



Company: Zebra Technologies Corporation
Model Tested: ZM4e
Report Number: 11475

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

RADIATED DATA AND GRAPH(S) TAKEN FOR

SPURIOUS EMISSION MEASUREMENTS

ZPN 21052 ANTENNA

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 63% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Rx mode; Low, Mid, High channels
Date: 06-15-2005

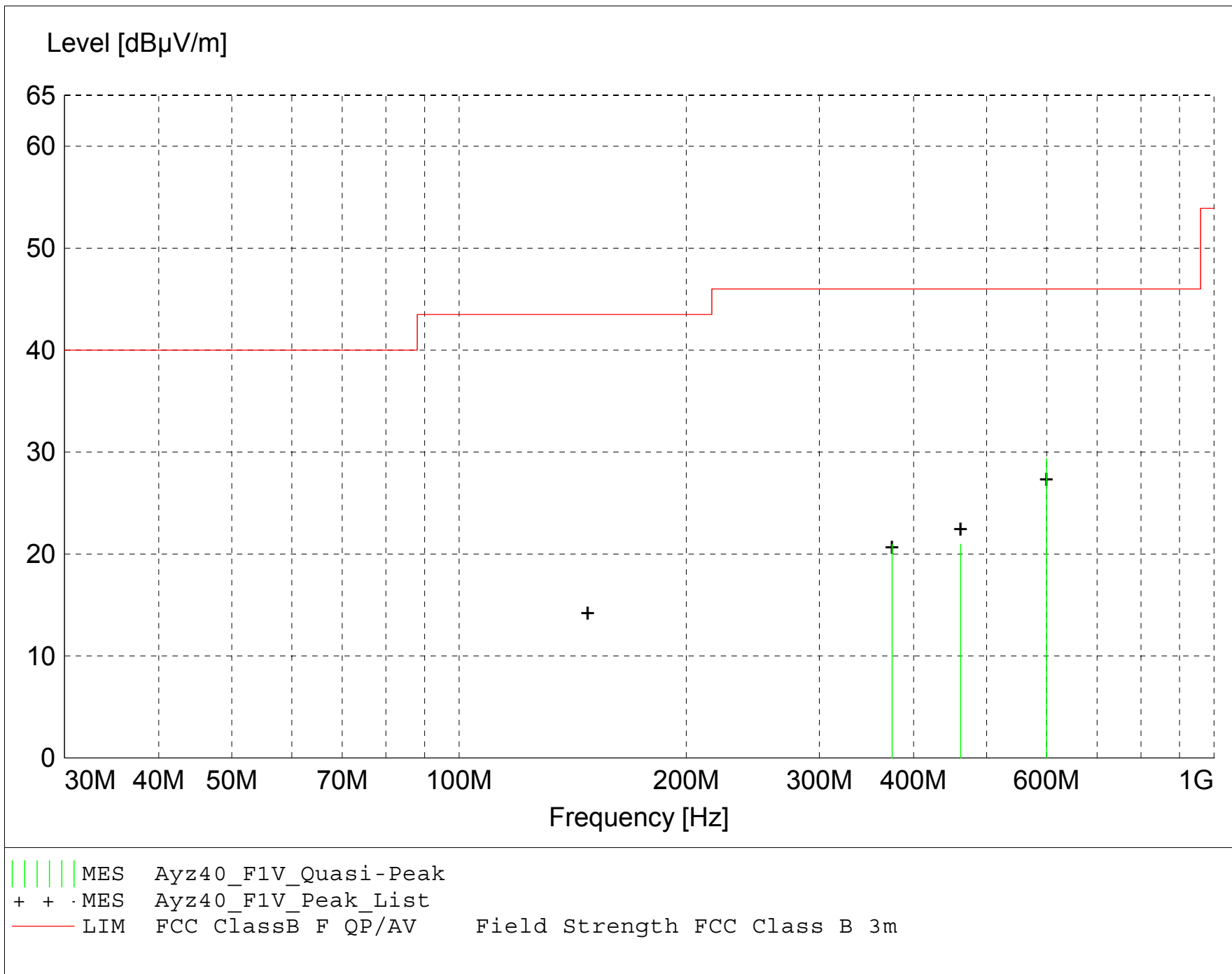
TEXT: "Site 3 MidV 3M"

Short Description: Test Set-up Vert30-1000MHz
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 26 SN: 837491/010

Antennas ---
Biconical -- EMCO 3104C SN: 9701-4785
Log Periodic -- EMCO 3146 SN: 9702-4895

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/005

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz40_F1V_Final"

6/15/2005 1:00PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant. m	EuT Angle deg	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB				
0.000000	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0		
599.990000	30.75	18.95	-20.3	29.4	46.0	16.6	1.00	90	QUASI-PEAK	None
461.440000	25.40	16.70	-21.1	21.0	46.0	25.0	1.00	225	QUASI-PEAK	None
374.650000	27.43	15.11	-21.6	21.0	46.0	25.0	1.00	225	QUASI-PEAK	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 63% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Rx mode; Low, Mid, High channels
Date: 06-15-2005

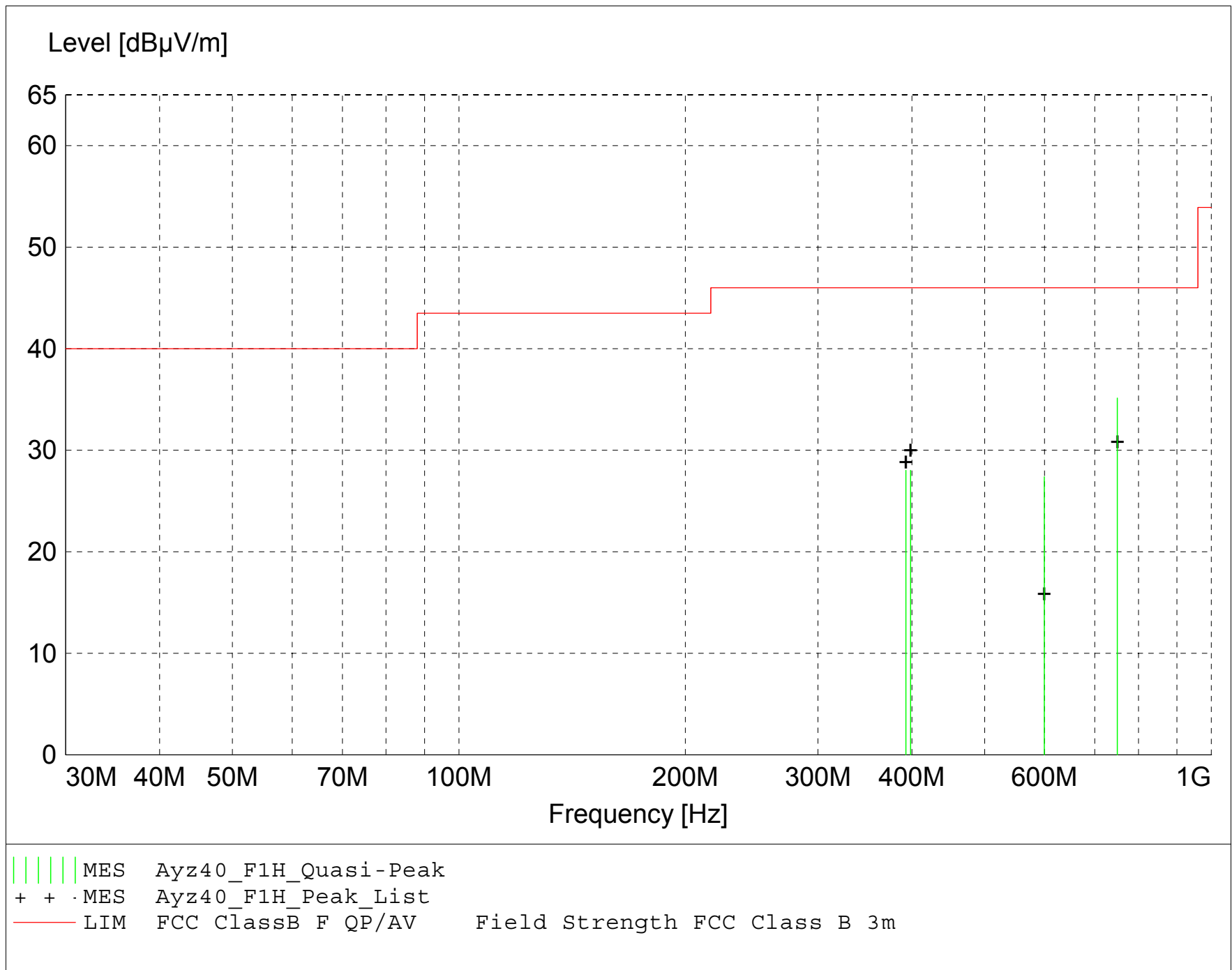
TEXT: "Site 3 MidH 3M"

Short Description: Test Set-up Horz30-1000MHz
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 26 SN: 837491/010

Antennas ---
Biconical -- EMCO 3104C SN: 9701-4785
Log Periodic -- EMCO 3146 SN: 9702-4895

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/005

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz40_F1H_Final"

6/15/2005 1:04PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
749.990000	31.57	21.36	-17.8	35.1	46.0	10.9	1.20	135	QUASI-PEAK	None
398.270000	33.76	15.67	-21.4	28.0	46.0	18.0	2.20	135	QUASI-PEAK	None
392.690000	33.98	15.50	-21.5	28.0	46.0	18.0	2.20	135	QUASI-PEAK	None
599.990000	28.74	18.95	-20.3	27.4	46.0	18.6	1.60	135	QUASI-PEAK	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Low Power; Low Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 V3M"

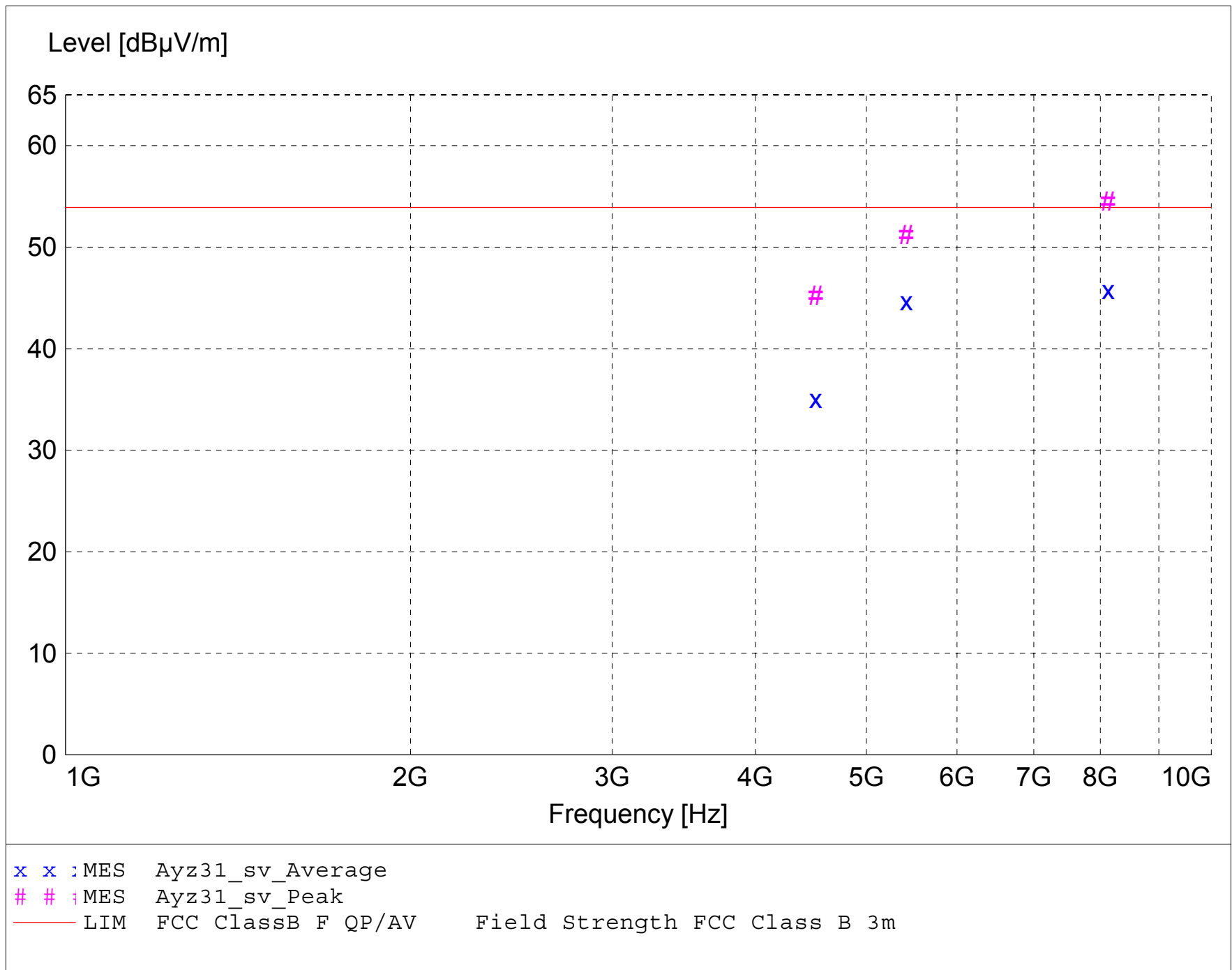
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz31_sv_Final"

6/15/2005 9:21AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8126.950000	50.15	36.98	-32.7	54.5	53.9	-0.6	1.60	30	MAX PEAK	None
5417.950000	52.40	33.97	-35.2	51.2	53.9	2.7	1.80	0	MAX PEAK	None
8126.950000	41.47	36.98	-32.7	45.8	53.9	8.1	1.60	30	AVERAGE	None
4514.950000	48.40	32.35	-35.6	45.2	53.9	8.7	1.50	0	MAX PEAK	None
5417.950000	45.83	33.97	-35.2	44.6	53.9	9.3	1.80	0	AVERAGE	None
4514.950000	38.28	32.35	-35.6	35.1	53.9	18.8	1.50	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Low Power; Low Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 H3M"

