

**GRAPHICAL SECTION PART 1
FOR RFI TEST REPORT SERIAL NO:
RFI/MPTB2/RP43166A**

Test Of: Red-M (Communications) Ltd.
Smart Wireless Access Server

To: F.C.C. Part 15 Subpart C: 2000
(Intentional Radiators)
Section 15.247
(Requested Parts Only)

Radio Frequency Investigation Ltd, Ewhurst Park, Ramsdell,
Basingstoke, Hampshire, RG26 5RQ, ENGLAND.
Tel: +44 (0) 1256 851193 Fax: +44 (0) 1256 851192

Registered in England, No. 211 7901.
Registered Office: Ewhurst Park, Ramsdell,
Basingstoke, Hampshire RG26 5RQ



EMC Department

Test Of: Red-M (Communications) Ltd.
Smart Wireless Access ServerTo: F.C.C. Part 15 Subpart C: 1998 (Intentional Radiators) Section 15.247
(Requested Parts Only)

Graphical Test Results

Graph Reference Number	Title
GPH\41366JD01\001	Radiated Emissions, FCC Part 15.209, Bottom Channel (30 MHz to 1000 MHz)
GPH\41366JD01\002	Radiated Emissions, FCC Part 15.209, Middle Channel (30 MHz to 1000 MHz)
GPH\41366JD01\003	Radiated Emissions, FCC Part 15.209, Top Channel (30 MHz to 1000 MHz)
GPH\41366JD01\004	Radiated Emissions, FCC Part 15.209, Hopping Mode (30 MHz to 1000 MHz)
GPH\41366JD01\005	Radiated Emissions, FCC Part 15.209, Receiver Mode (30 MHz to 1000 MHz)
GPH\41366JD01\006	Radiated Emissions, FCC Part 15.209, Receiver Mode (1 GHz to 2 GHz)
GPH\41366JD01\007	Radiated Emissions, FCC Part 15.209, Frequency Hopping Mode (1 GHz to 2 GHz)
GPH\41366JD01\008	Radiated Emissions, FCC Part 15.209, Bottom Channel (1 GHz to 2 GHz)
GPH\41366JD01\009	Radiated Emissions, FCC Part 15.209, Middle Channel (1 GHz to 2 GHz)
GPH\41366JD01\010	Radiated Emissions, FCC Part 15.209, Top Channel (1 GHz to 2 GHz)
GPH\41366JD01\011	Radiated Emissions, FCC Part 15.209, Top Channel (2 GHz to 2.4 GHz)
GPH\41366JD01\012	Radiated Emissions, FCC Part 15.209, Top Channel (2.484 GHz to 4 GHz)
GPH\41366JD01\013	Radiated Emissions, FCC Part 15.209, Middle Channel (2 GHz to 2.4 GHz)
GPH\41366JD01\014	Radiated Emissions, FCC Part 15.209, Middle Channel (2.484 GHz to 4 GHz)
GPH\41366JD01\015	Radiated Emissions, FCC Part 15.209, Bottom Channel (2 GHz to 2.4 GHz)
GPH\41366JD01\016	Radiated Emissions, FCC Part 15.209, Bottom Channel (2.484 GHz to 4 GHz)

EMC Department

**Test Of: Red-M (Communications) Ltd.
Smart Wireless Access Server**

**To: F.C.C. Part 15 Subpart C: 1998 (Intentional Radiators) Section 15.247
(Requested Parts Only)**

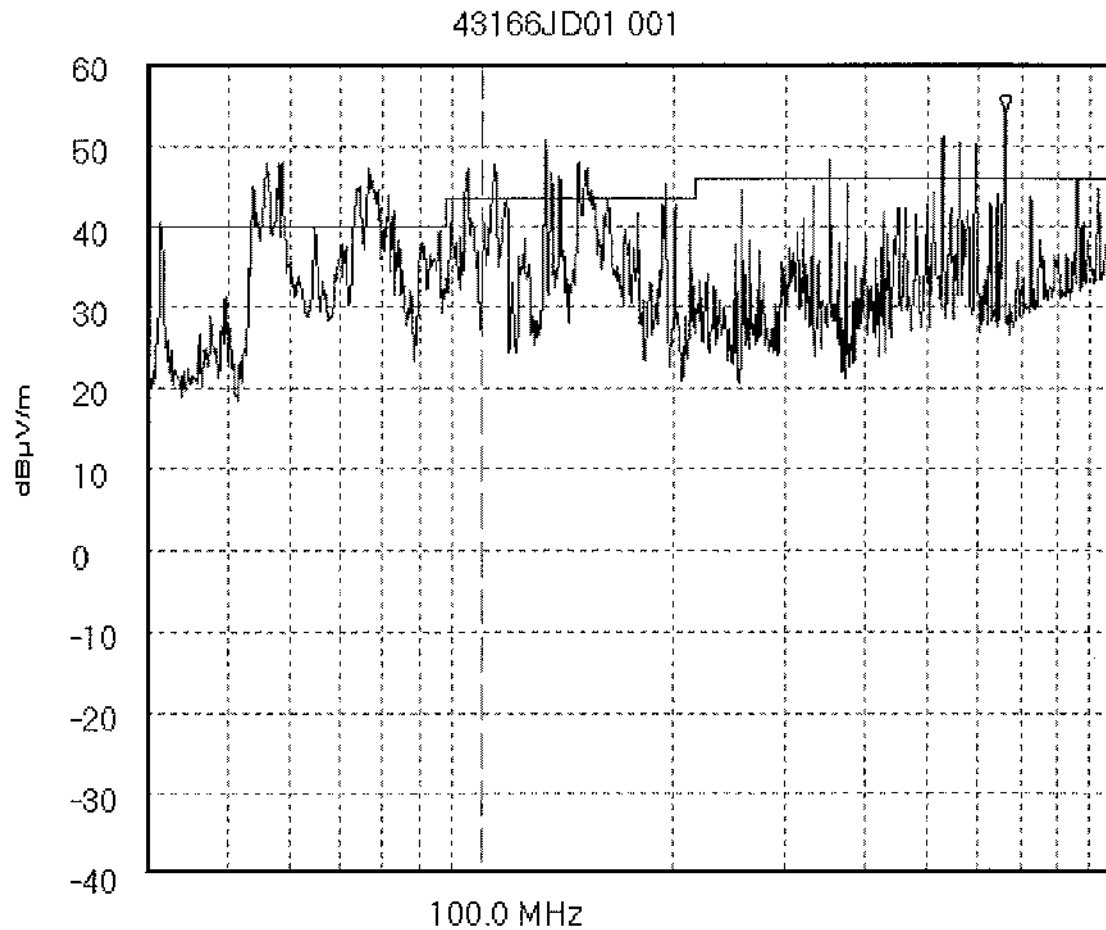
Graphical Test Results (continued)

Graph Reference Number	Title
GPH\41366JD01\017	Radiated Emissions, FCC Part 15.209, Hopping Mode (2 GHz to 2.4 GHz)
GPH\41366JD01\018	Radiated Emissions, FCC Part 15.209, Hopping Mode (2.484 GHz to 4 GHz)
GPH\41366JD01\019	Radiated Emissions, FCC Part 15.209, Receiver Mode (2 GHz to 2.4 GHz)
GPH\41366JD01\020	Radiated Emissions, FCC Part 15.209, Receiver Mode (2.484 GHz to 4 GHz)

GPH\43166JD01\001

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Bottom Channel)



Trace 1

rad_30_to_1000

Start 30.0 MHz; Stop 1.0 GHz - Log Scale

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 120.0 kHz; VBW 100.0 kHz; Att 0 dB; Swp 380.0 mS

Peak 661.666 MHz, 54.01 dBµV/m

Limit/Mask: rad_30_to_1000;

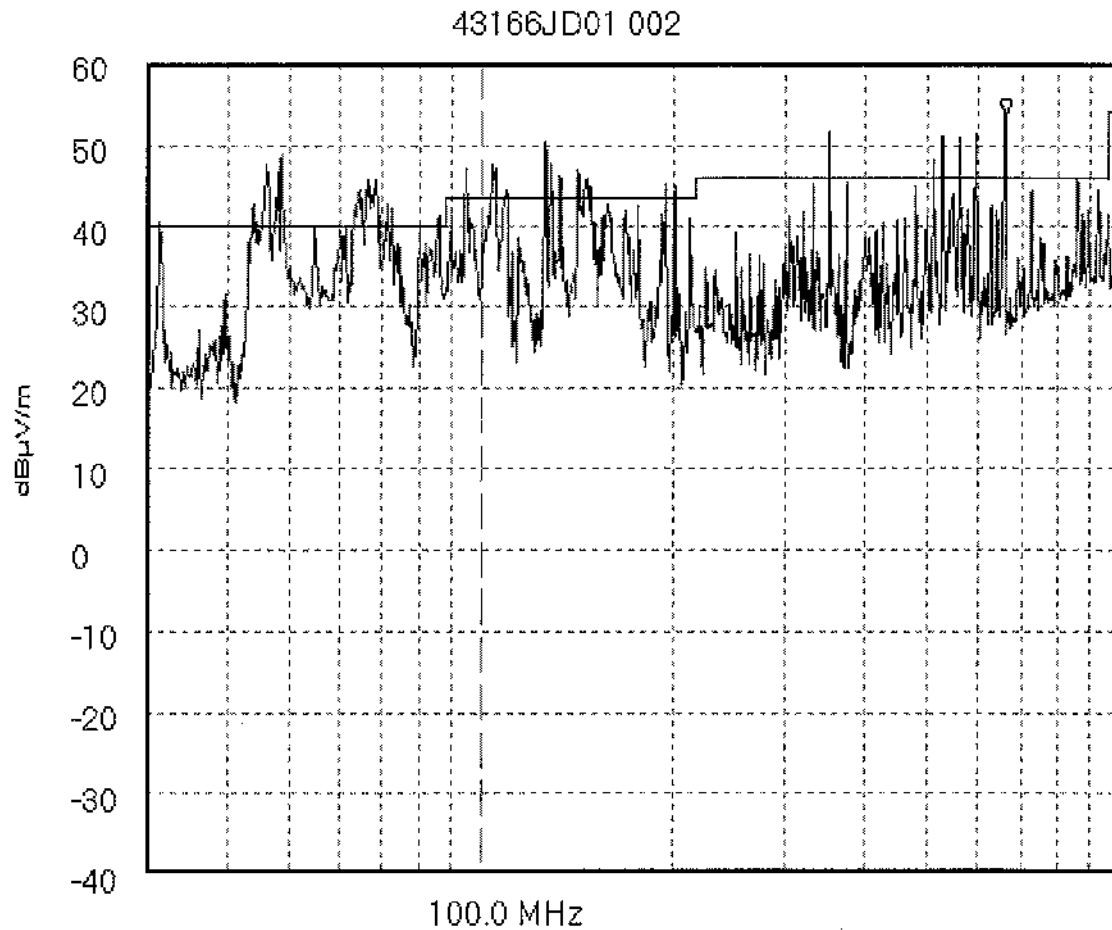
Transducer Factors: A490

19/02/2002 9:50:17 AM

GPH\43166JD01\002

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Middle Channel)



