frequency [MHz]	Reading [dBm]	Atten. [dB]	Cable Loss [dB]	Result [dBm]	Limit [dBm]
824.0	-44.6	30.0	1.4	-13.3	-13.0
849.0	-45.5	30.0	1.4	-14.2	-13.0

Sample Calculation : Result = Reading + Atten. + Cable Loss



Date: 16.JUN.2003 17:20:27



Date: 16.JUN.2003 17:52:43



# DATA OF BAND EDGES(CONDUCTED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (CDMA 1X)

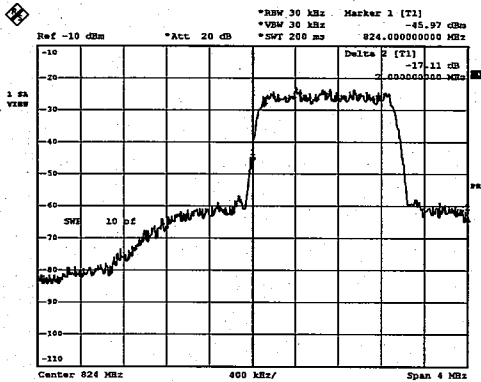
REPORT NO : 23HE0073-HO-1  
REGULATION : Fcc Part 22 Section 22.917(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 06/16/2003  
TEMPERATURE : 22°C  
HUMIDITY : 60%

*Hiroka Umeyama*  
Engineer : Hiroka Umeyama

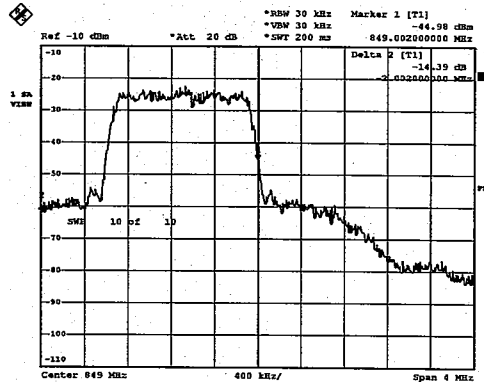
PK DETECT(S/A :Span 4MHz, RBW 30kHz, VBW 30kHz, sweep time 200msec)

Frequency	Reading	Atten.	Cable Loss	Result	Limit
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]
824.0	-45.0	30.0	1.4	-13.6	-13.0
849.0	-46.0	30.0	1.4	-14.6	-13.0

Sample Calculation : Result = Reading + Atten. + Cable Loss



Date: 16.JUN.2003 16:21:47



Date: 16.JUN.2003 16:16:05

# DATA OF BAND EDGES(CONDUCTED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (PCS)

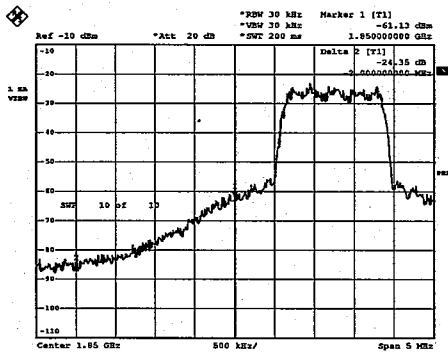
REPORT NO : 23HE0073-HO-1  
REGULATION : Fcc Part 24 Section 24.238(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 06/16/2003  
TEMPERATURE : 22°C  
HUMIDITY : 60%

*Hiroka Umeyama*  
\_\_\_\_\_  
Engineer : Hiroka Umeyama

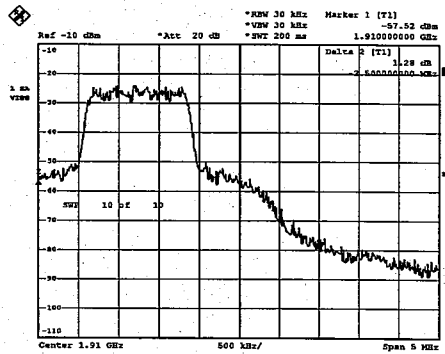
**PK DETECT(S/A :Span 5MHz, RBW 30kHz, VBW 30kHz, sweep time 200msec )**