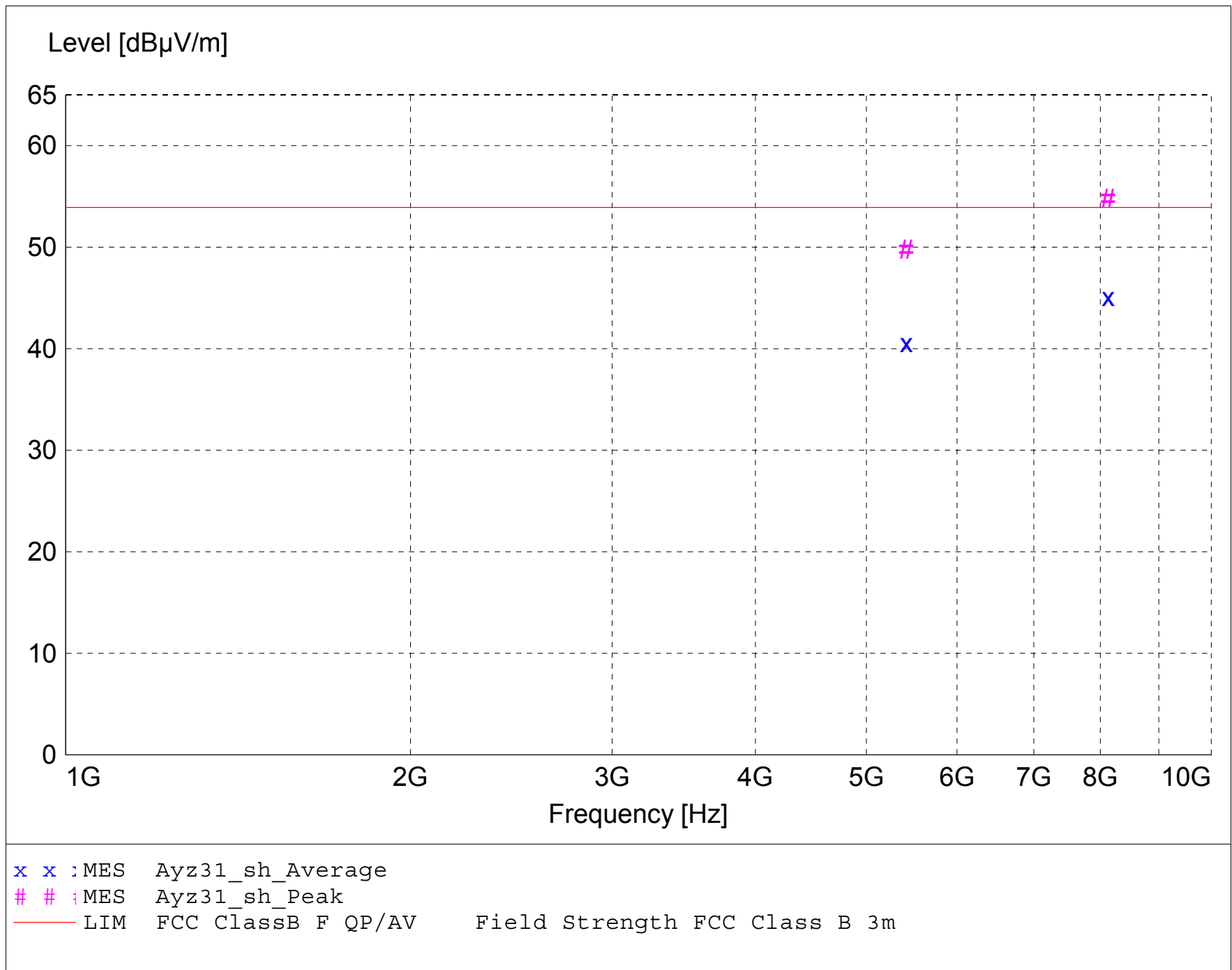
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz31_sh_Final"

6/15/2005 9:25AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
8126.950000	50.41	36.98	-32.7	54.7	53.9	-0.8	2.00	340	MAX PEAK	None
5417.950000	50.92	33.97	-35.2	49.7	53.9	4.2	2.00	45	MAX PEAK	None
8126.950000	40.79	36.98	-32.7	45.1	53.9	8.8	2.00	340	AVERAGE	None
5417.950000	41.76	33.97	-35.2	40.5	53.9	13.4	2.00	45	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Low Power; Mid Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 V3M"

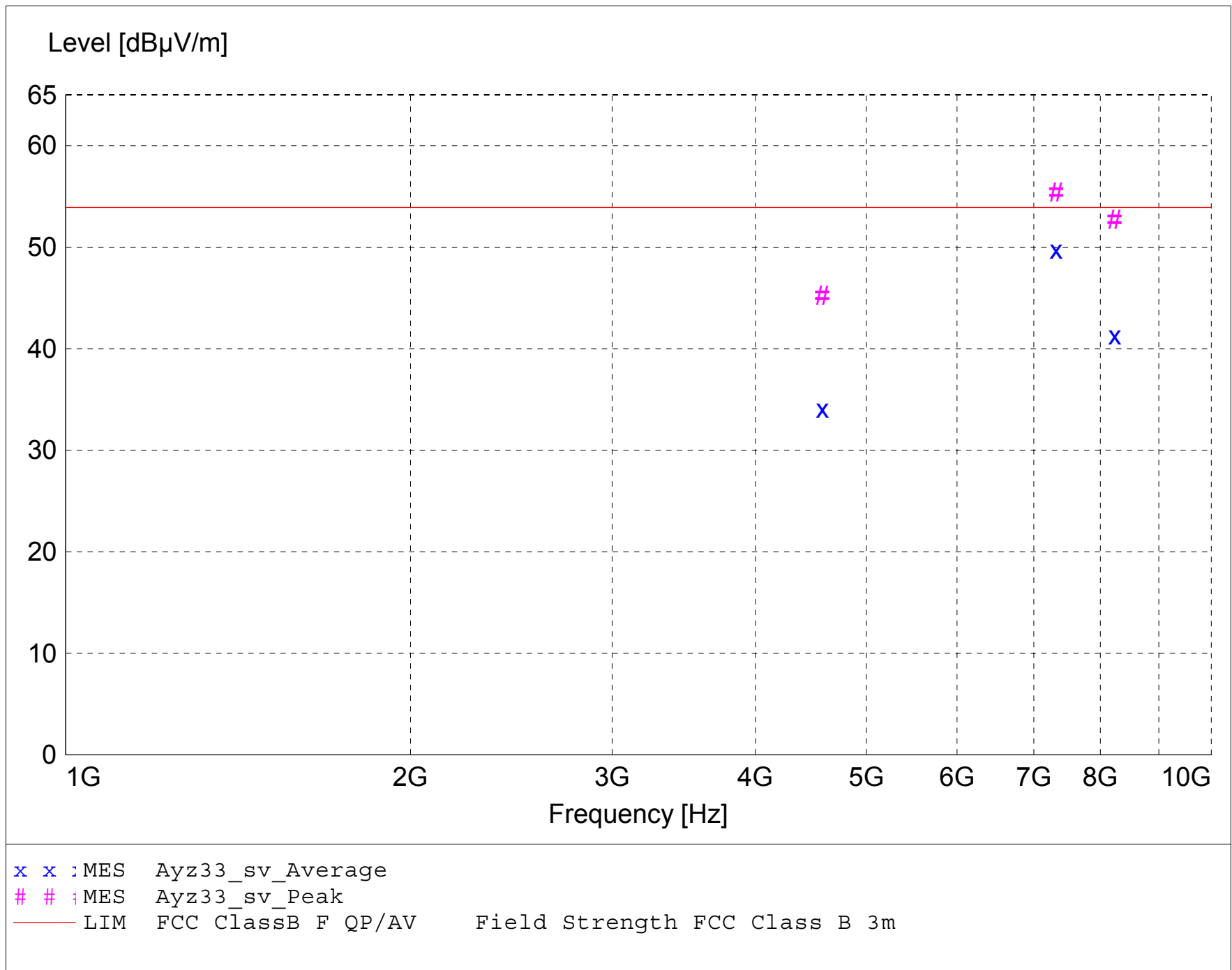
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz33_sv_Final"

6/15/2005 9:45AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7321.000000	52.80	36.09	-33.6	55.3	53.9	-1.4	1.90	0	MAX PEAK	None
8236.150000	48.40	37.11	-32.8	52.7	53.9	1.2	1.20	340	MAX PEAK	None
7321.000000	47.20	36.09	-33.6	49.7	53.9	4.2	1.90	0	AVERAGE	None
4575.650000	48.40	32.47	-35.7	45.2	53.9	8.7	1.20	0	MAX PEAK	None
8236.150000	37.00	37.11	-32.8	41.3	53.9	12.6	1.20	340	AVERAGE	None
4575.650000	37.30	32.47	-35.7	34.1	53.9	19.8	1.20	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Low Power; Mid Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 H3M"

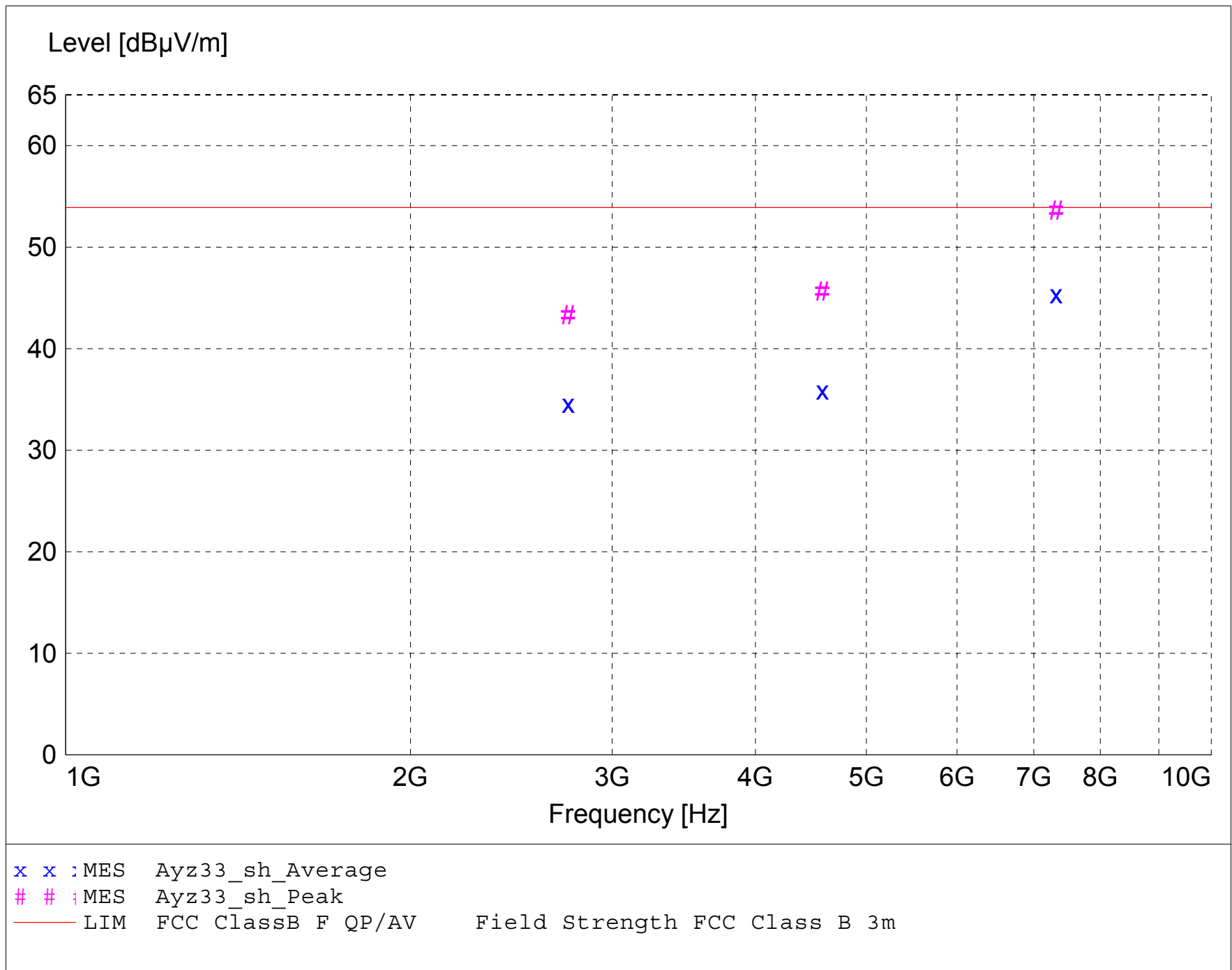
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz33_sh_Final"

6/15/2005 9:50AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7321.000000	51.05	36.09	-33.6	53.6	53.9	0.3	2.00	0	MAX PEAK	None
4575.650000	48.79	32.47	-35.7	45.6	53.9	8.3	2.30	45	MAX PEAK	None
7321.000000	42.83	36.09	-33.6	45.4	53.9	8.5	2.00	0	AVERAGE	None
2745.400000	51.99	29.40	-38.1	43.3	53.9	10.6	2.10	0	MAX PEAK	None
4575.650000	39.09	32.47	-35.7	35.9	53.9	18.0	2.30	45	AVERAGE	None
2745.400000	43.28	29.40	-38.1	34.6	53.9	19.3	2.10	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Low Power; High Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 V3M"

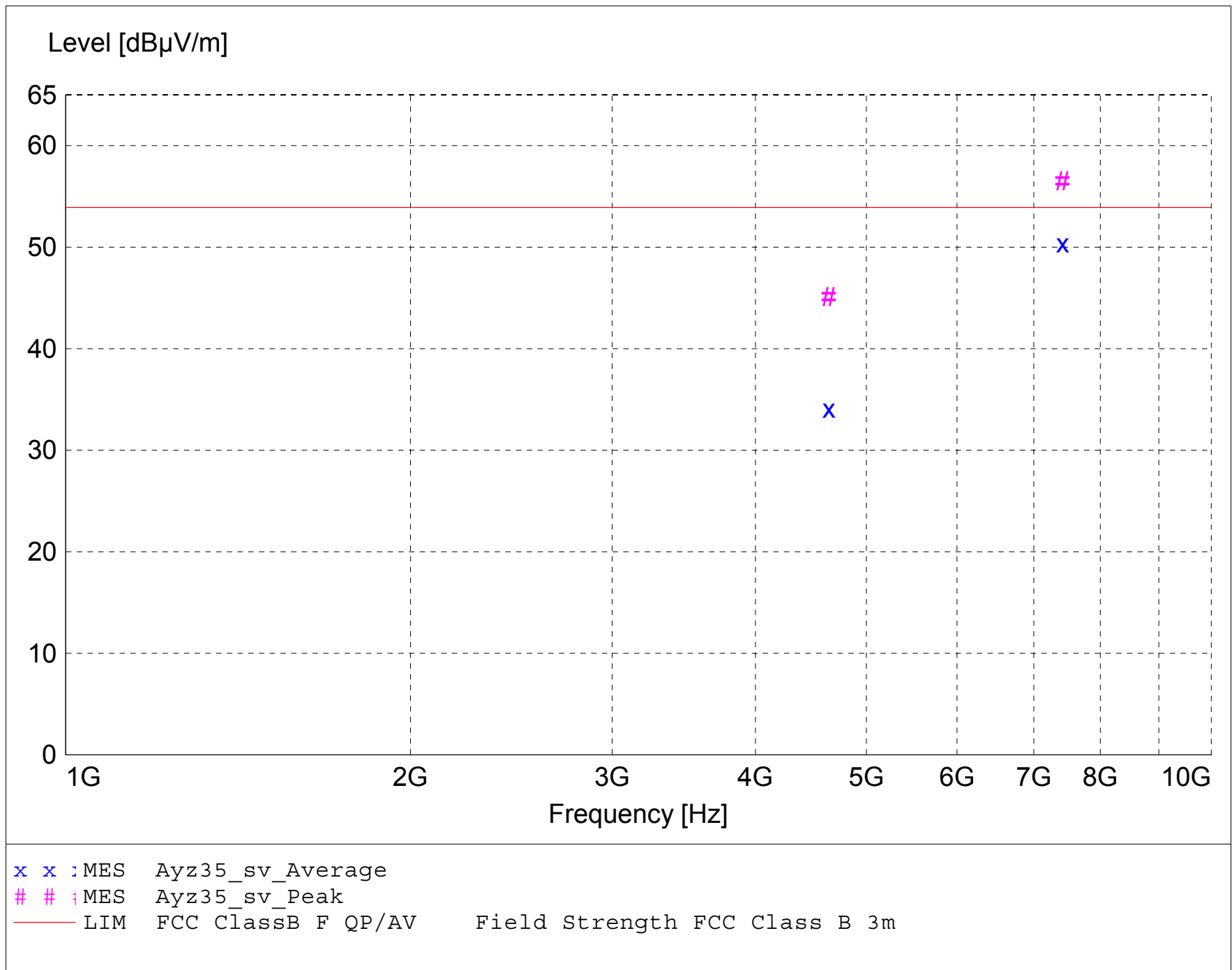
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz35_sv_Final"