Trace 1

rad_30_to_1000

Start 30.0 MHz; Stop 1.0 GHz - Log Scale

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 120.0 kHz; VBW 100.0 kHz; Att 0 dB; Swp 80.0 mS

Peak 661.666 MHz, 53.5 dBµV/m

Limit/Mask: rad_30_to_1000;

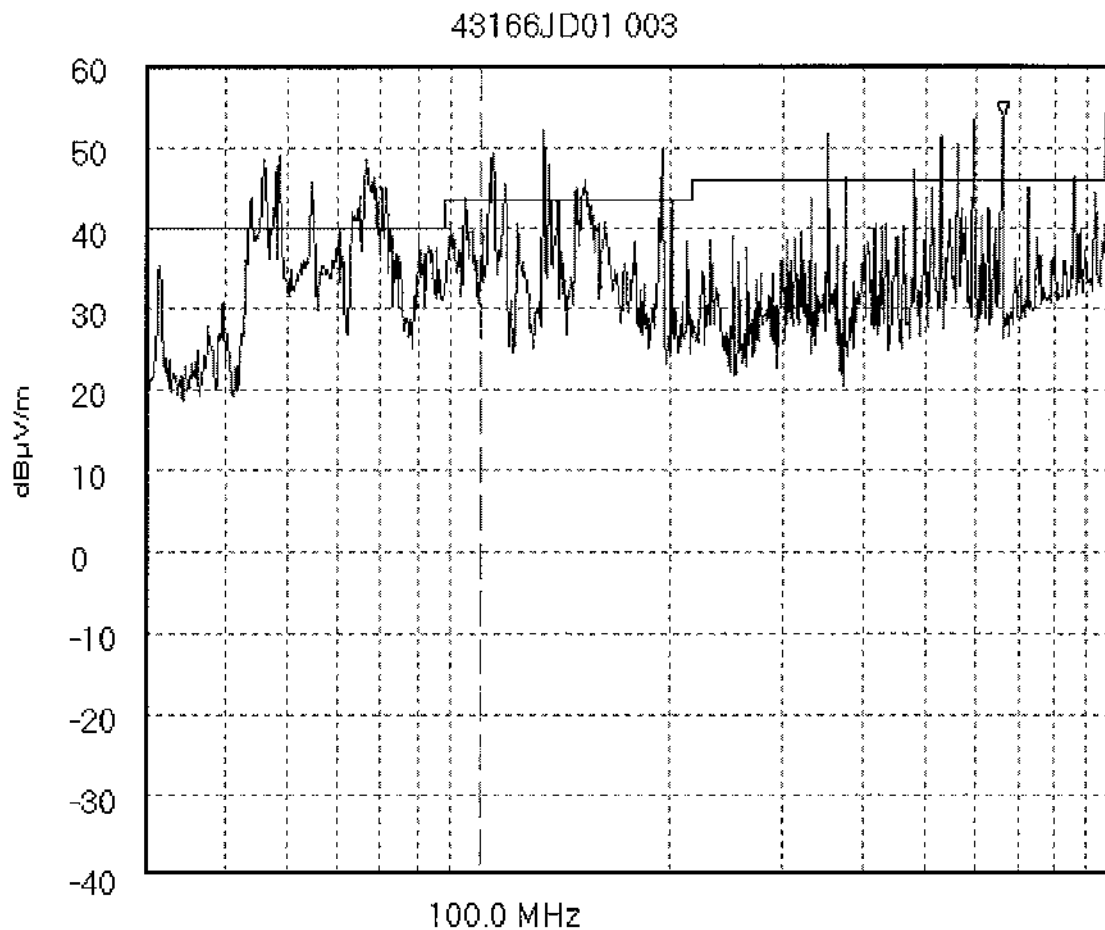
Transducer Factors: A490

19/02/2002 10:05:19 AM

GPH\43166JD01\003

Radiated Emissions, FCC Part 15.209, PreScan @ 3m.

Tested For Red-M, EUT: Smart Wireless Access Server (Top Channel)



Trace 1

rad_30_to_1000

Start 30.0 MHz; Stop 1.0 GHz - Log Scale

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 120.0 kHz; VBW 100.0 kHz; Att 0 dB; Swp 80.0 mS

Peak 661.666 MHz, 53.53 dBµV/m

Limit/Mask: rad_30_to_1000

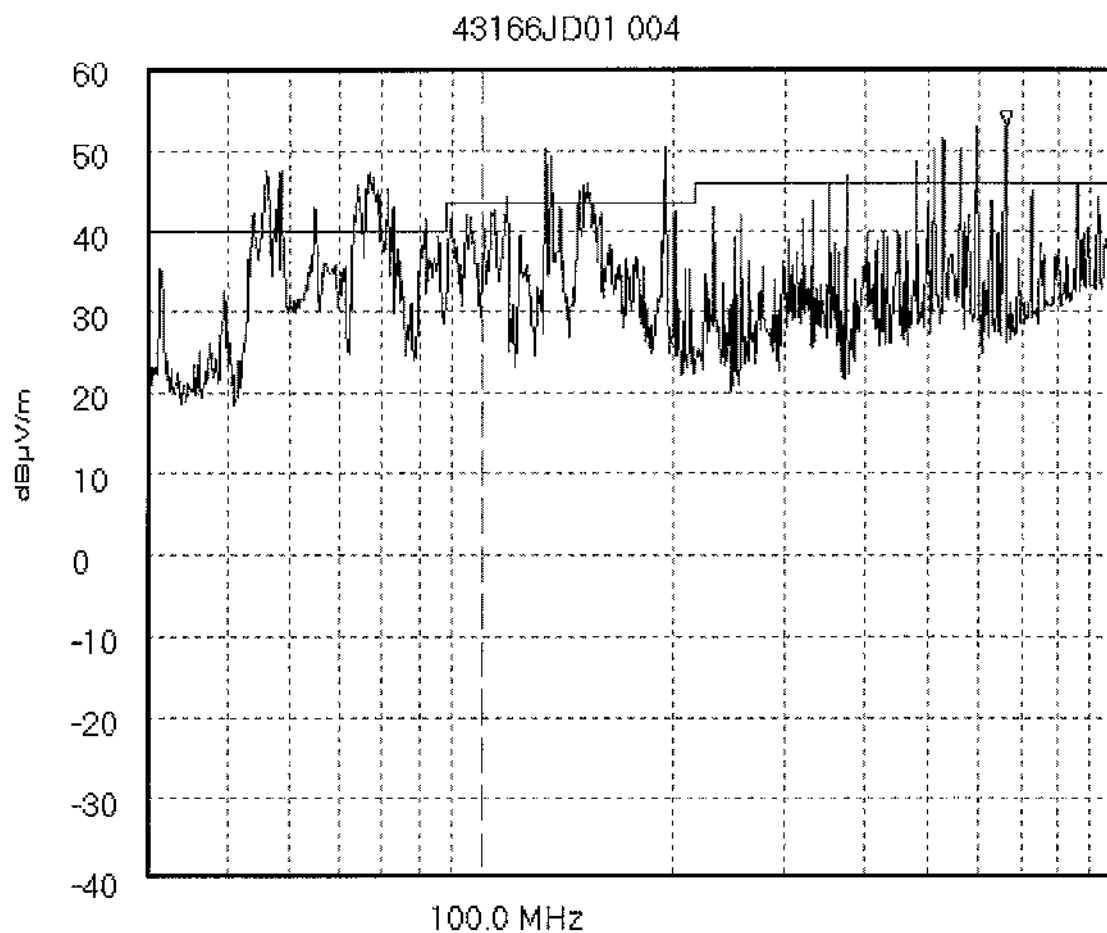
Transducer Factors: A490

19/02/2002 10:19:13 AM

GPH\43166JD01\004

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Hopping Mode)



Trace 1

rad_30_to_1000

Start 30.0 MHz; Stop 1.0 GHz - Log Scale

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 120.0 kHz; VBW 100.0 kHz; Att 0 dB; Swp 380.0 mS

Peak 661.666 MHz, 52.95 dBµV/m

Limit/Mask: rad_30_to_1000;