Frequency	Reading	Atten.	Cable Loss	Result	Limit
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]
1850.0	-61.1	30.0	1.9	-29.2	-13.0
1910.0	-57.5	30.0	1.9	-25.6	-13.0

Sample Calculation : Result = Reading + Atten. + Cable Loss



Date: 16.JUN.2003 17:57:59



Date: 16.JUN.2003 17:59:33

# DATA OF BAND EDGES(CONDUCTED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement Room

COMPANY : ALPS Electric Co., Ltd  
EQUIPMENT : CDMA data module  
MODEL : UGEA3A  
S/N : 00000011  
FCC ID : CWTUGEA3A  
IC Number : -  
POWER : DC3.6V  
MODE : Tx (PCS 1X)

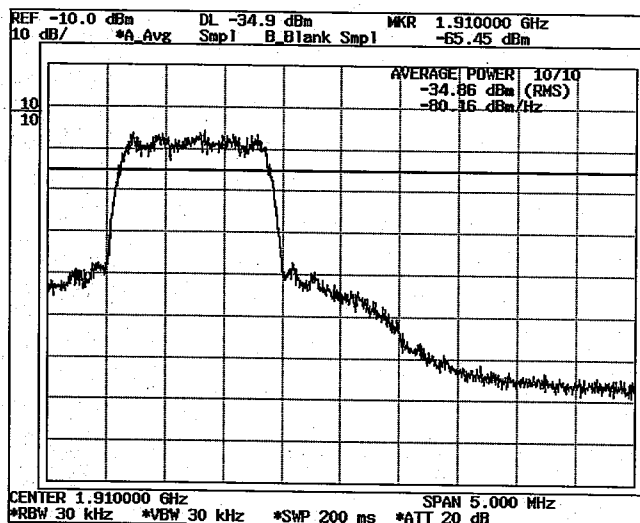
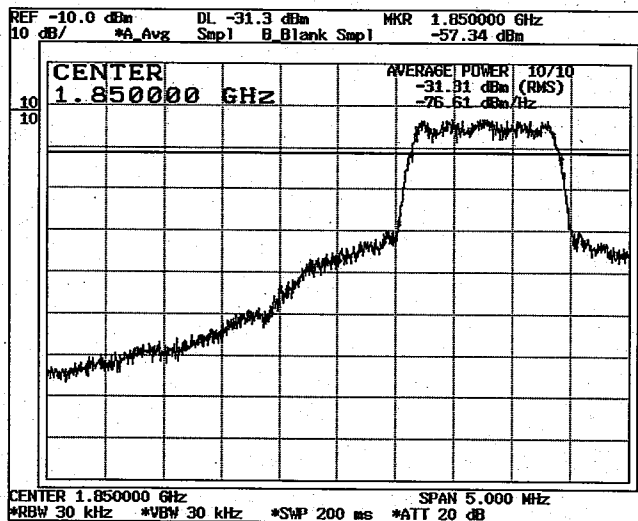
REPORT NO : 23HE0073-HO - 1  
REGULATION : Fcc Part 24 Section 24.238(b)  
TEST METHOD : Fcc Part 2 Section 2.1049  
TEST DISTANCE : -  
DATE : 10/16/2003  
TEMPERATURE : 24°C  
HUMIDITY : 50%

  
 \_\_\_\_\_  
 Engineer : Hiroka Umeyama

**PK DETECT(S/A :Span 5MHz, RBW 30kHz, VBW 30kHz, sweep time 200msec)**

Frequency	Reading	Atten.	Cable Loss	Result	Limit
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]
1850.0	-57.3	30.0	1.9	-25.4	-13.0
1910.0	-65.5	30.0	1.9	-33.5	-13.0