6/15/2005 10:10AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBμV	dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	53.35	36.33	-33.2	56.5	53.9	-2.6	1.90	340	MAX PEAK	None
7417.500000	47.18	36.33	-33.2	50.3	53.9	3.6	1.90	340	AVERAGE	None
4636.000000	48.26	32.60	-35.8	45.1	53.9	8.8	2.10	0	MAX PEAK	None
4636.000000	37.24	32.60	-35.8	34.0	53.9	19.9	2.10	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Low Power; High Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 H3M"

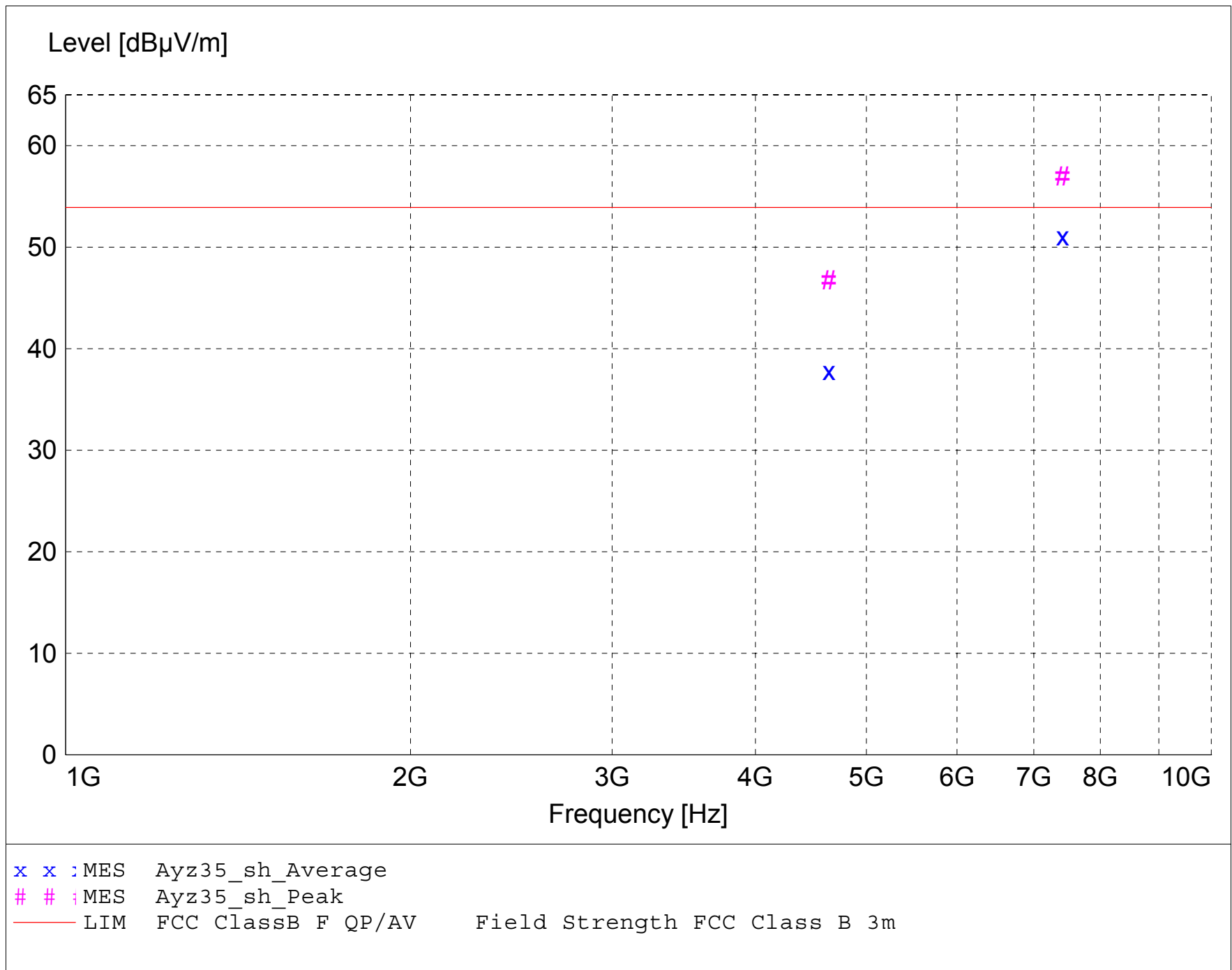
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz35_sh_Final"

6/15/2005 10:14AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBμV	dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	53.76	36.33	-33.2	56.9	53.9	-3.0	2.10	0	MAX PEAK	None
7417.500000	47.92	36.33	-33.2	51.1	53.9	2.8	2.10	0	AVERAGE	None
4636.000000	49.89	32.60	-35.8	46.7	53.9	7.2	2.10	45	MAX PEAK	None
4636.000000	41.02	32.60	-35.8	37.8	53.9	16.1	2.10	45	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Max Power; Low Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 V3M"

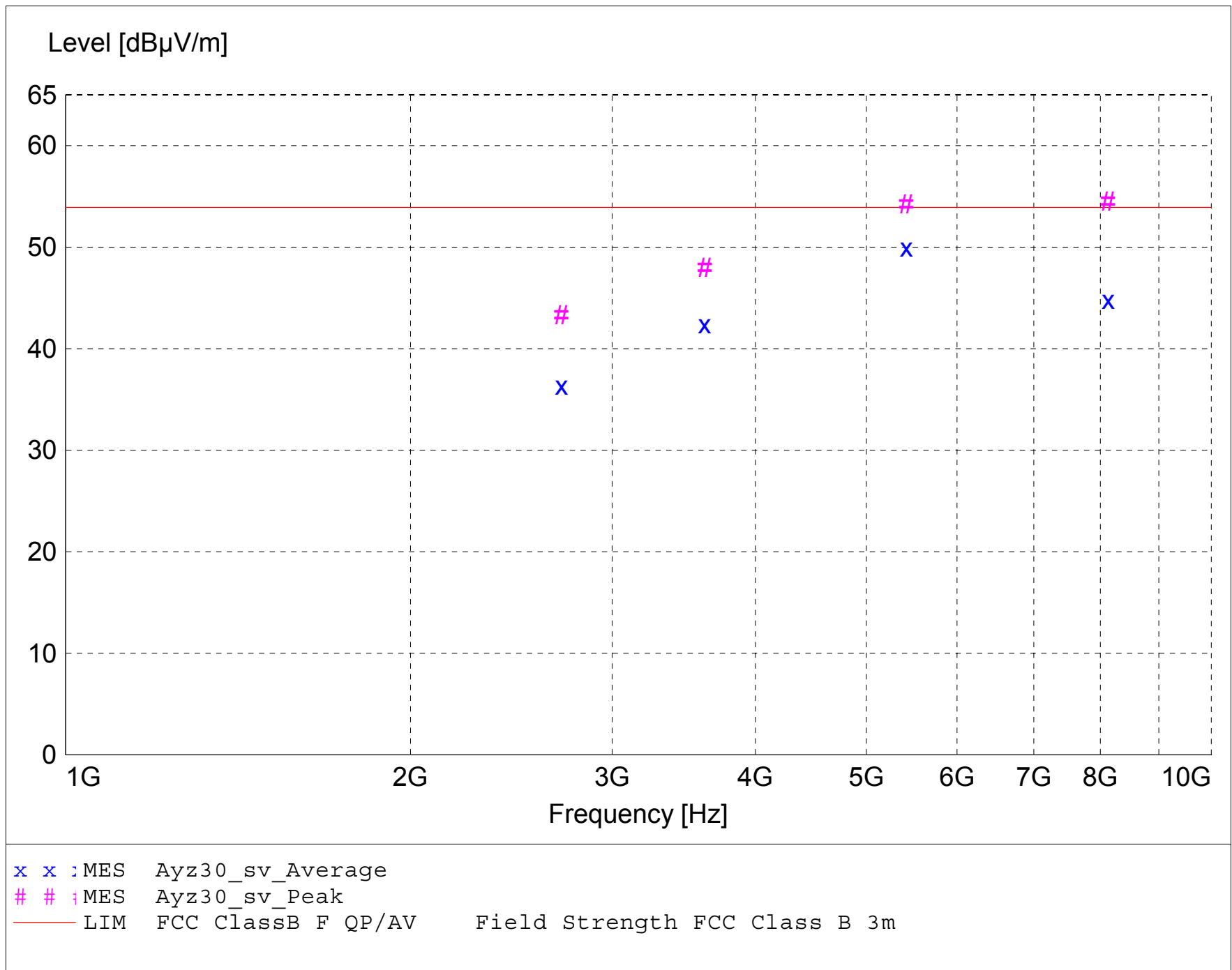
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz30_sv_Final"

6/15/2005 9:08AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8126.950000	50.15	36.98	-32.7	54.5	53.9	-0.6	1.70	290	MAX PEAK	None
5417.950000	55.41	33.97	-35.2	54.2	53.9	-0.3	1.40	0	MAX PEAK	None
5417.950000	51.14	33.97	-35.2	49.9	53.9	4.0	1.40	0	AVERAGE	None
3612.000000	53.07	31.49	-36.6	48.0	53.9	5.9	2.00	45	MAX PEAK	None
8126.950000	40.45	36.98	-32.7	44.7	53.9	9.2	1.70	290	AVERAGE	None
2709.000000	52.26	29.28	-38.3	43.3	53.9	10.6	1.00	110	MAX PEAK	None
3612.000000	47.51	31.49	-36.6	42.4	53.9	11.5	2.00	45	AVERAGE	None
2709.000000	45.29	29.28	-38.3	36.3	53.9	17.6	1.00	110	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Max Power; Low Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 H3M"

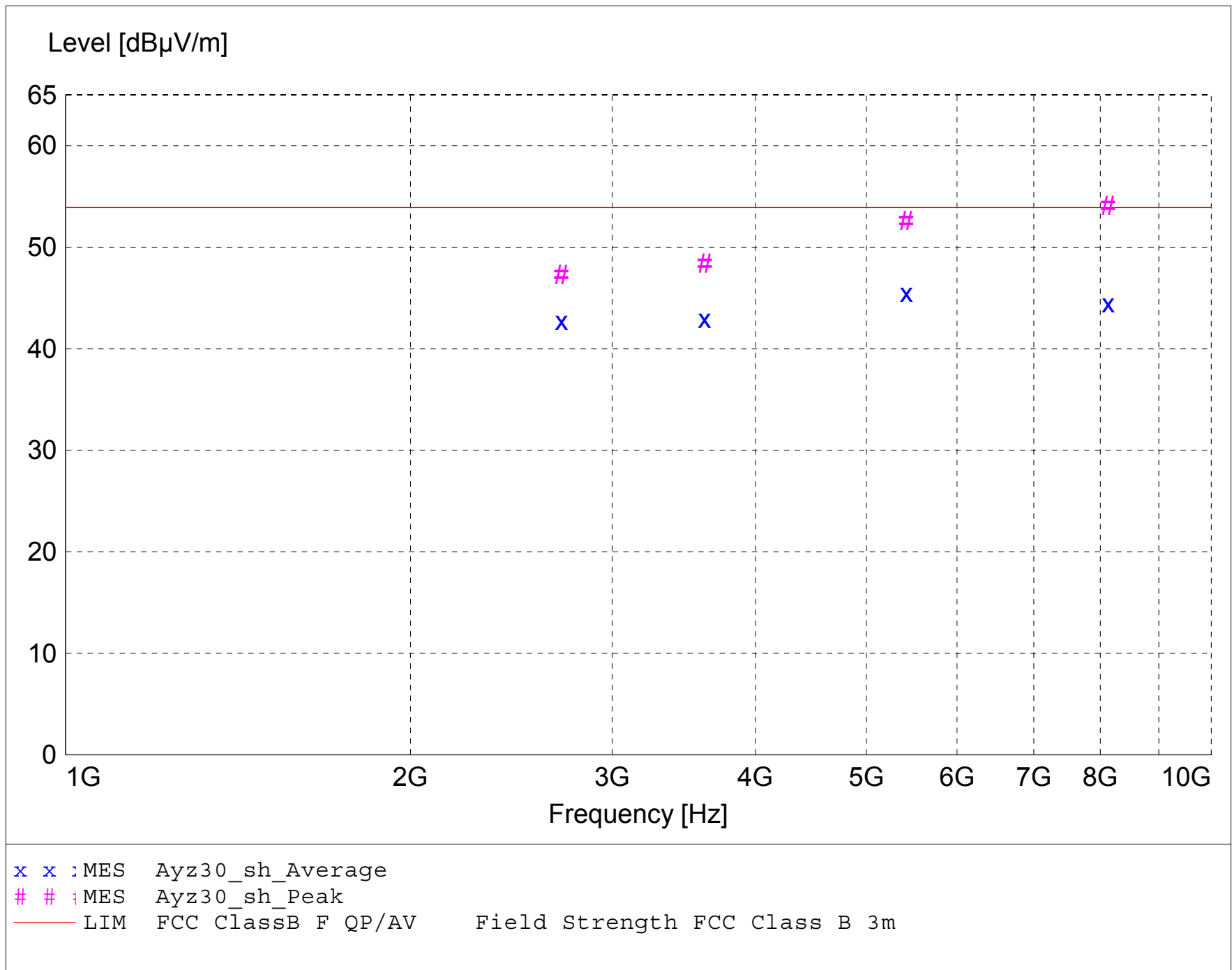
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz30_sh_Final"

6/15/2005 9:14AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8126.950000	49.75	36.98	-32.7	54.0	53.9	-0.1	2.00	0	MAX PEAK	None
5417.950000	53.76	33.97	-35.2	52.6	53.9	1.3	2.00	45	MAX PEAK	None
3612.000000	53.49	31.49	-36.6	48.4	53.9	5.5	1.10	0	MAX PEAK	None
2709.000000	56.20	29.28	-38.3	47.2	53.9	6.7	1.20	50	MAX PEAK	None
5417.950000	46.66	33.97	-35.2	45.5	53.9	8.4	2.00	45	AVERAGE	None
8126.950000	40.19	36.98	-32.7	44.5	53.9	9.4	2.00	0	AVERAGE	None
3612.000000	48.05	31.49	-36.6	42.9	53.9	11.0	1.10	0	AVERAGE	None
2709.000000	51.71	29.28	-38.3	42.7	53.9	11.2	1.20	50	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Max Power; Mid Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 V3M"