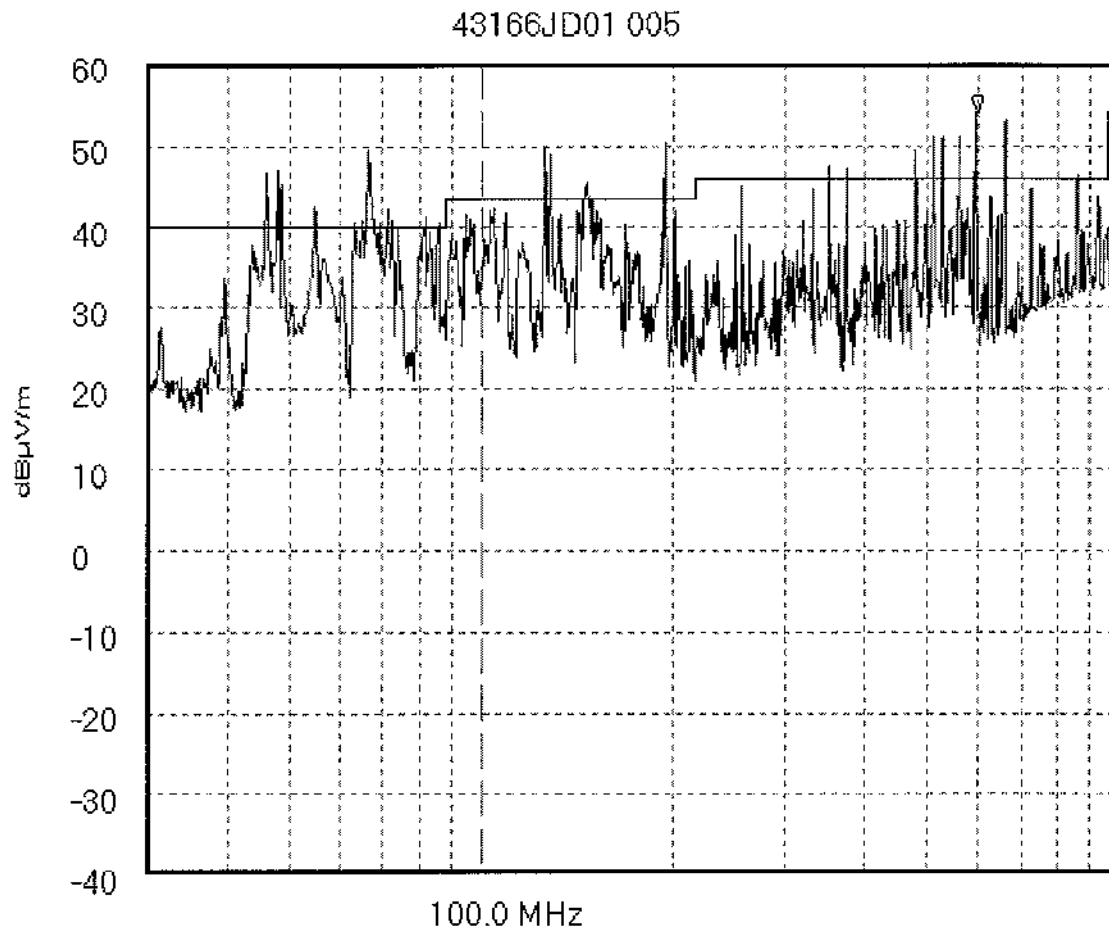
Transducer Factors: A490

19/02/2002 10:29:00 AM

GPH\43166JD01\005

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Receiver Mode)



Trace 1

rad_30_to_1000

Start 30.0 MHz; Stop 1.0 GHz - Log Scale

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 120.0 kHz; VBW 100.0 kHz; Att 0 dB; Swp 80.0 mS

Peak 597.922 MHz, 54.09 dBµV/m

Limit/Mask: rad_30_to_1000;

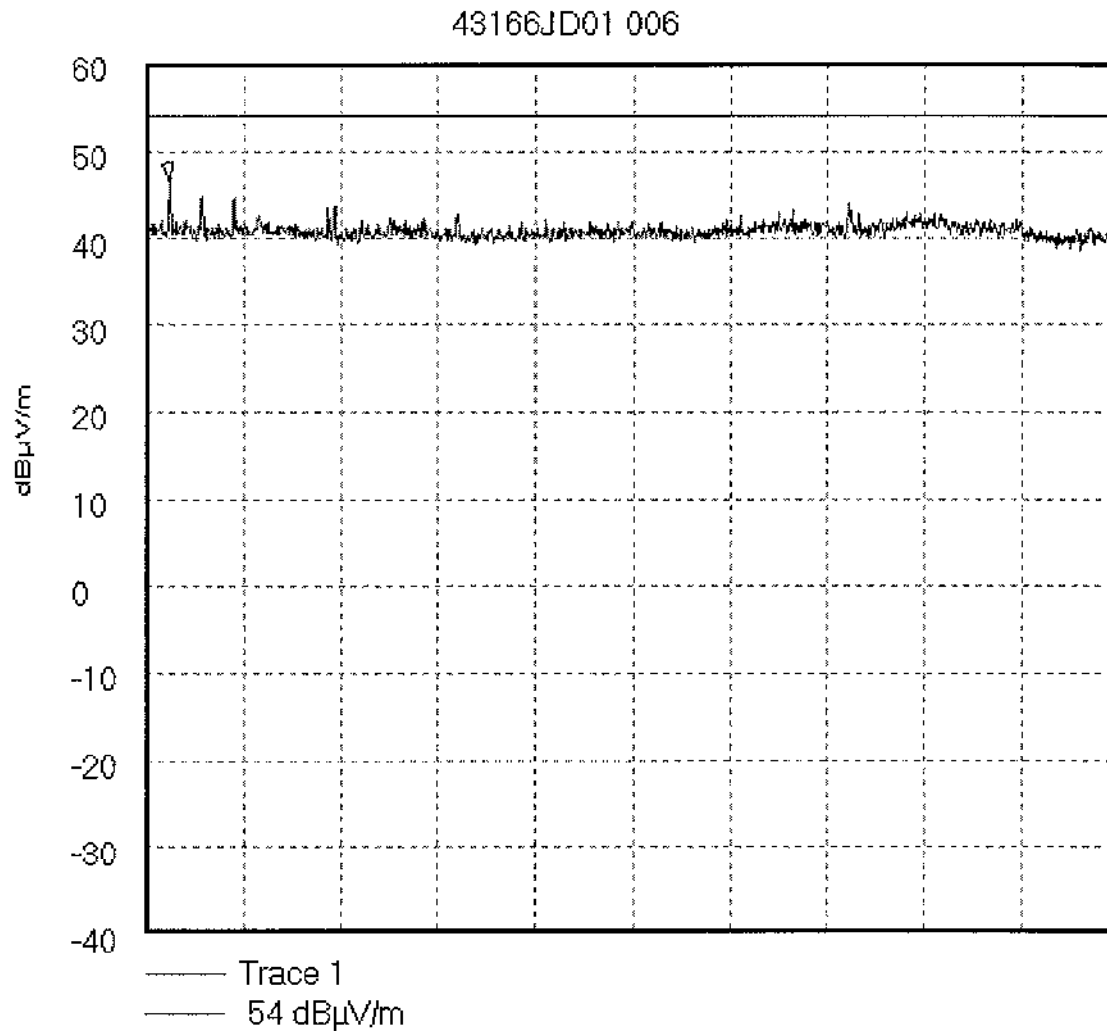
Transducer Factors: A490

19/02/2002 10:37:52 AM

GPH\43166JD01\006

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Receiver Mode)



Start 1.0 GHz; Stop 2.0 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 1.024 GHz, 46.72 dBµV/m

Display Line: 54 dBµV/m; ; Limit Test Passed

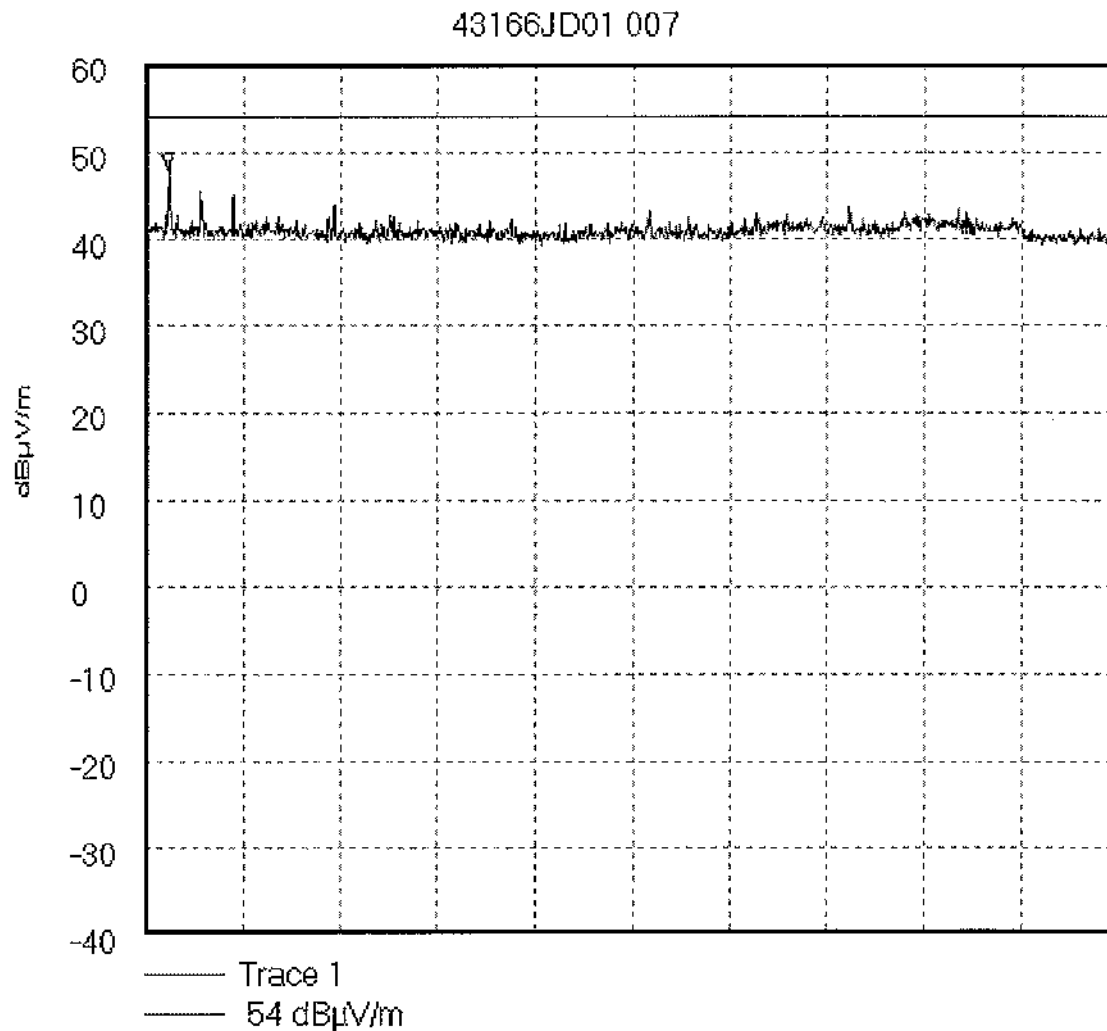
Transducer Factors: 1 to 2

19/02/2002 11:21:11 AM

GPH\43166JD01\007

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Frequency Hopping Mode)



Start 1.0 GHz; Stop 2.0 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 1.024 GHz, 48.02 dBµV/m