Sample Calculation : Result = Reading + Atten. + Cable Loss



## DATA OF BAND EDGES (RADIATED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.2 Semi Anechoic Chamber

COMPANY : ALPS Electric Co.,Ltd.  
EQUIPMENT : CDMA data Module  
MODEL : UGEA3A  
S/N : 00000013  
FCC ID : CWTUGEA3A  
POWER : DC 3.6V  
MODE : Transmitting(AMPS)

REPORT NO : 23HE0073-HO-1  
REGULATION : FCC Part22 Section 22.917(b)  
TEST METHOD : FCC Part2 Section 2.1049  
TEST DISTANCE : 3m  
DATE : 06/11/2003 06/19/2003  
TEMPERATURE : 27deg. C 27deg. C  
HUMIDITY : 60% 63%

  
ENGINEER : Hiroka Umeyama

ANT Type 1

No.	FREQ [MHz]	SG READING		CABLE LOSS [dB]	ANT GAIN [dBi]	ATTEN [dB]	RESULT		LIMITS (ERP) [dBm]	MARGIN	
		HOR [dBm]	VER [dBm]				HOR [dBm]	VER [dBm]		HOR [dB]	VER [dB]
1	824.00	-47.1	-35.2	1.9	2.15	10.0	-59.0	-47.1	-13.0	46.0	34.1
2	849.00	-38.2	-19.3	2.0	2.15	10.0	-50.2	-31.3	-13.0	37.2	18.3

ANT Type 2

No.	FREQ [MHz]	SG READING		CABLE LOSS [dB]	ANT GAIN [dBi]	ATTEN [dB]	RESULT		LIMITS (ERP) [dBm]	MARGIN	
		HOR [dBm]	VER [dBm]				HOR [dBm]	VER [dBm]		HOR [dB]	VER [dB]
1	824.00	-40.8	-33.7	1.9	2.15	10.0	-52.7	-45.6	-13.0	39.7	32.6
2	849.00	-23.0	-18.9	2.0	2.15	10.0	-35.0	-30.9	-13.0	22.0	17.9

CALCULATION:READING(SG)-LOSS(CABLE)+ANT.GAIN-ATTEN-2.15

RxANTENNA:Biconical Antenna(30-300MHz), Logperiodic Antenna(300-1000MHz), Horn Antenna(1-13GHz)

TxANTENNA:Dipole Antenna(30-1000MHz), Horn Antenna(1-13GHz)

## DATA OF BAND EDGES (RADIATED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.2 Semi Anechoic Chamber

COMPANY : ALPS Electric Co.,Ltd.  
EQUIPMENT : CDMA data Module  
MODEL : UGEA3A  
S/ N : 00000013  
FCC ID : CWTUGEA3A  
POWER : DC 3.6V  
MODE : Transmitting(CDMA)

REPORT NO : 23HE0073-HO - 1  
REGULATION : FCC Part22 Section 22.917(b)  
TEST METHOD : FCC Part2 Section 2.1049  
TEST DISTANCE : 3m  
DATE : 06/11/2003 06/19/2003  
TEMPERATURE : 27deg. C 27deg. C  
HUMIDITY : 60% 63%

  
ENGINEER : Hiroka Umeyama

### ANT Type 1

No.	FREQ [MHz]	SG READING		CABLE LOSS [dB]	ANT GAIN [dBi]	ATTEN [dB]	RESULT		LIMITS (ERP) [dBm]	MARGIN	
		HOR [dBm]	VER [dBm]				HOR [dBm]	VER [dBm]		HOR [dB]	VER [dB]
1	824.00	-15.5	-5.6	1.9	2.15	10.0	-27.4	-17.5	-13.0	14.4	4.5
2	849.00	-11.9	-2.7	2.0	2.15	10.0	-23.9	-14.7	-13.0	10.9	1.7