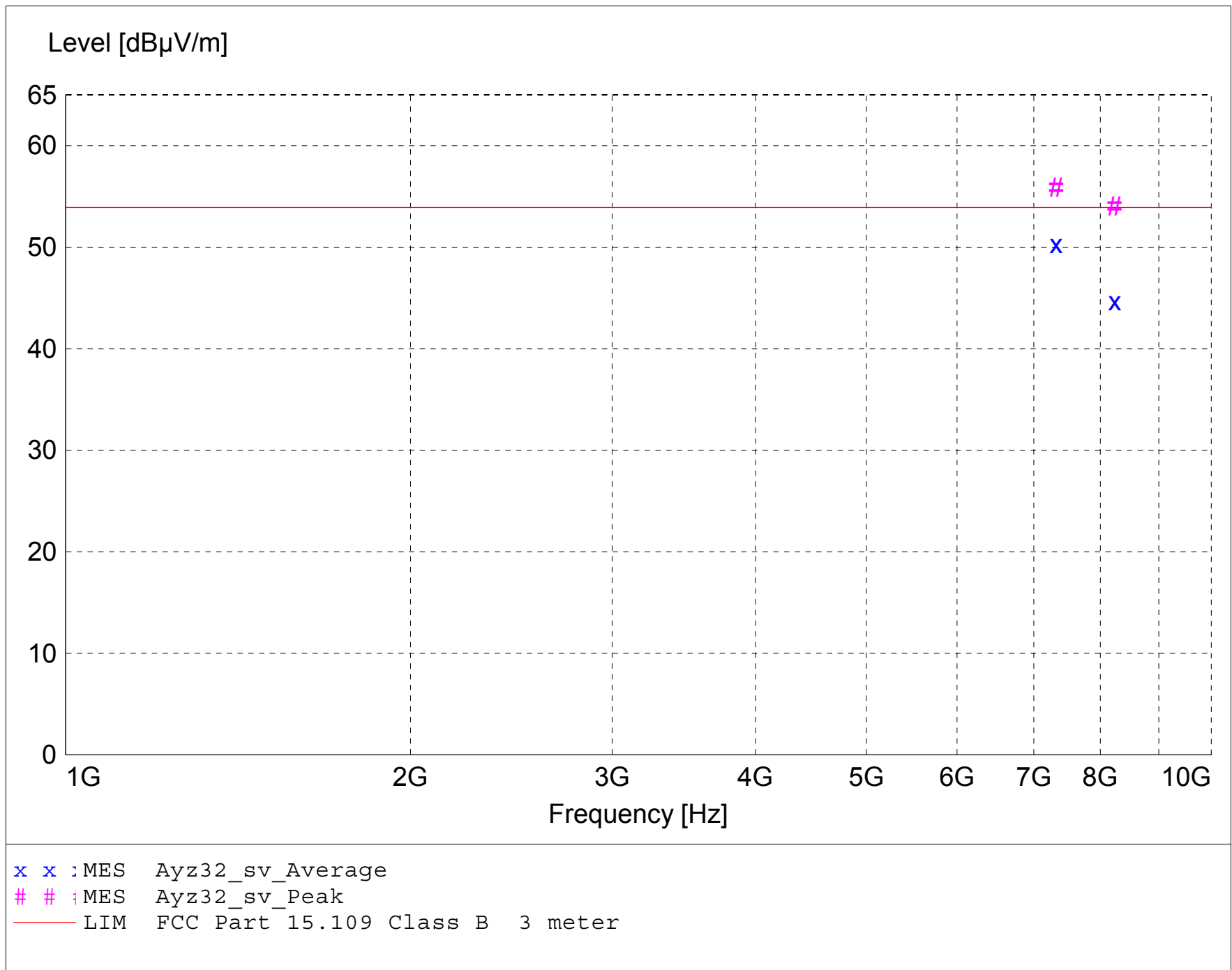
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz32_sv_Final"

6/15/2005 9:32AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
7321.000000	53.35	36.09	-33.6	55.9	53.9	-2.0	1.20	0	MAX PEAK	None
8236.150000	49.75	37.11	-32.8	54.0	53.9	-0.1	1.20	0	MAX PEAK	None
7321.000000	47.77	36.09	-33.6	50.3	53.9	3.6	1.20	0	AVERAGE	None
8236.150000	40.39	37.11	-32.8	44.7	53.9	9.2	1.20	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Max Power; Mid Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 H3M"

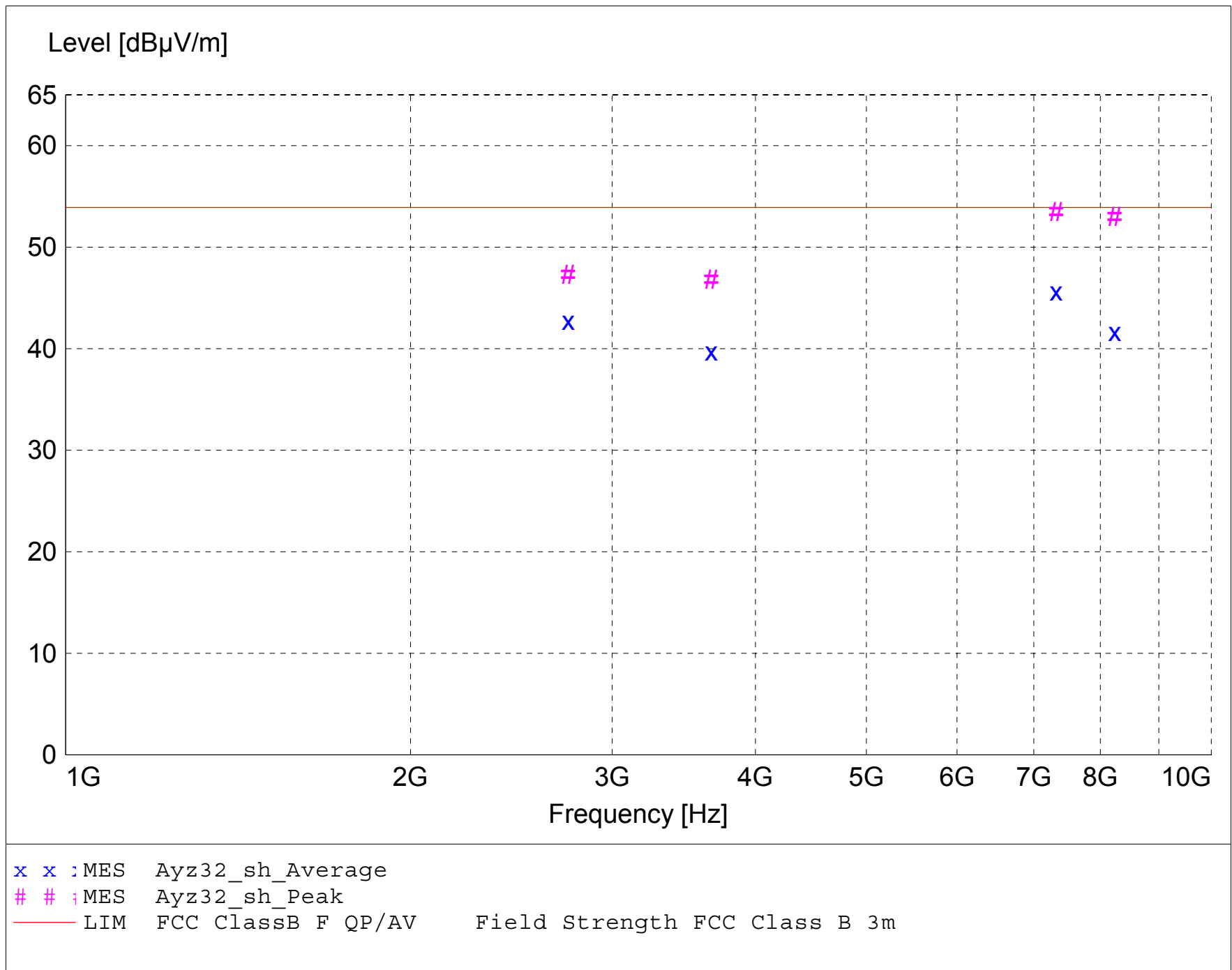
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz32_sh_Final"

6/15/2005 9:38AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7321.000000	50.92	36.09	-33.6	53.4	53.9	0.5	2.00	0	MAX PEAK	None
8236.150000	48.66	37.11	-32.8	52.9	53.9	1.0	2.00	330	MAX PEAK	None
2745.400000	55.93	29.40	-38.1	47.2	53.9	6.7	1.20	45	MAX PEAK	None
3660.500000	51.72	31.63	-36.6	46.8	53.9	7.1	2.00	290	MAX PEAK	None
7321.000000	43.07	36.09	-33.6	45.6	53.9	8.3	2.00	0	AVERAGE	None
2745.400000	51.44	29.40	-38.1	42.7	53.9	11.2	1.20	45	AVERAGE	None
8236.150000	37.34	37.11	-32.8	41.6	53.9	12.3	2.00	330	AVERAGE	None
3660.500000	44.65	31.63	-36.6	39.7	53.9	14.2	2.00	290	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Max Power; High Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 V3M"

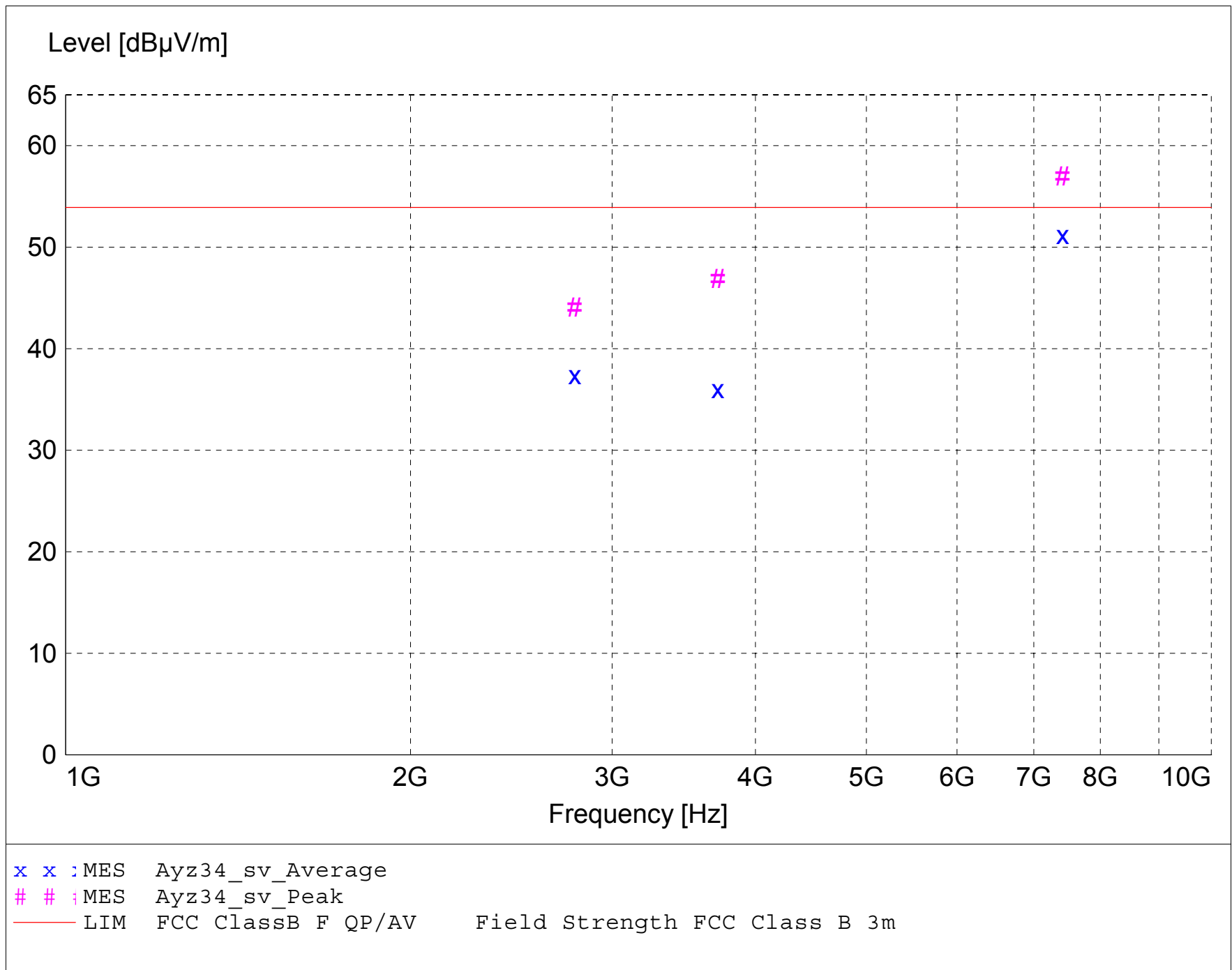
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz34_sv_Final"

6/15/2005 9:59AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	53.76	36.33	-33.2	56.9	53.9	-3.0	1.10	350	MAX PEAK	None
7417.500000	48.06	36.33	-33.2	51.2	53.9	2.7	1.10	350	AVERAGE	None
3708.750000	51.59	31.77	-36.5	46.8	53.9	7.1	1.20	135	MAX PEAK	None
2781.600000	52.53	29.51	-38.0	44.1	53.9	9.8	1.20	135	MAX PEAK	None
2781.600000	45.83	29.51	-38.0	37.4	53.9	16.5	1.20	135	AVERAGE	None
3708.750000	40.75	31.77	-36.5	36.0	53.9	17.9	1.20	135	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Tx mode; Max Power; High Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 H3M"

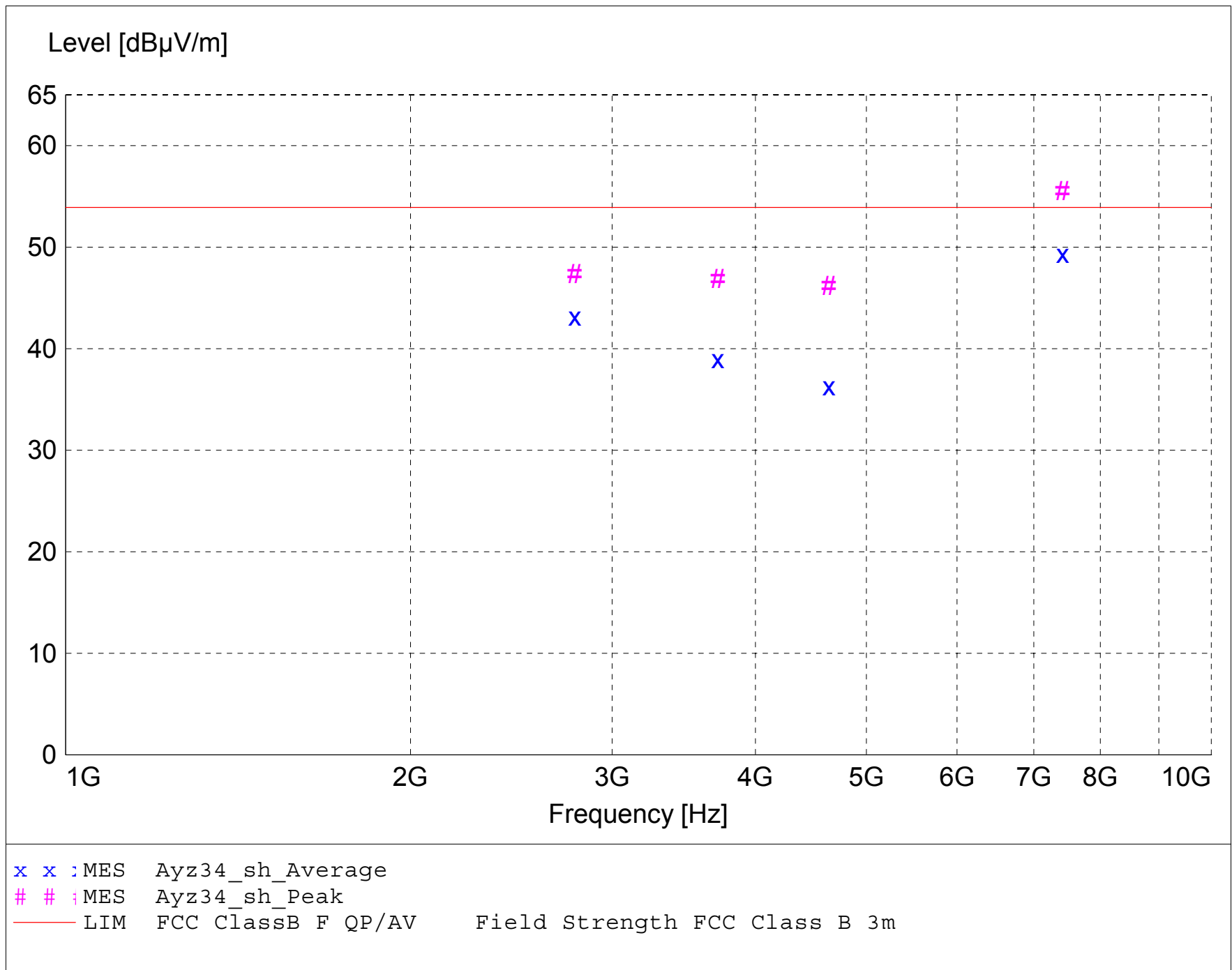
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz34_sh_Final"