Display Line: 54 dBµV/m; : Limit Test Passed

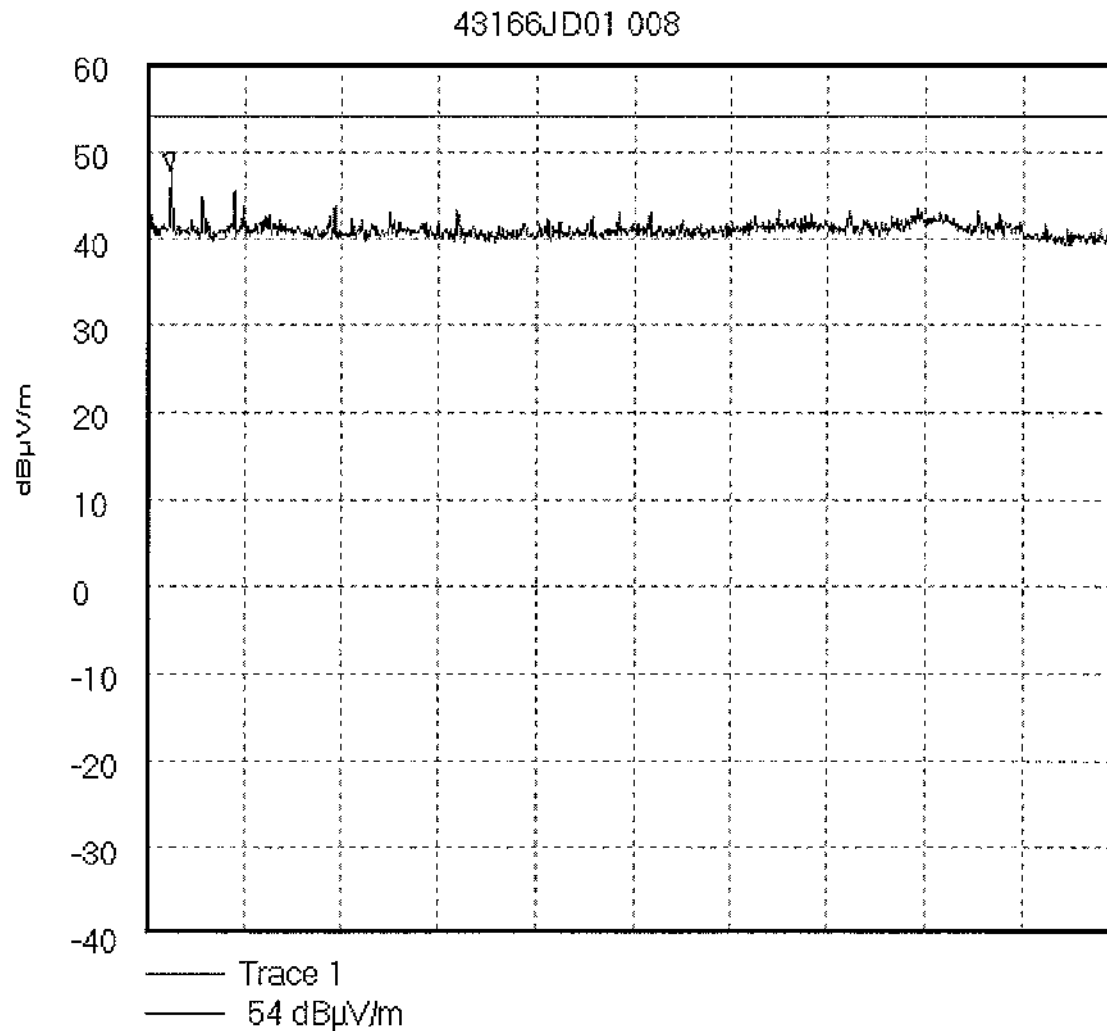
Transducer Factors: 1 to 2

19/02/2002 11:25:08 AM

GPH\43166JD01\008

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Bottom Channel)



Start 1.0 GHz; Stop 2.0 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 1.024 GHz, 47.84 dBµV/m

Display Line: 54 dBµV/m; ; Limit Test Passed

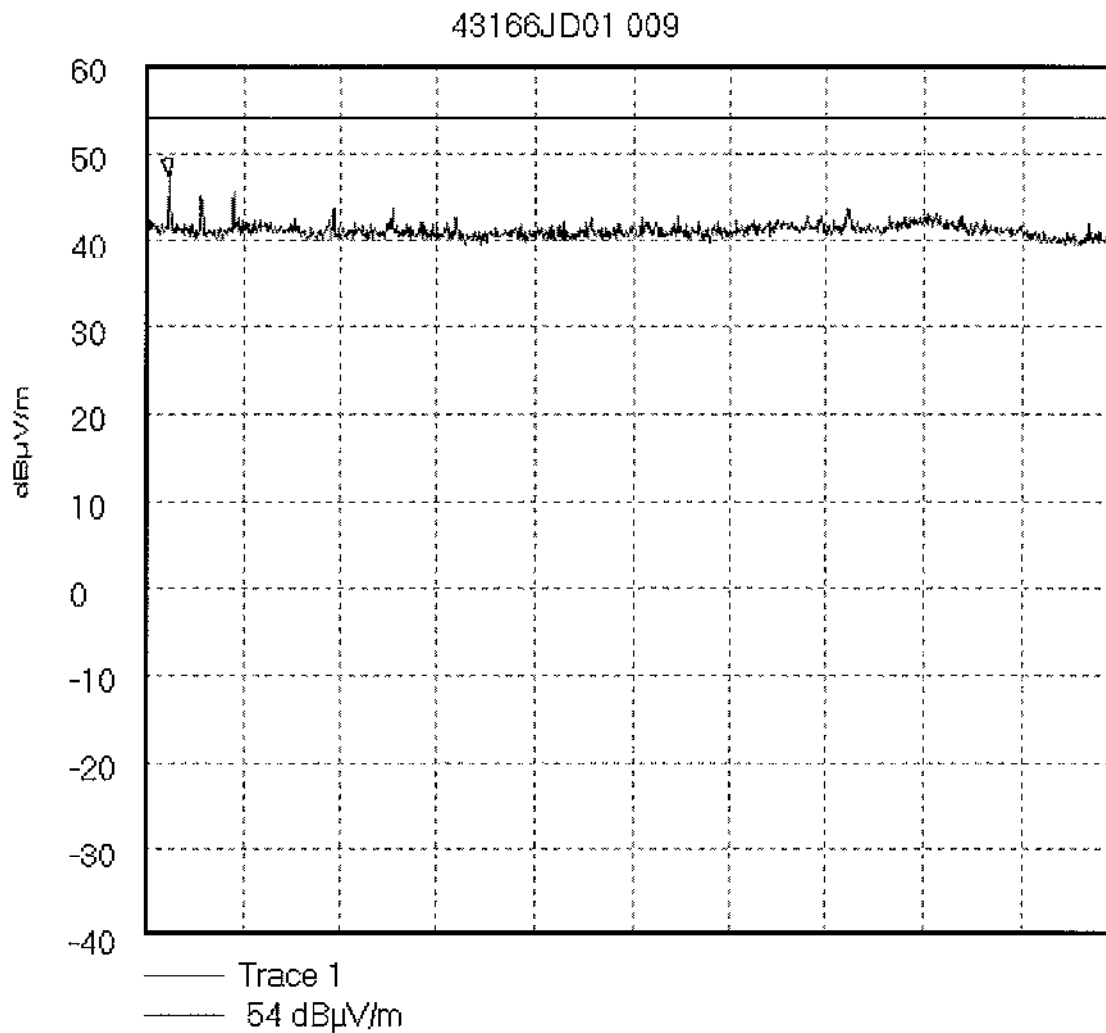
Transducer Factors: 1 to 2

19/02/2002 11:31:47 AM

GPH\43166JD01\009

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Middle Channel)



Start 1.0 GHz; Stop 2.0 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 1.024 GHz, 47.38 dBµV/m

Display Line: 54 dBµV/m; ; Limit Test Passed

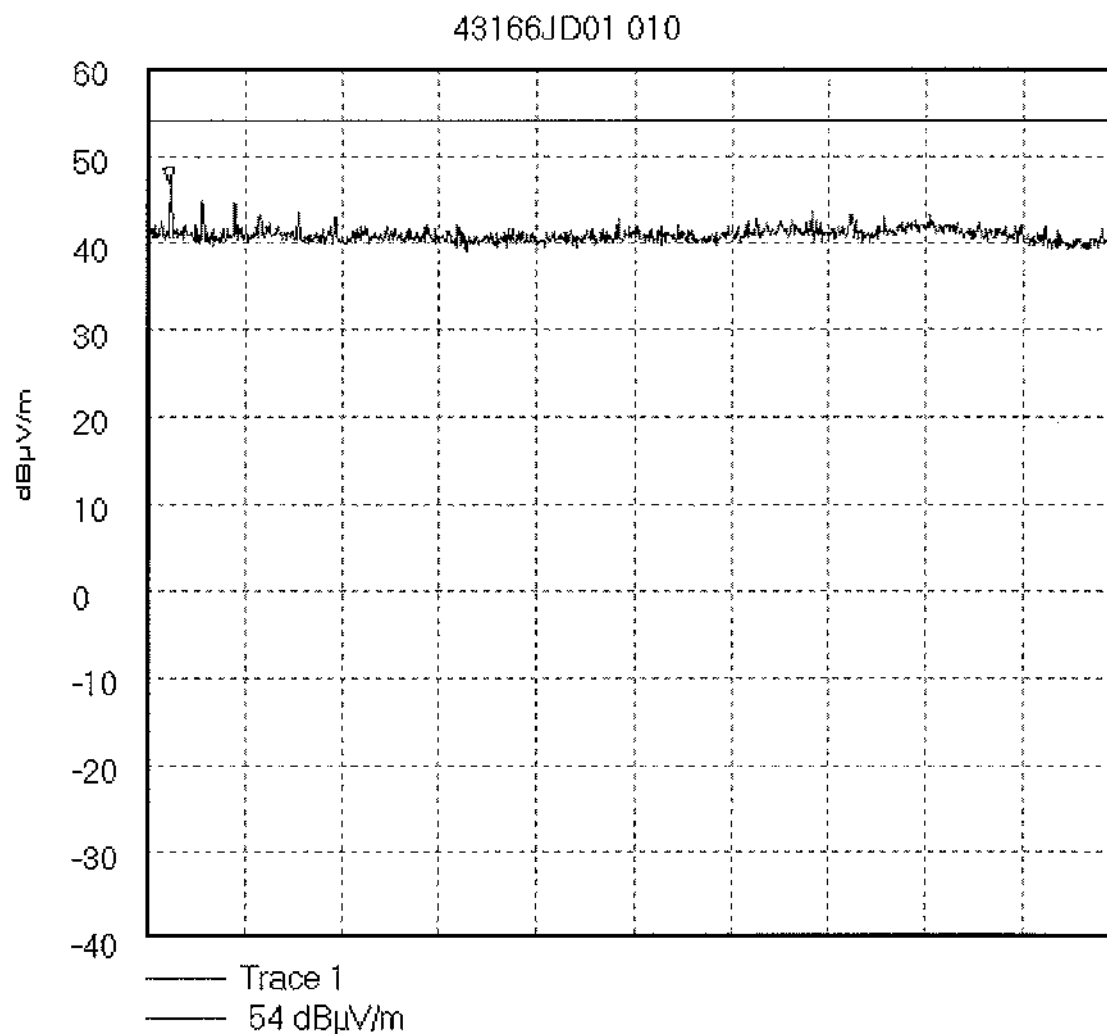
Transducer Factors: 1 to 2

19/02/2002 11:36:23 AM

GPH\43166JD01\010

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server Top Channel)