### ANT Type 2

No.	FREQ [MHz]	SG READING		CABLE LOSS [dB]	ANT GAIN [dBi]	ATTEN [dB]	RESULT		LIMITS (ERP) [dBm]	MARGIN	
		HOR [dBm]	VER [dBm]				HOR [dBm]	VER [dBm]		HOR [dB]	VER [dB]
1	824.00	-11.1	-6.6	1.9	2.15	10.0	-23.0	-18.5	-13.0	10.0	5.5
2	849.00	-6.5	-7.0	2.0	2.15	10.0	-18.5	-19.0	-13.0	5.5	6.0

CALCULATION:READING(SG)-LOSS(CABLE)+ANT.GAIN-ATTEN-2.15

RxANTENNA:Biconical Antenna(30-300MHz), Logperiodic Antenna(300-1000MHz), Horn Antenna(1-13GHz)

TxANTENNA:Dipole Antenna(30-1000MHz), Horn Antenna(1-13GHz)

## DATA OF BAND EDGES (RADIATED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.2 Semi Anechoic Chamber

COMPANY : ALPS Electric Co.,Ltd.  
EQUIPMENT : CDMA data Module  
MODEL : UGEA3A  
S/ N : 00000013  
FCC ID : CWTUGEA3A  
POWER : DC 3.6V  
MODE : Transmitting(CDMA 1X)

REPORT NO : 23HE0073-HO - 1  
REGULATION : FCC Part22 Section 22.917(b)  
TEST METHOD : FCC Part2 Section 2.1049  
TEST DISTANCE : 3m  
DATE : 06/11/2003 06/19/2003  
TEMPERATURE : 27deg. C 27deg. C  
HUMIDITY : 60% 63%

  
ENGINEER : Hiroka Umeyama

ANT Type 1

No.	FREQ [MHz]	SG READING [dBm]		CABLE LOSS [dB]	ANT GAIN [dBi]	ATTEN [dB]	RESULT [dBm]		LIMITS (ERP) [dBm]	MARGIN [dB]	
		HOR	VER				HOR	VER		HOR	VER
1	824.00	-13.3	-4.8	1.9	2.15	10.0	-25.2	-16.7	-13.0	12.2	3.7
2	849.00	-19.0	-5.4	2.0	2.15	10.0	-31.0	-17.4	-13.0	18.0	4.4

ANT Type 2

No.	FREQ [MHz]	SG READING [dBm]		CABLE LOSS [dB]	ANT GAIN [dBi]	ATTEN [dB]	RESULT [dBm]		LIMITS (ERP) [dBm]	MARGIN [dB]	
		HOR	VER				HOR	VER		HOR	VER
1	824.00	-11.7	-6.8	1.9	2.15	10.0	-23.6	-18.7	-13.0	10.6	5.7
2	849.00	-5.2	-1.7	2.0	2.15	10.0	-17.2	-13.7	-13.0	4.2	0.7

CALCULATION:READING(SG)-LOSS(CABLE)+ANT.GAIN-ATTEN-2.15

RxANTENNA:Biconical Antenna(30-300MHz), Logperiodic Antenna(300-1000MHz), Horn Antenna(1-13GHz)

TxANTENNA:Dipole Antenna(30-1000MHz), Horn Antenna(1-13GHz)

## DATA OF BAND EDGES (RADIATED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.2 Semi Anechoic Chamber

COMPANY : ALPS Electric Co.,Ltd.  
EQUIPMENT : CDMA data Module  
MODEL : UGEA3A  
S/ N : 00000013  
FCC ID : CWTUGEA3A  
POWER : DC 3.6V  
MODE : Transmitting(PCS)

REPORT NO : 23HE0073-HO - 1  
REGULATION : FCC Part24 Section 24.238(b)  
TEST METHOD : FCC Part2 Section 2.1049  
TEST DISTANCE : 3m  
DATE : 06/11/2003 06/19/2003  
TEMPERATURE : 27deg. C 27deg. C  
HUMIDITY : 60% 63%