6/15/2005 10:04AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	52.40	36.33	-33.2	55.5	53.9	-1.6	1.70	315	MAX PEAK	None
7417.500000	46.16	36.33	-33.2	49.3	53.9	4.6	1.70	315	AVERAGE	None
2781.600000	55.80	29.51	-38.0	47.3	53.9	6.6	1.10	70	MAX PEAK	None
3708.750000	51.59	31.77	-36.5	46.8	53.9	7.1	1.70	315	MAX PEAK	None
4636.000000	49.34	32.60	-35.8	46.1	53.9	7.8	1.70	315	MAX PEAK	None
2781.600000	51.61	29.51	-38.0	43.1	53.9	10.8	1.10	70	AVERAGE	None
3708.750000	43.74	31.77	-36.5	39.0	53.9	14.9	1.70	315	AVERAGE	None
4636.000000	39.49	32.60	-35.8	36.3	53.9	17.6	1.70	315	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 64% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R4M Coupler ZPN: 21052
Comment: Rx mode; High Channel
Date: 06-15-2005

TEXT: "Site 3 6204&184 H3M"

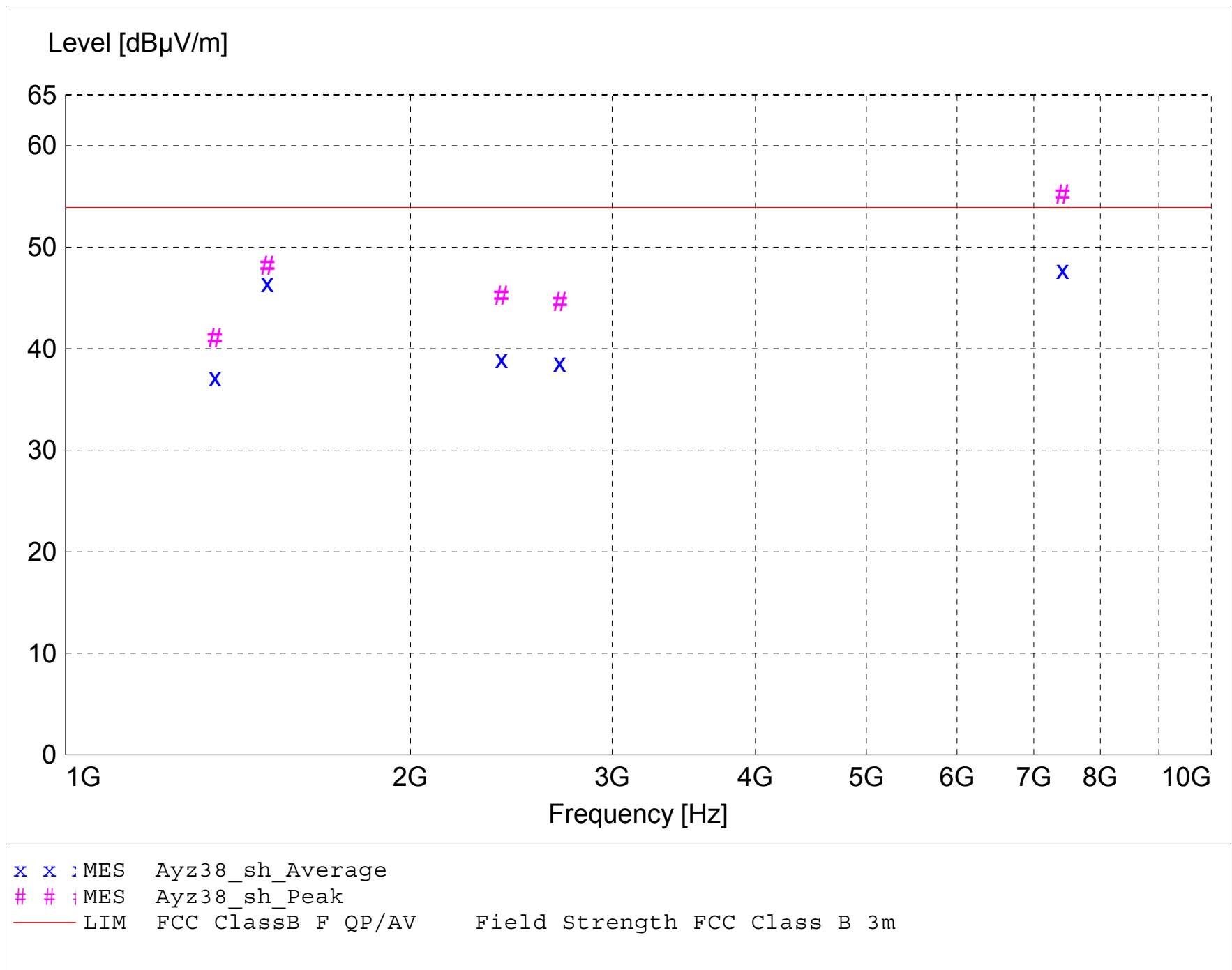
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz38_sh_Final"

6/15/2005 11:02AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.550000	51.99	36.33	-33.2	55.1	53.9	-1.2	2.00	290	MAX PEAK	None
1500.000000	62.13	25.19	-39.2	48.1	53.9	5.8	1.20	60	MAX PEAK	None
7417.550000	44.62	36.33	-33.2	47.7	53.9	6.2	2.00	290	AVERAGE	None
1500.000000	60.45	25.19	-39.2	46.5	53.9	7.4	1.20	60	AVERAGE	None
2400.050000	55.02	28.38	-38.2	45.2	53.9	8.7	1.00	70	MAX PEAK	None
2700.000000	53.62	29.26	-38.3	44.6	53.9	9.3	2.00	45	MAX PEAK	None
1350.000000	55.80	24.85	-39.6	41.0	53.9	12.9	1.20	180	MAX PEAK	None
2400.050000	48.73	28.38	-38.2	38.9	53.9	15.0	1.00	70	AVERAGE	None
2700.000000	47.64	29.26	-38.3	38.6	53.9	15.3	2.00	45	AVERAGE	None
1350.000000	51.91	24.85	-39.6	37.1	53.9	16.8	1.20	180	AVERAGE	None



Company: Zebra Technologies Corporation
Model Tested: ZM4e
Report Number: 11475

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

RADIATED DATA AND GRAPH(S) TAKEN FOR

SPURIOUS EMISSION MEASUREMENTS

ZPN 27050 ANTENNA

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 63% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Rx mode; Low, Mid, High channels
Date: 06-15-2005

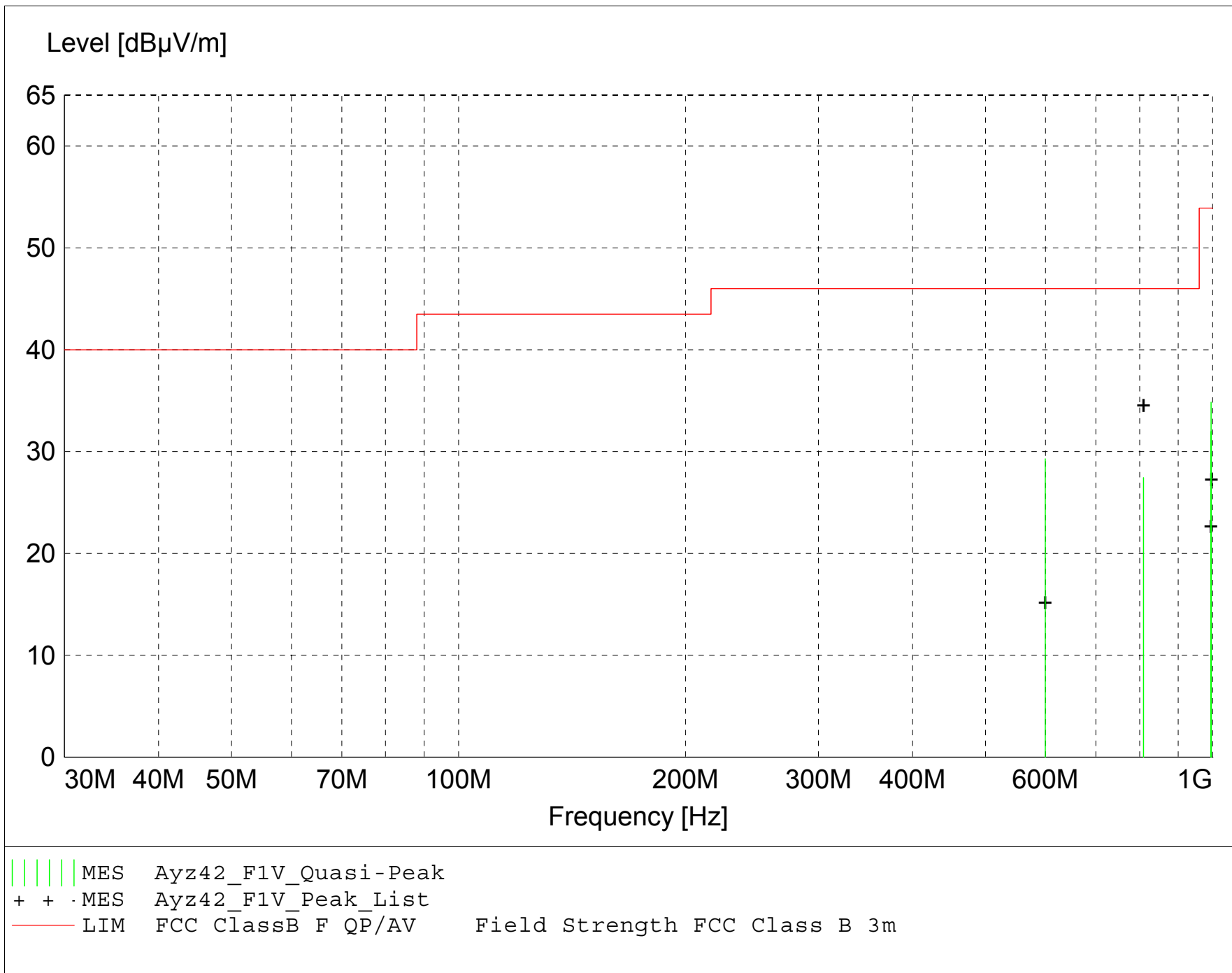
TEXT: "Site 3 MidV 3M"

Short Description: Test Set-up Vert30-1000MHz
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 26 SN: 837491/010

Antennas ---
Biconical -- EMCO 3104C SN: 9701-4785
Log Periodic -- EMCO 3146 SN: 9702-4895

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/005

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz42_F1V_Final"

6/15/2005 2:47PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
599.990000	30.65	18.95	-20.3	29.3	46.0	16.7	1.00	135	QUASI-PEAK	None
809.690000	25.05	21.57	-19.2	27.5	46.0	18.5	1.00	45	QUASI-PEAK	None
994.690000	28.40	23.93	-17.5	34.9	53.9	19.0	1.00	45	QUASI-PEAK	None
995.920000	25.50	23.92	-17.5	32.0	53.9	21.9	1.00	45	QUASI-PEAK	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 63% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Rx mode; Low, Mid, High channels
Date: 06-15-2005

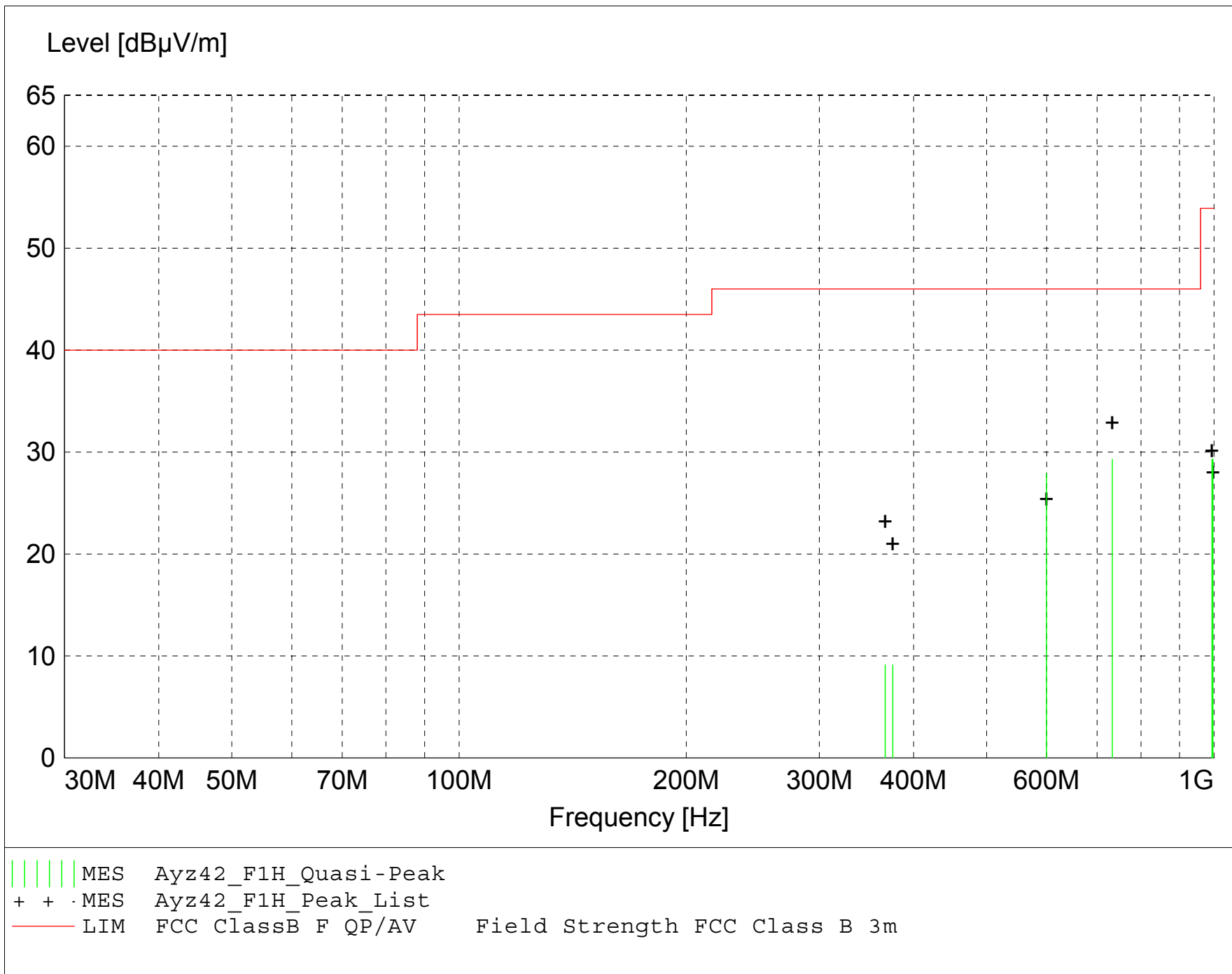
TEXT: "Site 3 MidH 3M"

Short Description: Test Set-up Horz30-1000MHz
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 26 SN: 837491/010

Antennas ---
Biconical -- EMCO 3104C SN: 9701-4785
Log Periodic -- EMCO 3146 SN: 9702-4895

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/005

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz42_F1H_Final"