Start 1.0 GHz; Stop 2.0 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 1.024 GHz, 46.85 dBµV/m

Display Line: 54 dBµV/m; : Limit Test Passed

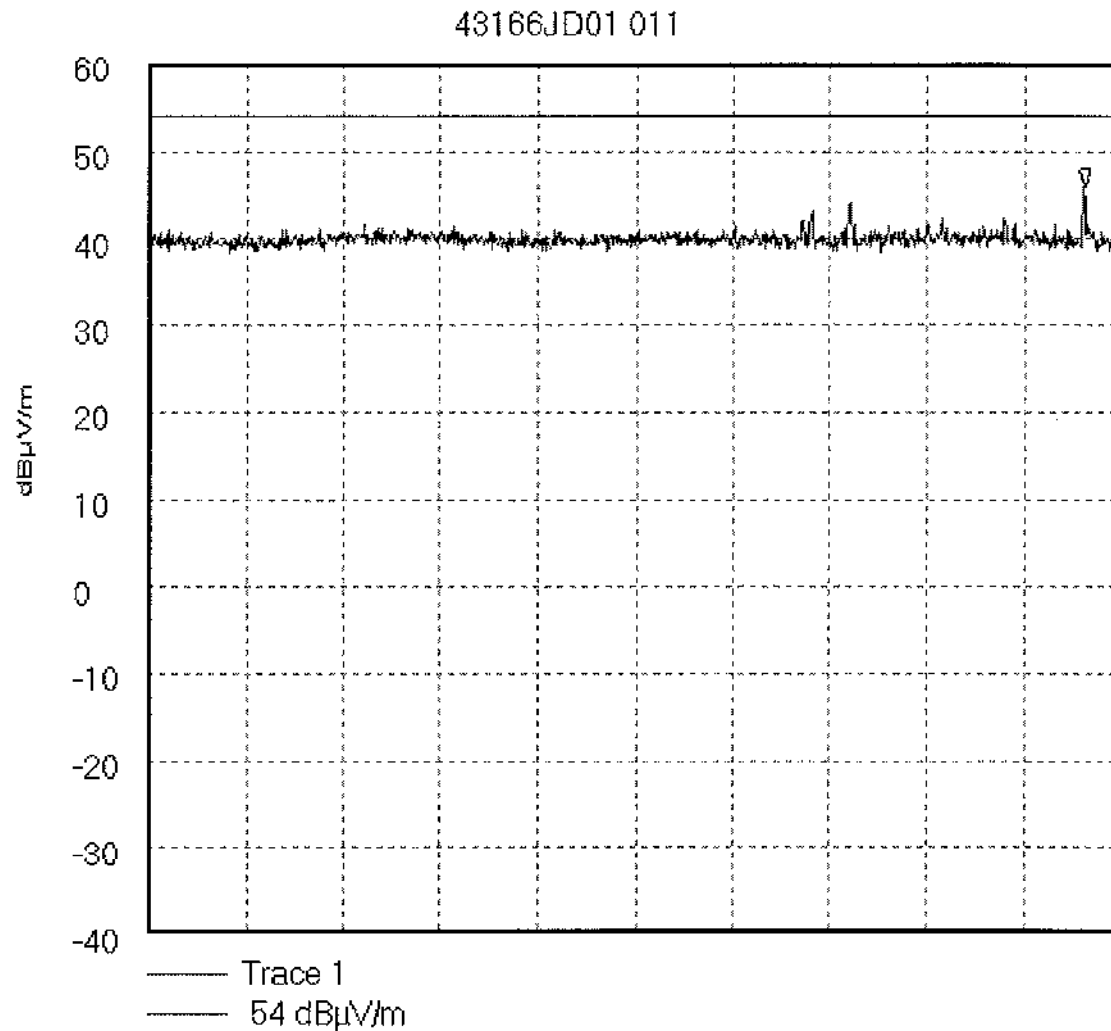
Transducer Factors: 1 to 2

19/02/2002 11:40:59 AM

GPH\43166JD01\011

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Top Channel)



Start 2.0 GHz; Stop 2.4 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 2.385 GHz, 45.99 dBµV/m

Display Line: 54 dBµV/m; : Limit Test Passed

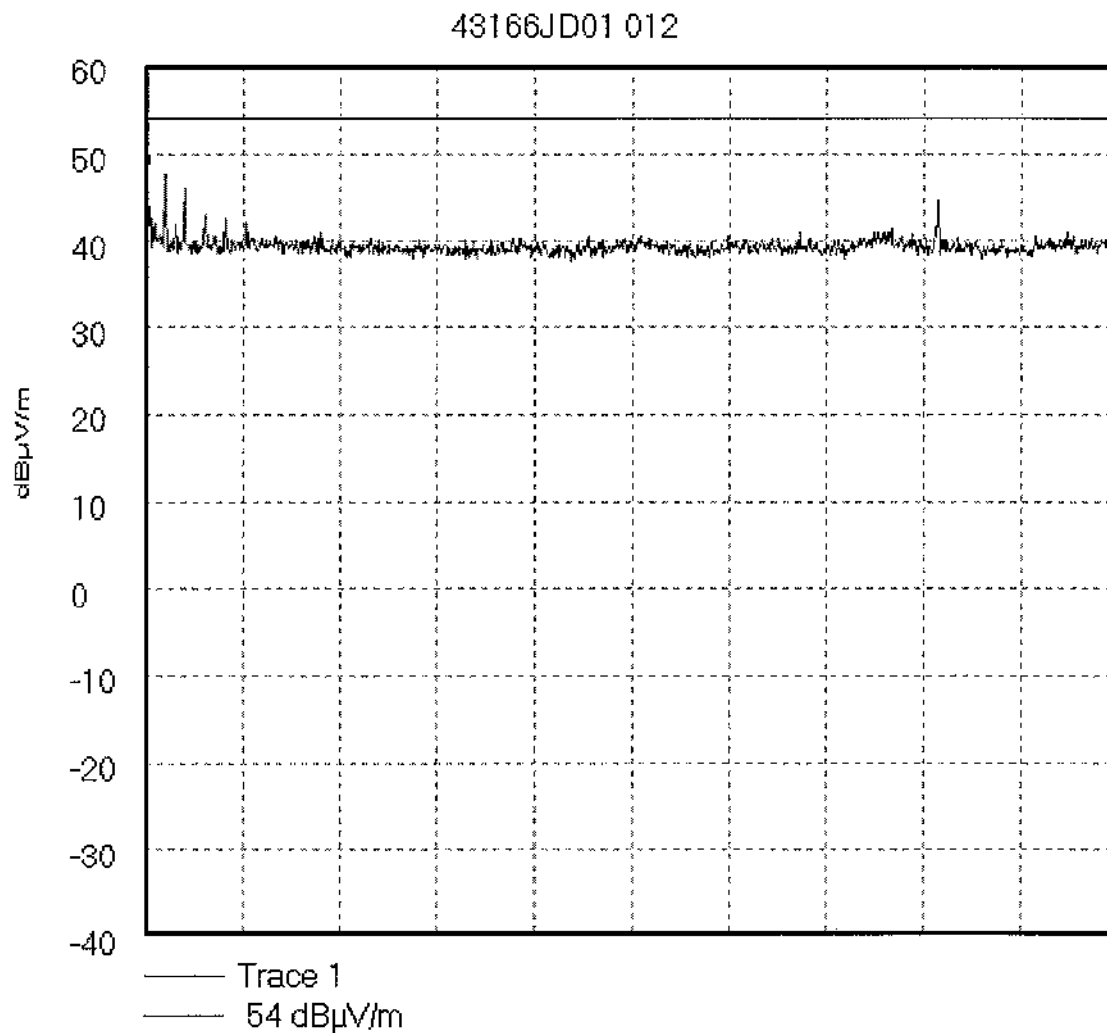
Transducer Factors: 2 to 4

19/02/2002 11:50:22 AM

GPH\43166JD01\012

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Top Channel)



Start 2.484 GHz; Stop 4.0 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 2.484 GHz, 47.74 dBµV/m