  
ENGINEER : Hiroka Umeyama

### ANT Type 1

No.	FREQ [MHz]	SG READING		CABLE LOSS [dB]	ANT GAIN [dBi]	ATTEN [dB]	RESULT		LIMITS (EIRP) [dBm]	MARGIN	
		HOR [dBm]	VER [dBm]				HOR [dBm]	VER [dBm]		HOR [dB]	VER [dB]
1	1850.00	-28.5	-5.6	2.6	9.60	30.0	-51.5	-28.6	-13.0	38.5	15.6
2	1910.00	-23.6	-8.2	2.6	9.90	30.0	-46.3	-30.9	-13.0	33.3	17.9

### ANT Type 2

No.	FREQ [MHz]	SG READING		CABLE LOSS [dB]	ANT GAIN [dBi]	ATTEN [dB]	RESULT		LIMITS (EIRP) [dBm]	MARGIN	
		HOR [dBm]	VER [dBm]				HOR [dBm]	VER [dBm]		HOR [dB]	VER [dB]
1	1850.00	-26.7	-13.9	2.6	9.60	30.0	-49.7	-36.9	-13.0	36.7	23.9
2	1910.00	-19.5	-10.6	2.6	9.90	30.0	-42.2	-33.3	-13.0	29.2	20.3

CALCULATION:READING(SG)-LOSS(CABLE)+ANT.GAIN-ATTEN

RxANTENNA:Biconical Antenna(30-300MHz), Logperiodic Antenna(300-1000MHz), Horn Antenna(1-13GHz)

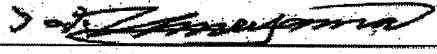
TxANTENNA:Dipole Antenna(30-1000MHz), Horn Antenna(1-13GHz)

## DATA OF BAND EDGES (RADIATED)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.2 Semi Anechoic Chamber

COMPANY : ALPS Electric Co.,Ltd.  
EQUIPMENT : CDMA data Module  
MODEL : UGEA3A  
S/N : 00000012  
FCC ID : CWTUGEA3A  
POWER : DC 3.6V  
MODE : Transmitting(PCS 1X)

REPORT NO : 23HE0073-HO - 1  
REGULATION : FCC Part24 Section 24.238(b)  
TEST METHOD : FCC Part2 Section 2.1049  
TEST DISTANCE : 3m  
DATE : 06/11/2003 06/19/2003  
TEMPERATURE : 27deg. C 27deg. C  
HUMIDITY : 60% 63%

  
ENGINEER : Hiroka Umeyama

ANT Type 1

No.	FREQ [MHz]	SG READING		CABLE LOSS [dB]	ANT GAIN [dBi]	ATTEN [dB]	RESULT		LIMITS (EIRP) [dBm]	MARGIN	
		HOR [dBm]	VER [dBm]				HOR [dBm]	VER [dBm]		HOR [dB]	VER [dB]
1	1850.00	-21.1	8.0	2.6	9.60	30.0	-44.1	-15.0	-13.0	31.1	2.0
2	1910.00	-15.4	2.6	2.6	9.90	30.0	-38.1	-20.1	-13.0	25.1	7.1

ANT Type 2

No.	FREQ [MHz]	SG READING		CABLE LOSS [dB]	ANT GAIN [dBi]	ATTEN [dB]	RESULT		LIMITS (EIRP) [dBm]	MARGIN	
		HOR [dBm]	VER [dBm]				HOR [dBm]	VER [dBm]		HOR [dB]	VER [dB]
1	1850.00	-18.6	4.9	2.6	9.60	30.0	-41.6	-18.1	-13.0	28.6	5.1
2	1910.00	-10.3	-3.7	2.6	9.90	30.0	-33.0	-26.4	-13.0	20.0	13.4

CALCULATION:READING(SG)-LOSS(CABLE)+ANT.GAIN-ATTEN

RxANTENNA:Biconical Antenna(30-300MHz), Logperiodic Antenna(300-1000MHz), Horn Antenna(1-13GHz)

TxANTENNA:Dipole Antenna(30-1000MHz), Horn Antenna(1-13GHz)