6/15/2005 2:47PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
732.850000	25.38	21.35	-17.4	29.3	46.0	16.7	1.00	0	QUASI-PEAK	None
599.990000	29.27	18.95	-20.3	27.9	46.0	18.1	2.00	135	QUASI-PEAK	None
996.990000	22.85	23.88	-17.4	29.3	53.9	24.6	1.00	0	QUASI-PEAK	None
993.620000	22.86	23.90	-17.5	29.3	53.9	24.6	1.00	0	QUASI-PEAK	None
375.180000	15.56	15.14	-21.6	9.1	46.0	36.9	2.00	45	QUASI-PEAK	None
366.710000	15.80	14.95	-21.6	9.1	46.0	36.9	2.00	45	QUASI-PEAK	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Low Power; Low Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

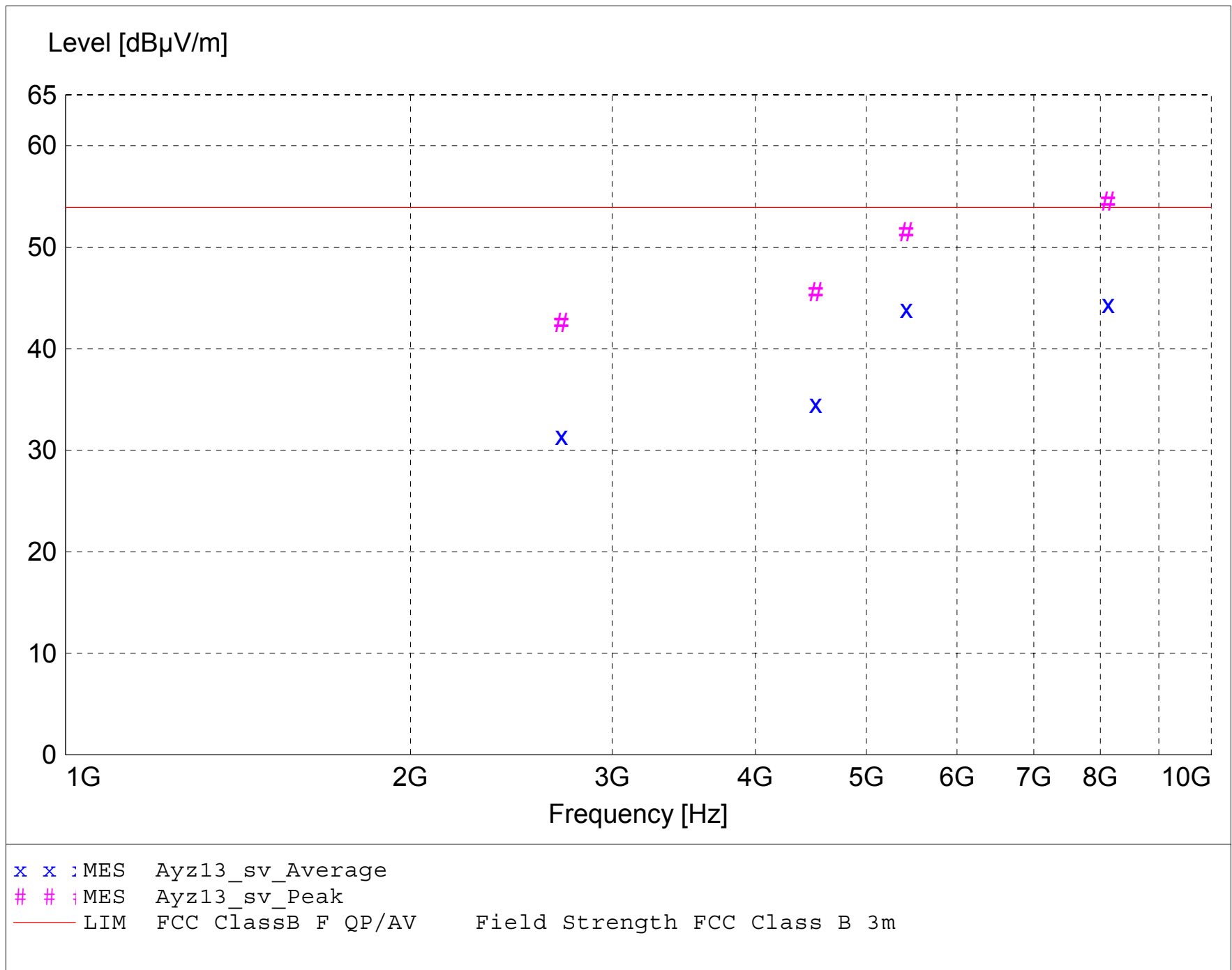
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz13_sv_Final"

6/14/2005 1:13PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8126.950000	50.17	36.98	-32.7	54.5	53.9	-0.6	2.00	270	MAX PEAK	None
5417.950000	52.66	33.97	-35.2	51.5	53.9	2.4	1.70	0	MAX PEAK	None
4514.950000	48.78	32.35	-35.6	45.6	53.9	8.3	1.20	90	MAX PEAK	None
8126.950000	40.07	36.98	-32.7	44.4	53.9	9.5	2.00	270	AVERAGE	None
5417.950000	45.08	33.97	-35.2	43.9	53.9	10.0	1.70	0	AVERAGE	None
2709.000000	51.48	29.28	-38.3	42.5	53.9	11.4	1.00	180	MAX PEAK	None
4514.950000	37.76	32.35	-35.6	34.5	53.9	19.4	1.20	90	AVERAGE	None
2709.000000	40.37	29.28	-38.3	31.4	53.9	22.5	1.00	180	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Low Power; Low Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

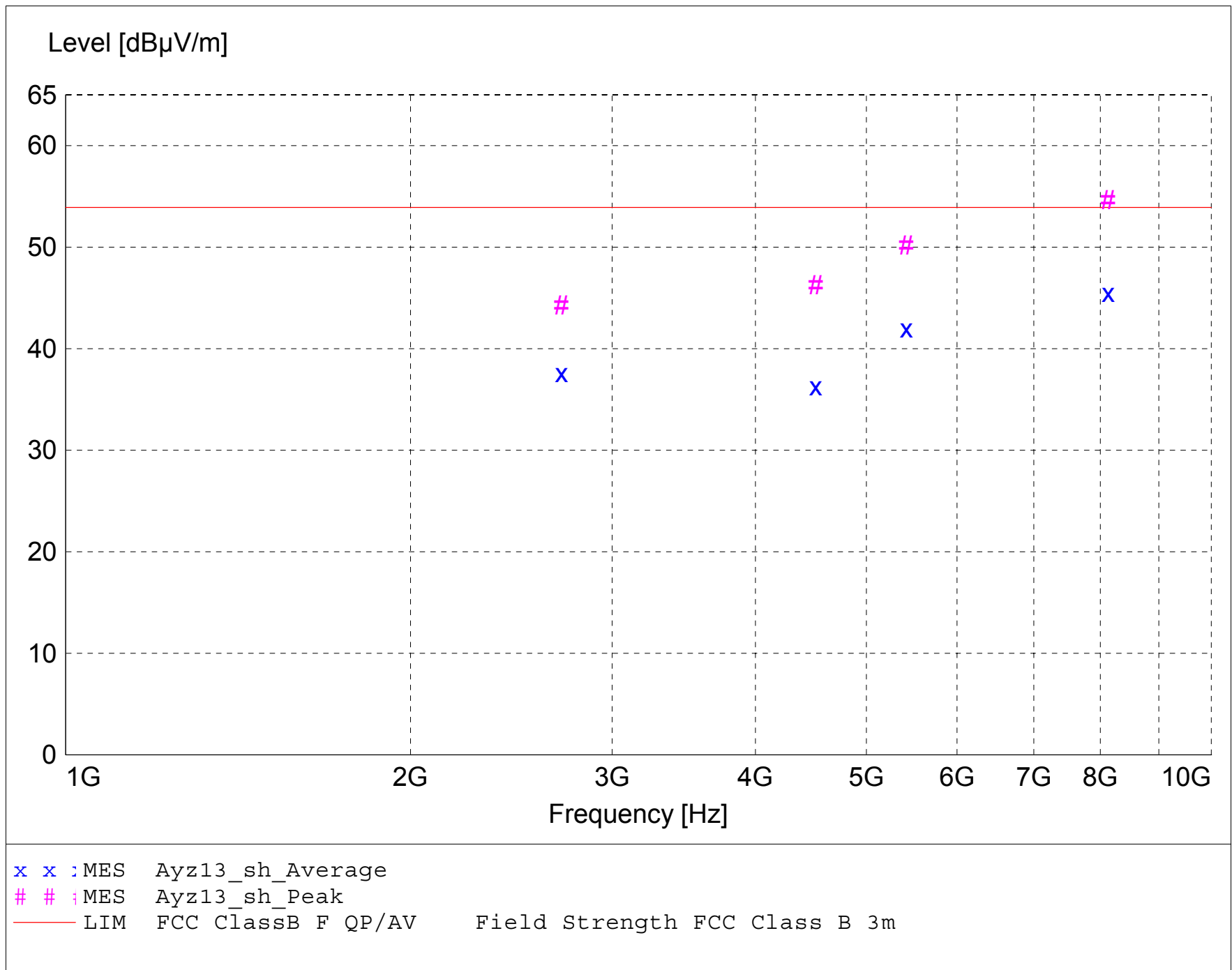
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz13_sh_Final"

6/14/2005 1:19PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8126.950000	50.31	36.98	-32.7	54.6	53.9	-0.7	1.80	0	MAX PEAK	None
5417.950000	51.35	33.97	-35.2	50.1	53.9	3.8	2.20	45	MAX PEAK	None
4514.950000	49.48	32.35	-35.6	46.3	53.9	7.6	2.20	20	MAX PEAK	None
8126.950000	41.15	36.98	-32.7	45.4	53.9	8.5	1.80	0	AVERAGE	None
2709.000000	53.19	29.28	-38.3	44.2	53.9	9.7	1.30	90	MAX PEAK	None
5417.950000	43.14	33.97	-35.2	41.9	53.9	12.0	2.20	45	AVERAGE	None
2709.000000	46.56	29.28	-38.3	37.6	53.9	16.3	1.30	90	AVERAGE	None
4514.950000	39.46	32.35	-35.6	36.2	53.9	17.7	2.20	20	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Low Power; Mid Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

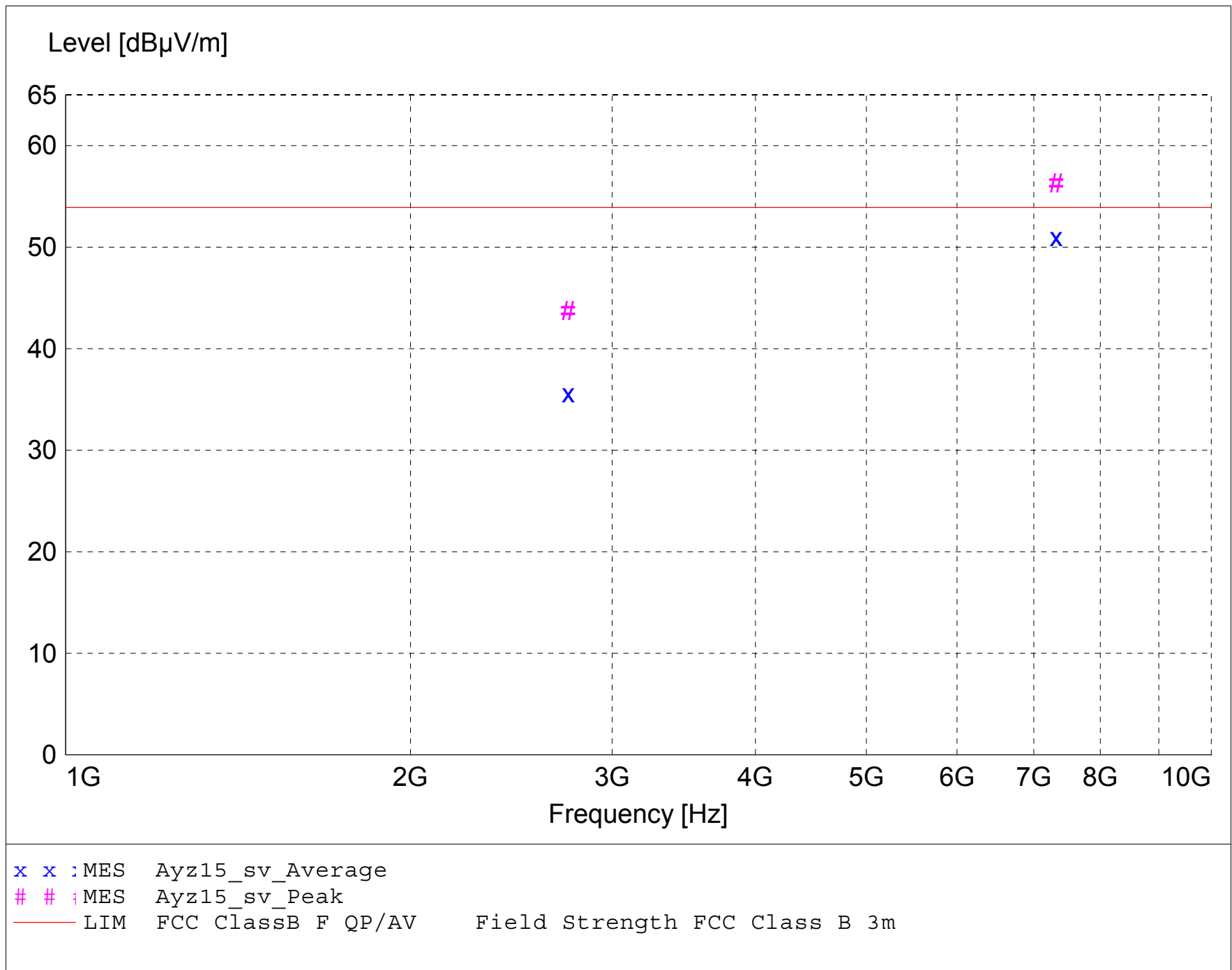
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz15_sv_Final"

6/14/2005 1:37PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBμV	dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7321.000000	53.72	36.09	-33.6	56.2	53.9	-2.3	1.10	0	MAX PEAK	None
7321.000000	48.43	36.09	-33.6	51.0	53.9	2.9	1.10	0	AVERAGE	None
2745.400000	52.39	29.40	-38.1	43.7	53.9	10.2	1.00	180	MAX PEAK	None
2745.400000	44.26	29.40	-38.1	35.5	53.9	18.4	1.00	180	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Low Power; Mid Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