Display Line: 54 dBµV/m; ; Limit Test Passed

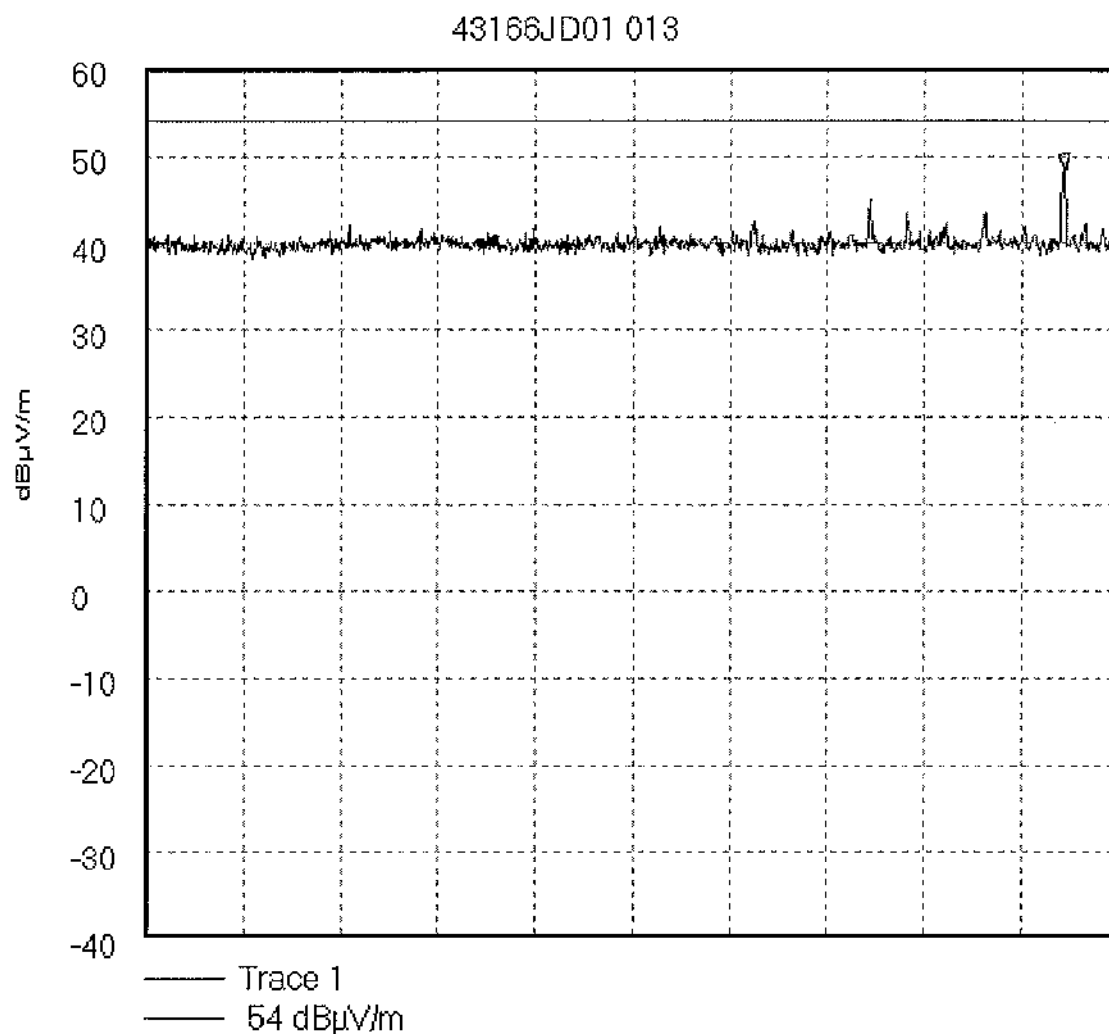
Transducer Factors: 2 to 4

19/02/2002 11:53:33 AM

GPH\43166JD01\013

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Middle Channel)



Start 2.0 GHz; Stop 2.4 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 2.378 GHz, 48.32 dBµV/m

Display Line: 54 dBµV/m; Limit Test Passed

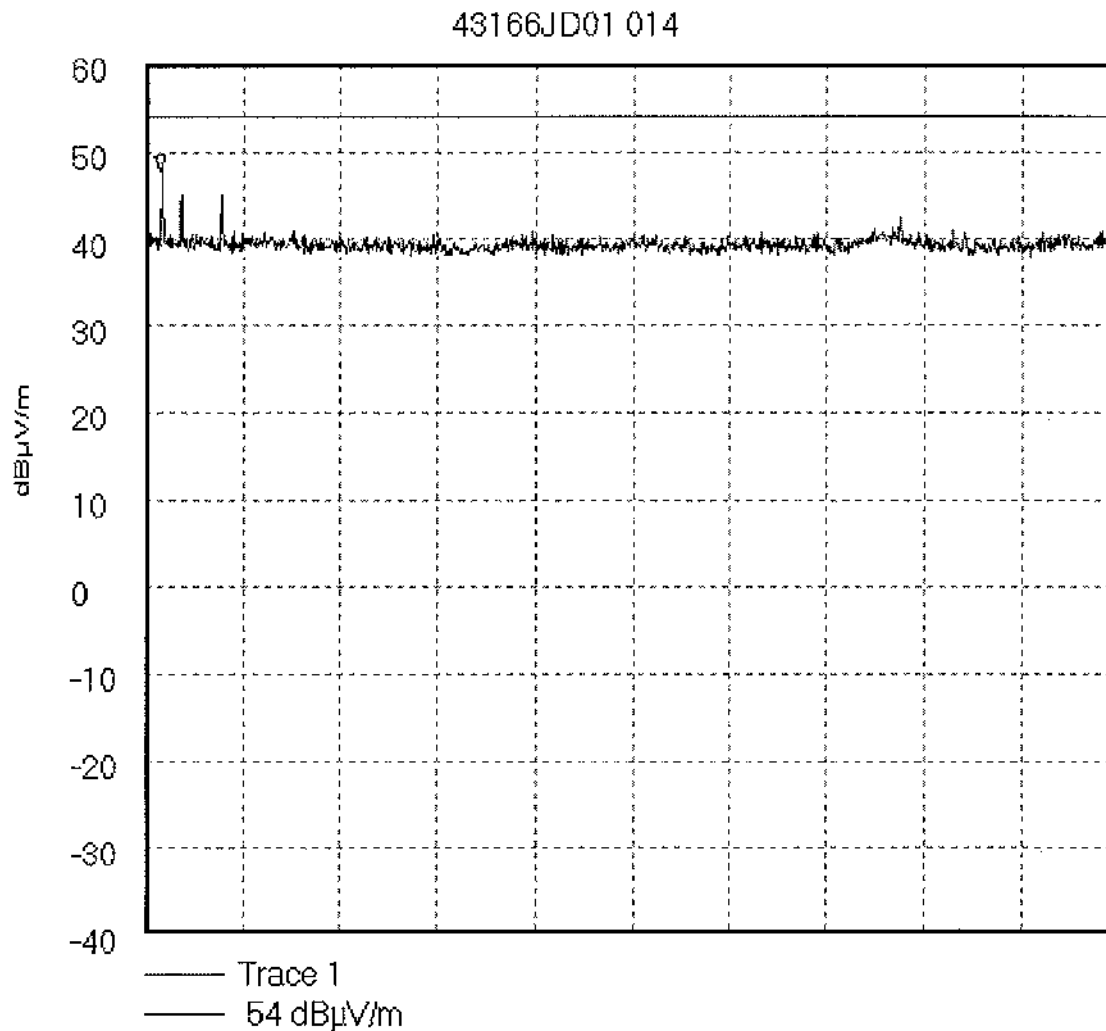
Transducer Factors: 2 to 4

19/02/2002 11:57:52 AM

GPH43166JD01\014

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Middle Channel)



Start 2.484 GHz; Stop 4.0 GHz

Ref 60 dBμV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 2.507 GHz, 47.77 dBμV/m

Display Line: 54 dBμV/m; : Limit Test Passed

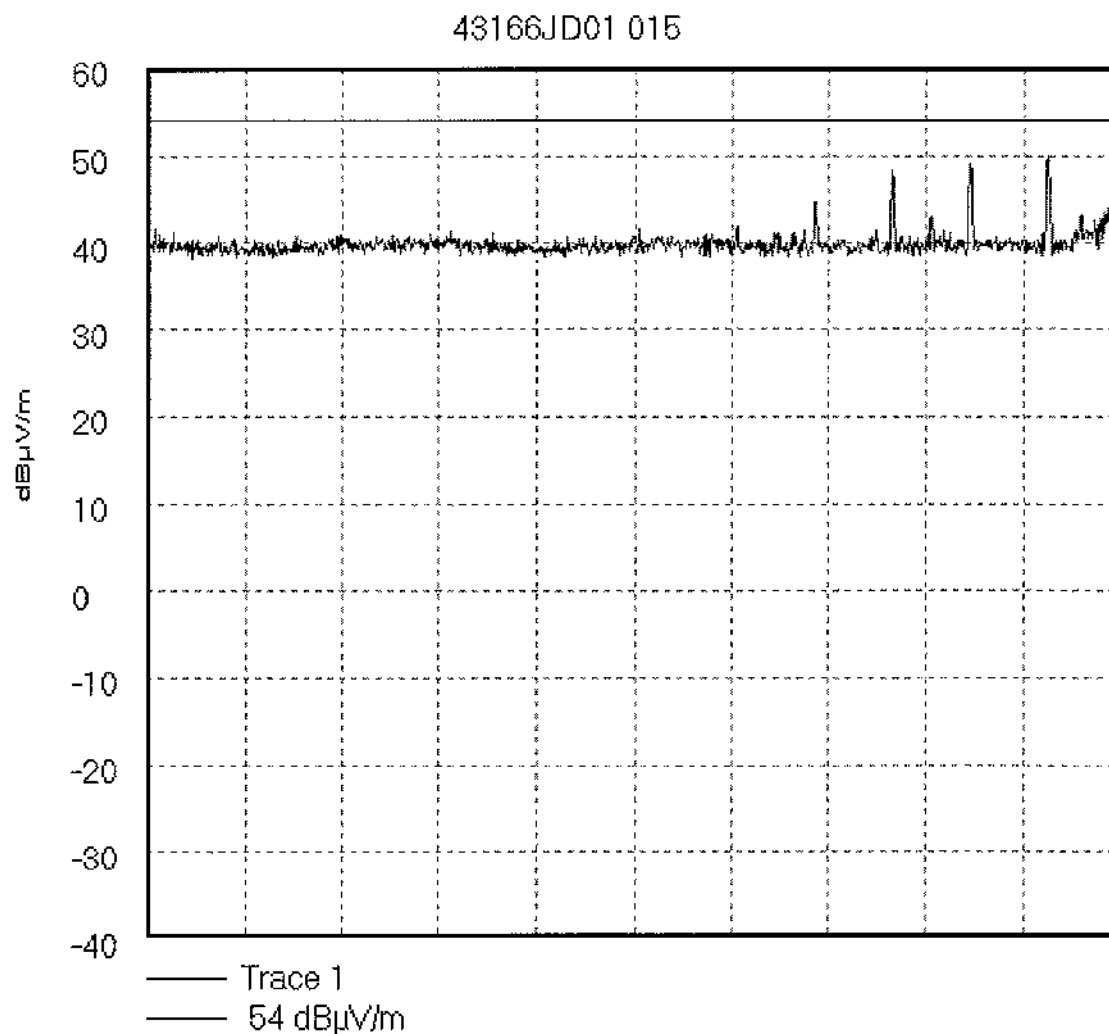
Transducer Factors: 2 to 4

19/02/2002 12:01:25 PM

GPH\43166JD01\015

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Bottom Channel)



Start 2.0 GHz; Stop 2.4 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 2.4 GHz, 57.26 dBµV/m

Display Line: 54 dBµV/m; : Limit Test Failed

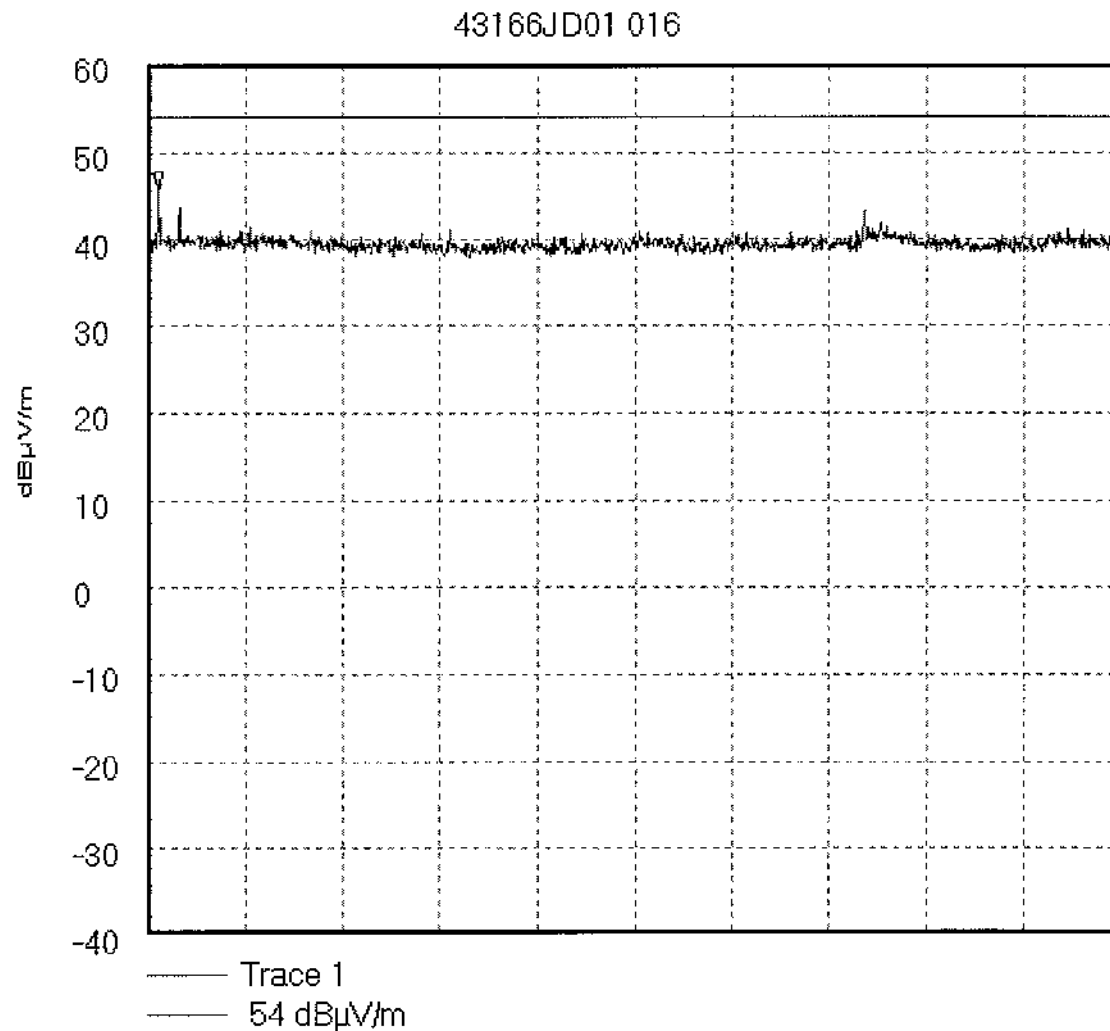
Transducer Factors: 2 to 4

19/02/2002 12:08:32 PM

GPH\43166JD01\016

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Bottom Channel)



Start 2.484 GHz; Stop 4.0 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 2.5 GHz, 45.96 dBµV/m

Display Line: 54 dBµV/m; ; Limit Test Passed

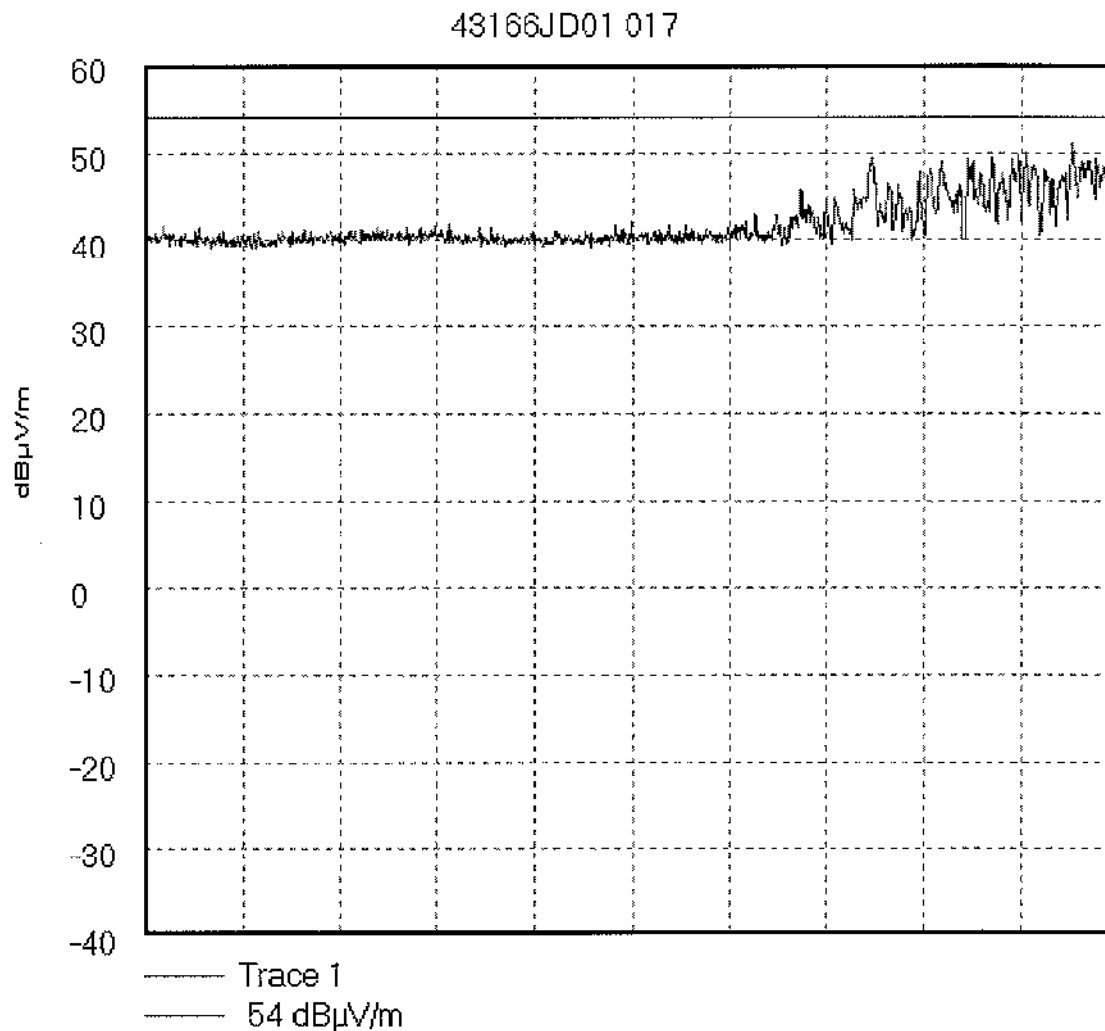
Transducer Factors: 2 to 4

19/02/2002 12:13:01 PM

GPH\43166JD01\017

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Hopping Mode)



Start 2.0 GHz; Stop 2.4 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 2.4 GHz, 56.32 dBµV/m