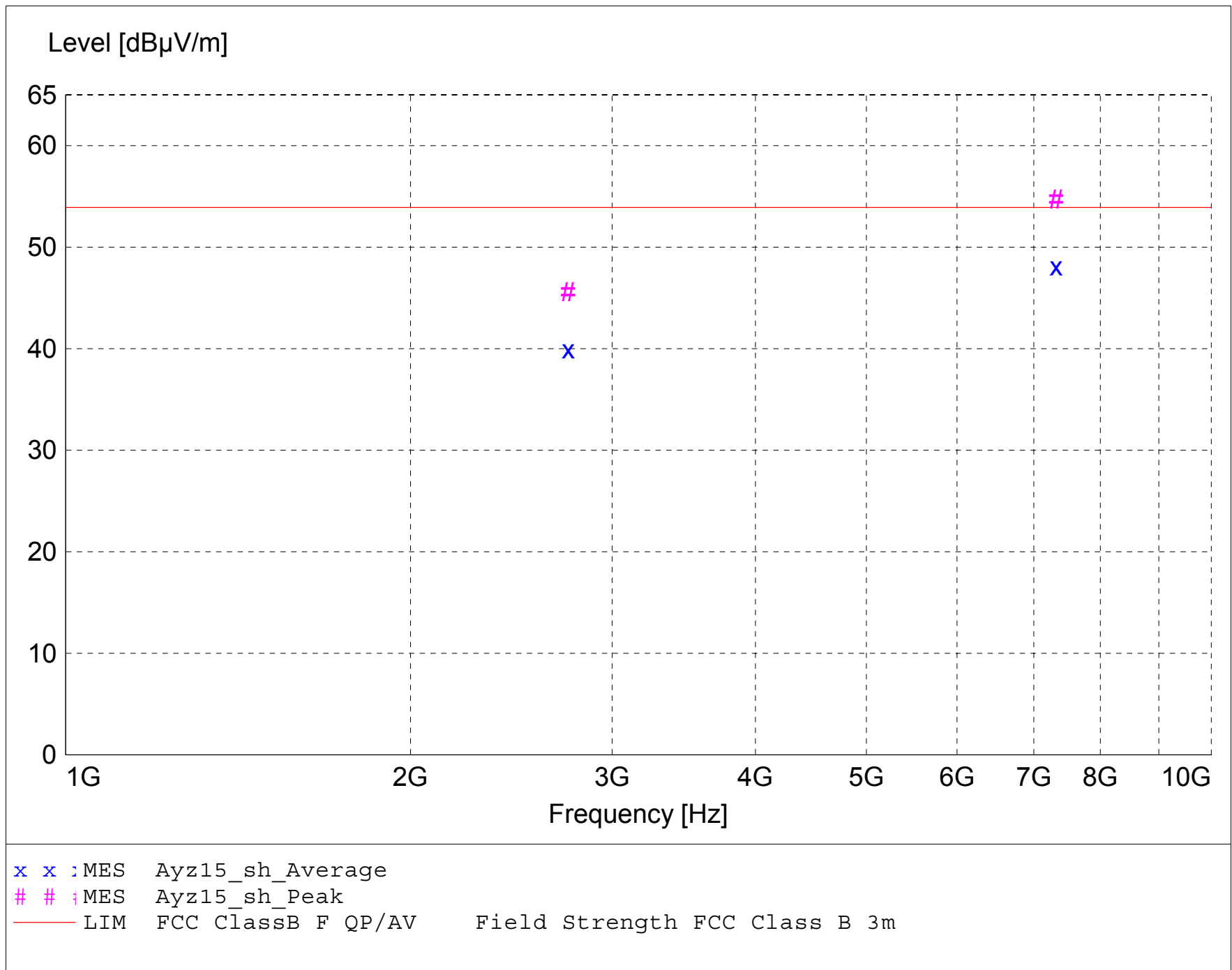
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz15_sh_Final"

6/14/2005 1:41PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
7321.000000	52.12	36.09	-33.6	54.6	53.9	-0.7	2.20	0	MAX PEAK	None
7321.000000	45.55	36.09	-33.6	48.1	53.9	5.8	2.20	0	AVERAGE	None
2745.400000	54.26	29.40	-38.1	45.5	53.9	8.4	2.10	45	MAX PEAK	None
2745.400000	48.63	29.40	-38.1	39.9	53.9	14.0	2.10	45	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Low Power; High Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

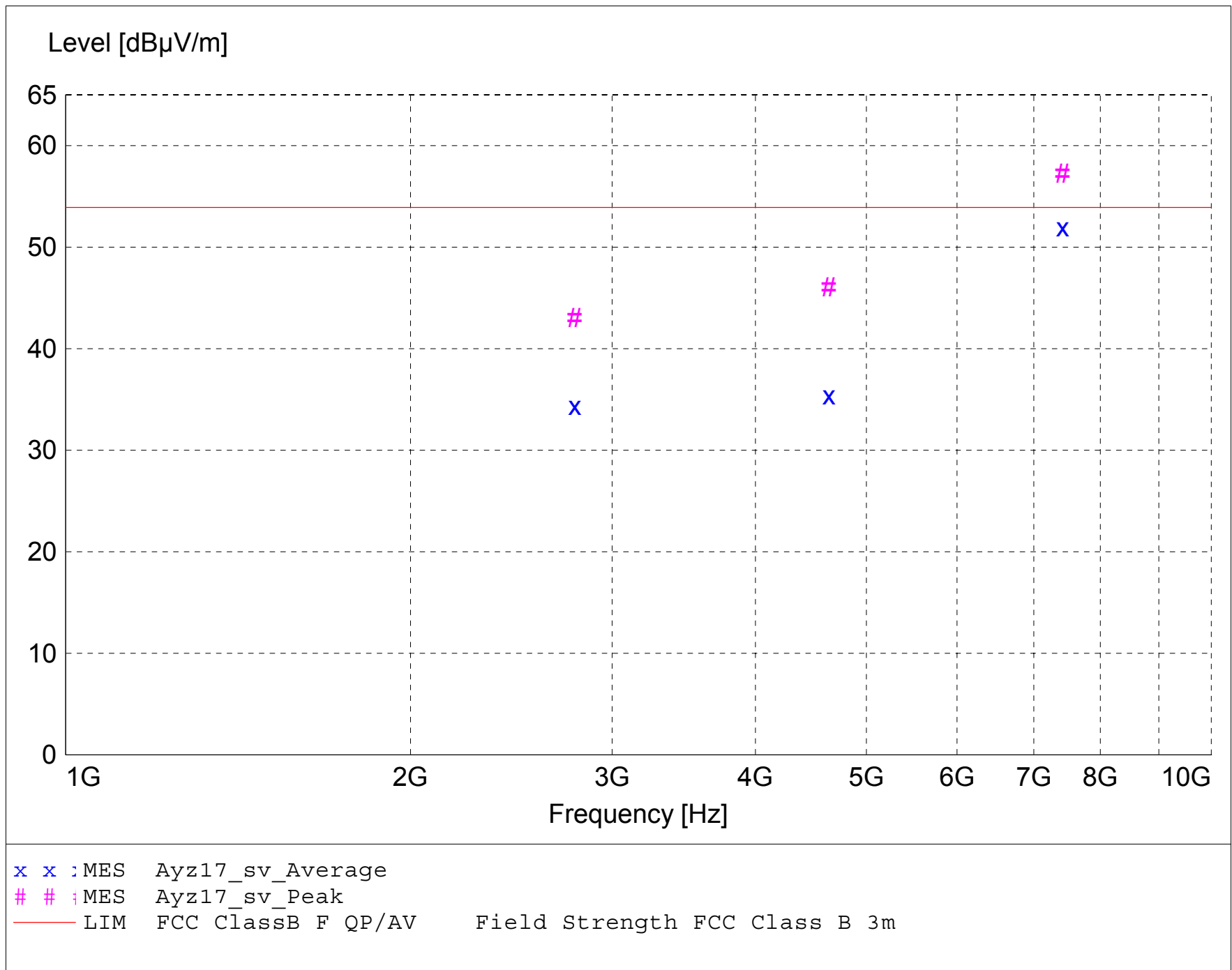
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz17_sv_Final"

6/14/2005 2:01PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	54.12	36.33	-33.2	57.3	53.9	-3.4	1.00	0	MAX PEAK	None
7417.500000	48.77	36.33	-33.2	51.9	53.9	2.0	1.00	0	AVERAGE	None
4636.000000	49.19	32.60	-35.8	46.0	53.9	7.9	1.20	0	MAX PEAK	None
2781.600000	51.48	29.51	-38.0	43.0	53.9	10.9	1.00	135	MAX PEAK	None
4636.000000	38.57	32.60	-35.8	35.4	53.9	18.5	1.20	0	AVERAGE	None
2781.600000	42.84	29.51	-38.0	34.4	53.9	19.5	1.00	135	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Low Power; High Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

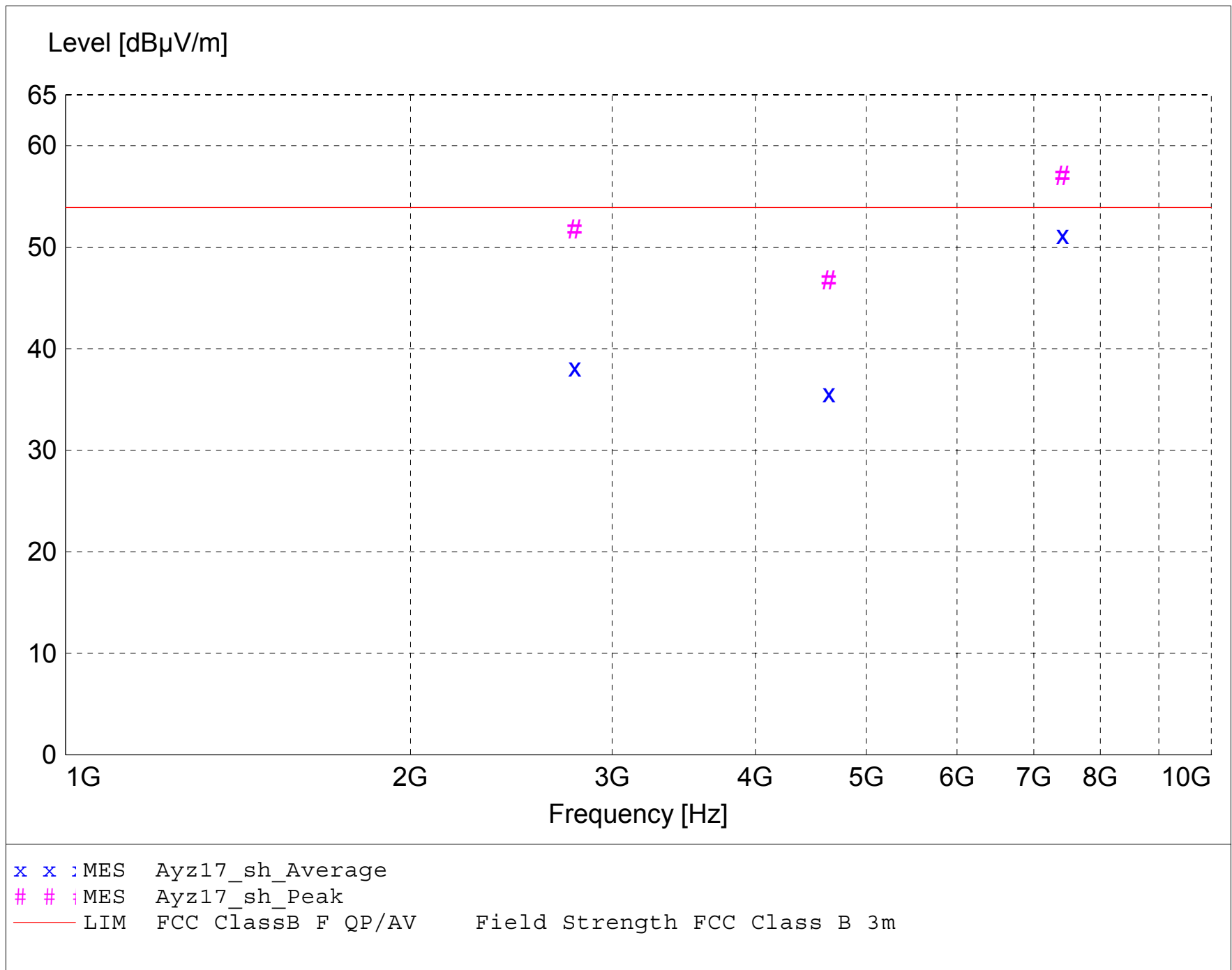
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz17_sh_Final"

6/14/2005 2:05PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	53.85	36.33	-33.2	57.0	53.9	-3.1	2.00	0	MAX PEAK	None
2781.600000	60.23	29.51	-38.0	51.8	53.9	2.1	1.00	30	MAX PEAK	None
7417.500000	48.04	36.33	-33.2	51.2	53.9	2.7	2.00	0	AVERAGE	None
4636.000000	49.90	32.60	-35.8	46.7	53.9	7.2	1.00	315	MAX PEAK	None
2781.600000	46.63	29.51	-38.0	38.1	53.9	15.8	1.00	30	AVERAGE	None
4636.000000	38.76	32.60	-35.8	35.6	53.9	18.3	1.00	315	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Max Power; Low Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

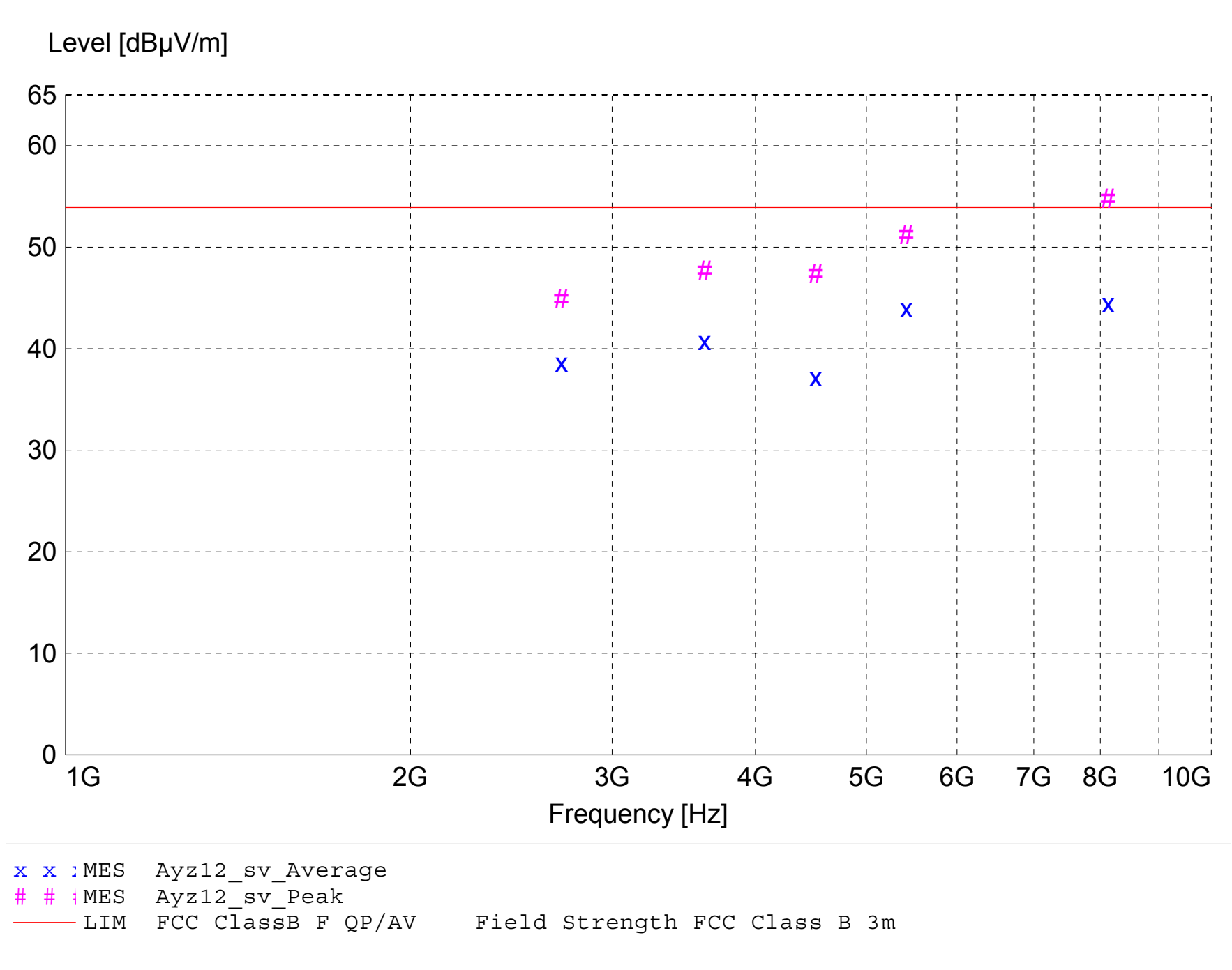
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz12_sv_Final"