Display Line: 54 dBµV/m; ; Limit Test Failed

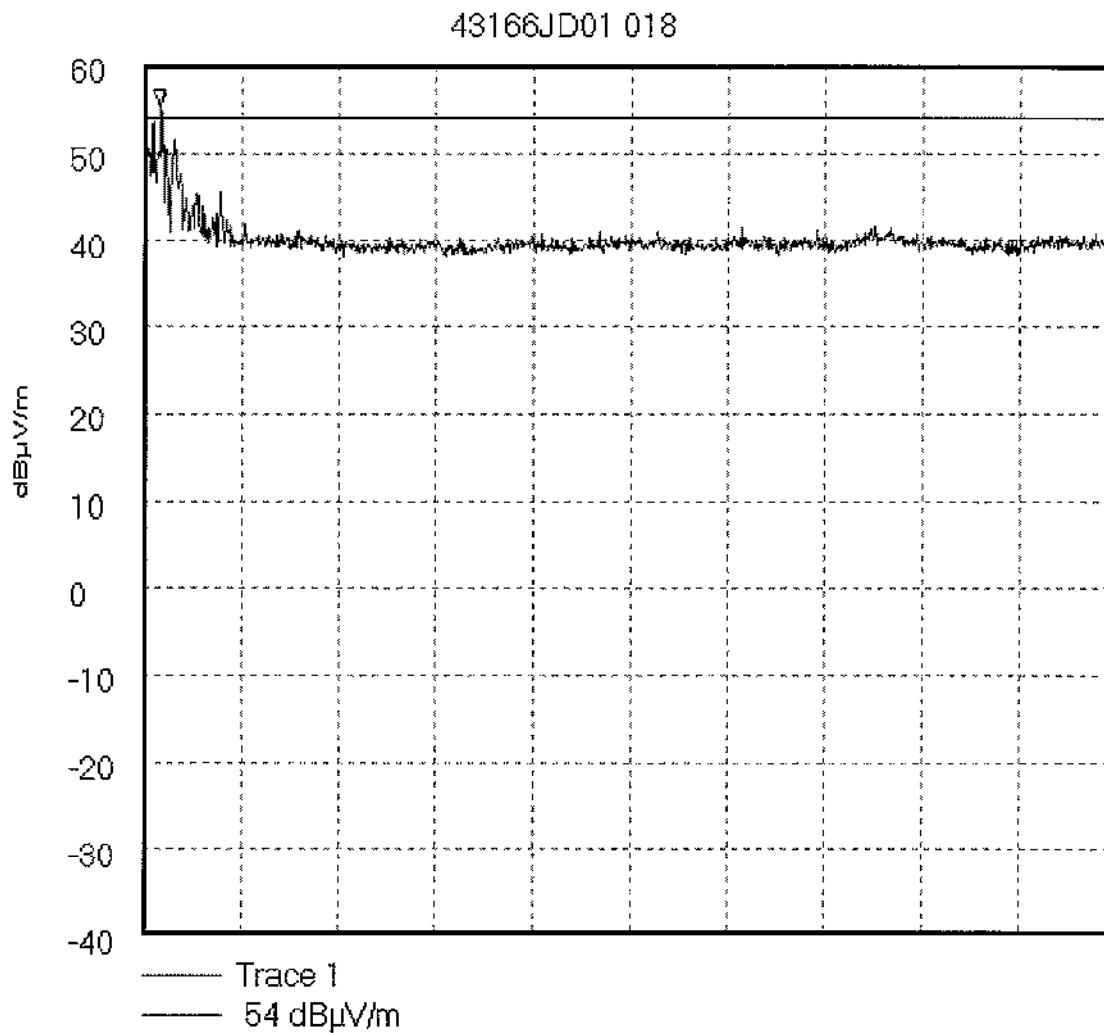
Transducer Factors: 2 to 4

19/02/2002 12:19:14 PM

GPH\43166JD01\018

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Hopping Mode)



Start 2.484 GHz; Stop 4.0 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 2.509 GHz, 55.26 dBµV/m

Display Line: 54 dBµV/m; ; Limit Test Failed

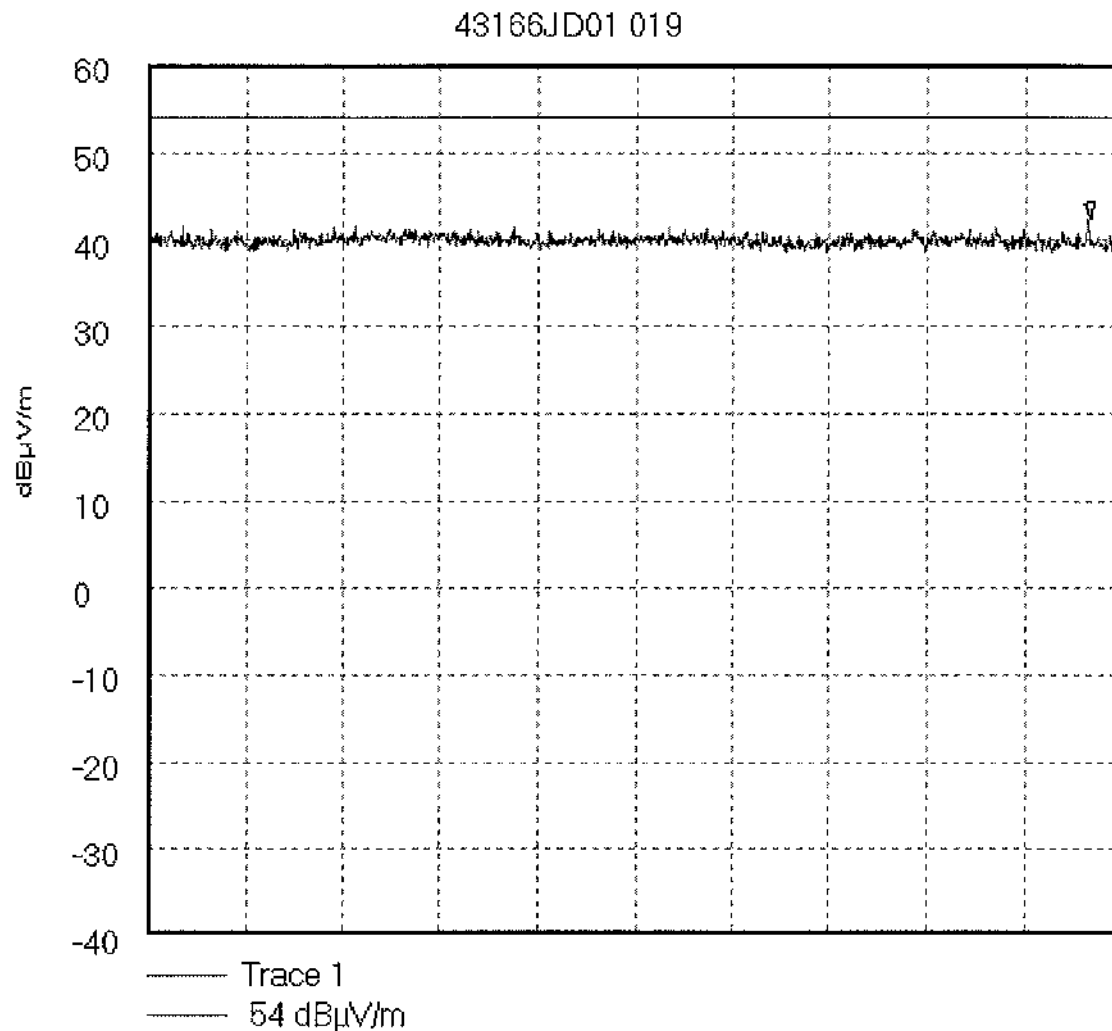
Transducer Factors: 2 to 4

19/02/2002 12:27:24 PM

GPH\43166JD01\019

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Receiver Mode)



Start 2.0 GHz; Stop 2.4 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 2.387 GHz, 42.48 dBµV/m

Display Line: 54 dBµV/m; : Limit Test Passed

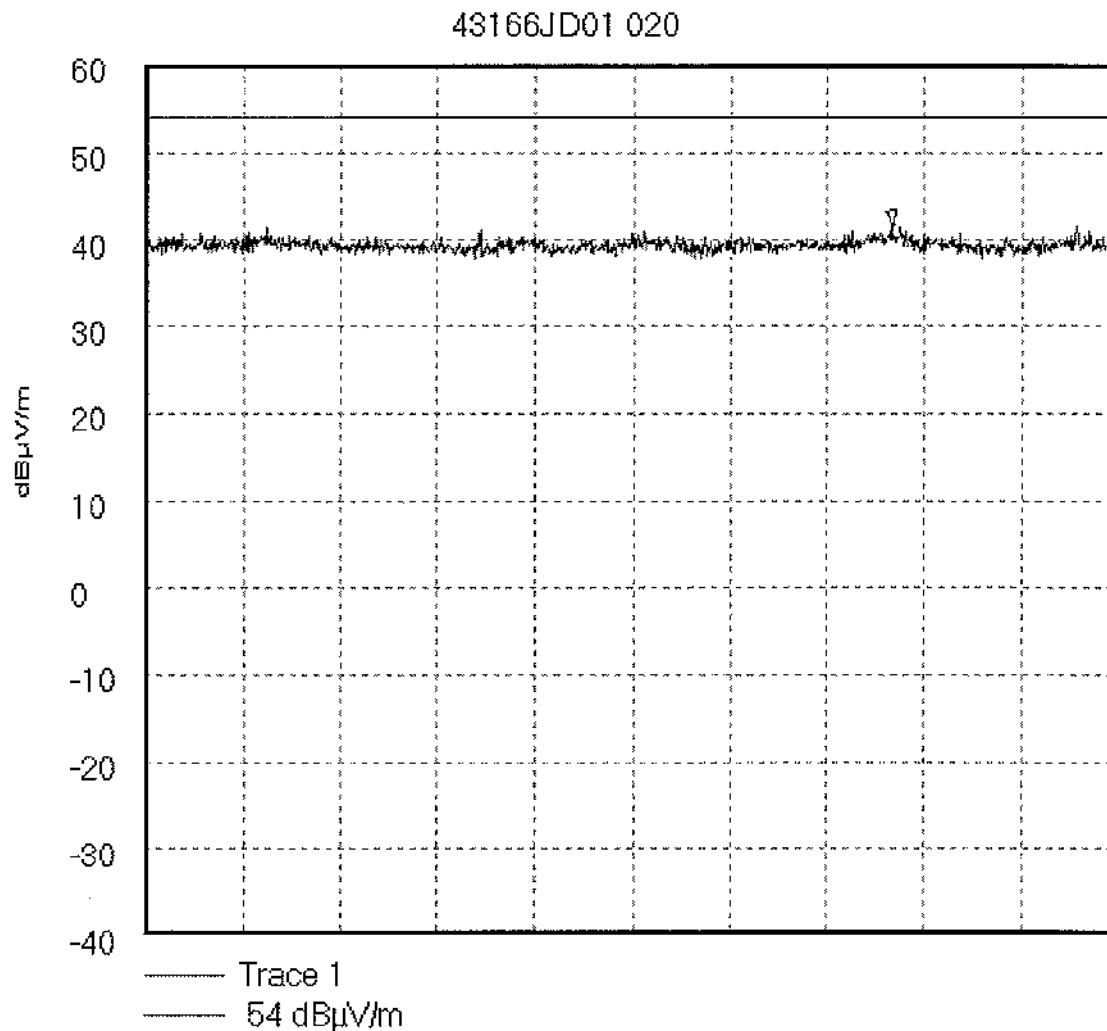
Transducer Factors: 2 to 4

19/02/2002 12:31:46 PM

GPH\43166JD01\020

Radiated Emissions. FCC Part 15.209. PreScan @ 3m.

Tested For Red-M. EUT: Smart Wireless Access Server (Receiver Mode)



Start 2.484 GHz; Stop 4.0 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1000.0 kHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 3.648 GHz, 41.59 dBµV/m

Display Line: 54 dBµV/m; : Limit Test Passed

Transducer Factors: 2 to 4

19/02/2002 12:34:11 PM