6/14/2005 12:59PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8126.950000	50.44	36.98	-32.7	54.7	53.9	-0.8	1.10	0	MAX PEAK	None
5417.950000	52.39	33.97	-35.2	51.2	53.9	2.7	1.00	180	MAX PEAK	None
3612.000000	52.79	31.49	-36.6	47.7	53.9	6.2	1.30	20	MAX PEAK	None
4514.950000	50.57	32.35	-35.6	47.4	53.9	6.5	1.00	90	MAX PEAK	None
2709.000000	53.85	29.28	-38.3	44.9	53.9	9.0	1.00	180	MAX PEAK	None
8126.950000	40.16	36.98	-32.7	44.5	53.9	9.4	1.10	0	AVERAGE	None
5417.950000	45.16	33.97	-35.2	44.0	53.9	9.9	1.00	180	AVERAGE	None
3612.000000	45.83	31.49	-36.6	40.7	53.9	13.2	1.30	20	AVERAGE	None
2709.000000	47.59	29.28	-38.3	38.6	53.9	15.3	1.00	180	AVERAGE	None
4514.950000	40.41	32.35	-35.6	37.2	53.9	16.7	1.00	90	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Max Power; Low Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

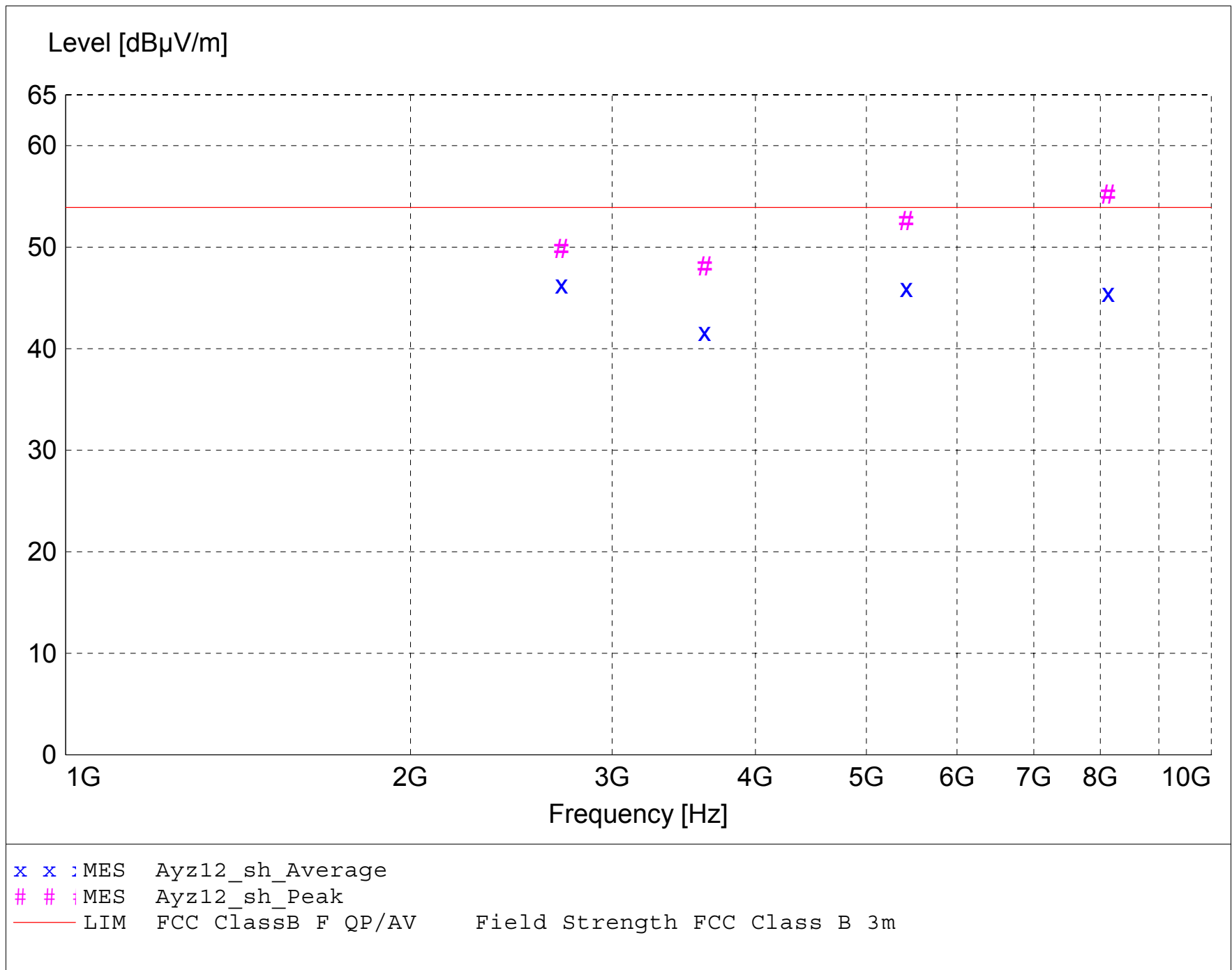
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz12_sh_Final"

6/14/2005 1:05PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8126.950000	50.84	36.98	-32.7	55.1	53.9	-1.2	1.10	315	MAX PEAK	None
5417.950000	53.72	33.97	-35.2	52.5	53.9	1.4	1.90	60	MAX PEAK	None
2709.000000	58.76	29.28	-38.3	49.8	53.9	4.1	1.30	45	MAX PEAK	None
3612.000000	53.19	31.49	-36.6	48.1	53.9	5.8	1.10	0	MAX PEAK	None
2709.000000	55.29	29.28	-38.3	46.3	53.9	7.6	1.30	45	AVERAGE	None
5417.950000	47.18	33.97	-35.2	46.0	53.9	7.9	1.90	60	AVERAGE	None
8126.950000	41.17	36.98	-32.7	45.5	53.9	8.4	1.10	315	AVERAGE	None
3612.000000	46.73	31.49	-36.6	41.6	53.9	12.3	1.10	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Max Power; Mid Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

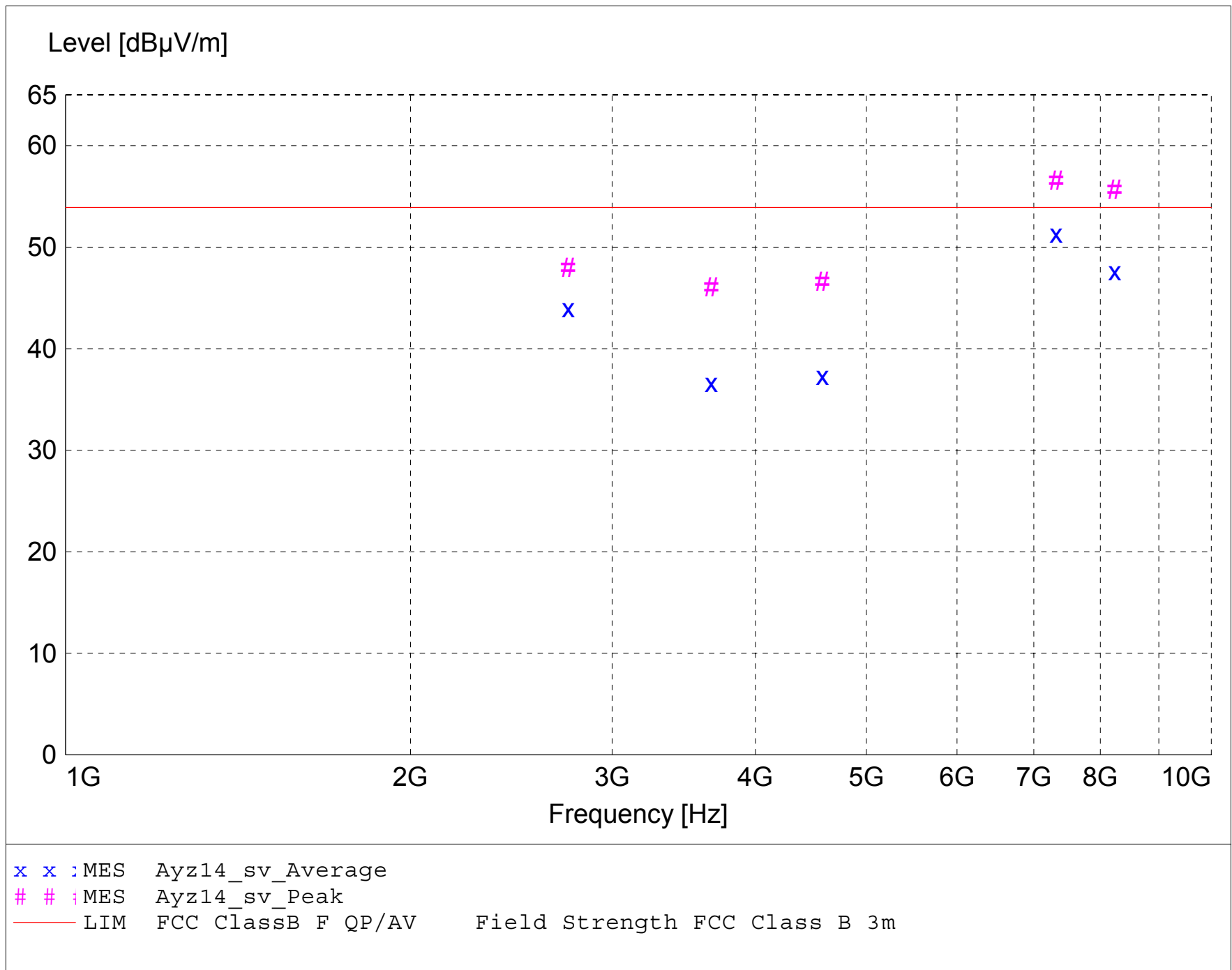
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz14_sv_Final"

6/14/2005 1:27PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBµV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
7321.000000	53.98	36.09	-33.6	56.5	53.9	-2.6	1.40	0	MAX PEAK	None
8236.150000	51.35	37.11	-32.8	55.6	53.9	-1.7	1.30	0	MAX PEAK	None
7321.000000	48.80	36.09	-33.6	51.3	53.9	2.6	1.40	0	AVERAGE	None
2745.400000	56.67	29.40	-38.1	48.0	53.9	5.9	1.00	90	MAX PEAK	None
8236.150000	43.34	37.11	-32.8	47.6	53.9	6.3	1.30	0	AVERAGE	None
4575.650000	49.76	32.47	-35.7	46.6	53.9	7.3	1.00	70	MAX PEAK	None
3660.500000	50.97	31.63	-36.6	46.0	53.9	7.9	1.00	0	MAX PEAK	None
2745.400000	52.71	29.40	-38.1	44.0	53.9	9.9	1.00	90	AVERAGE	None
4575.650000	40.55	32.47	-35.7	37.3	53.9	16.6	1.00	70	AVERAGE	None
3660.500000	41.57	31.63	-36.6	36.6	53.9	17.3	1.00	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Max Power; Mid Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

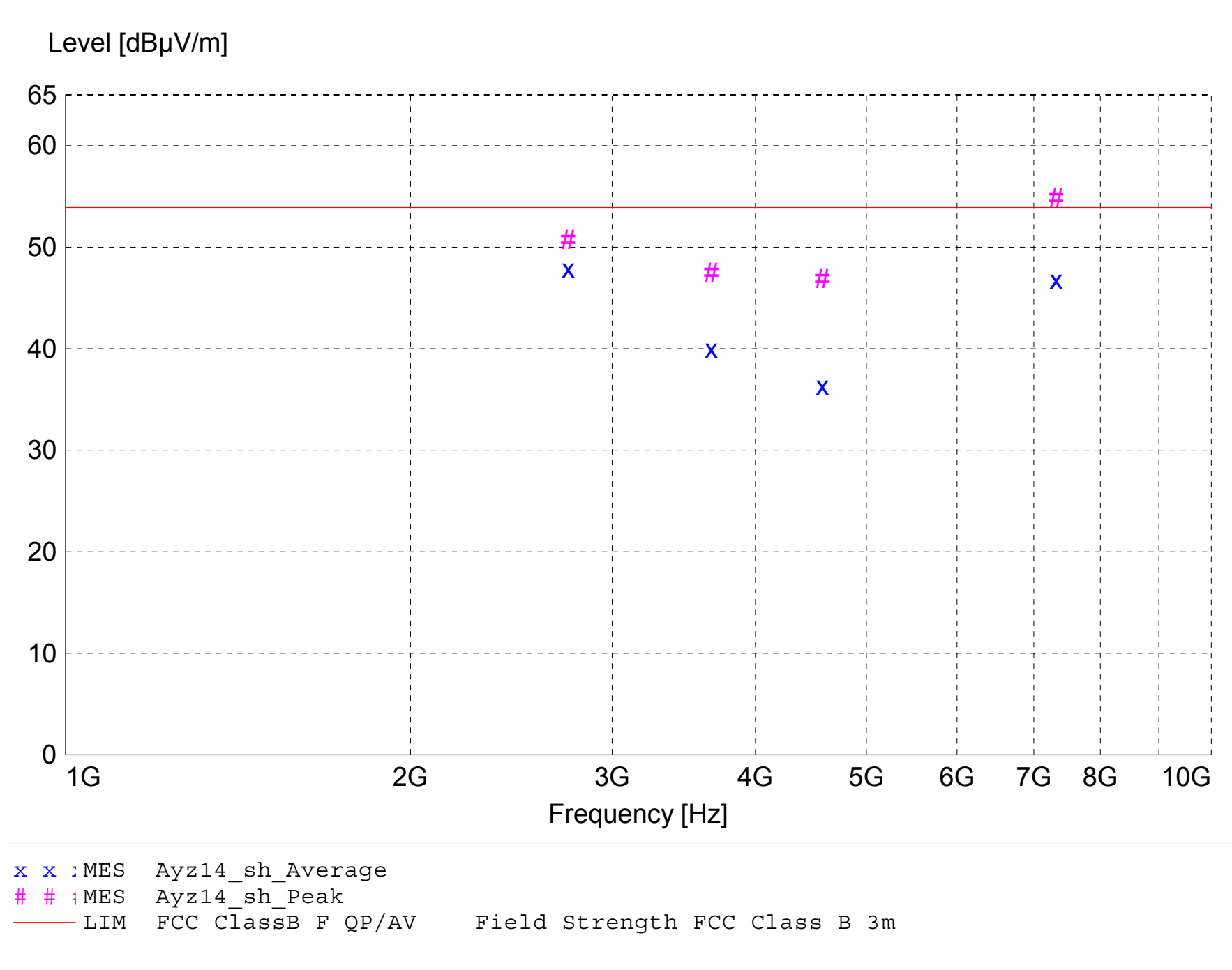
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz14_sh_Final"

6/14/2005 1:32PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7321.000000	52.26	36.09	-33.6	54.8	53.9	-0.9	2.00	0	MAX PEAK	None
2745.400000	59.38	29.40	-38.1	50.7	53.9	3.2	1.30	135	MAX PEAK	None
2745.400000	56.61	29.40	-38.1	47.9	53.9	6.0	1.30	135	AVERAGE	None
3660.500000	52.39	31.63	-36.6	47.5	53.9	6.4	1.50	300	MAX PEAK	None
4575.650000	50.04	32.47	-35.7	46.8	53.9	7.1	1.00	0	MAX PEAK	None
7321.000000	44.26	36.09	-33.6	46.8	53.9	7.1	2.00	0	AVERAGE	None
3660.500000	44.90	31.63	-36.6	40.0	53.9	13.9	1.50	300	AVERAGE	None
4575.650000	39.57	32.47	-35.7	36.4	53.9	17.5	1.00	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Max Power; High Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

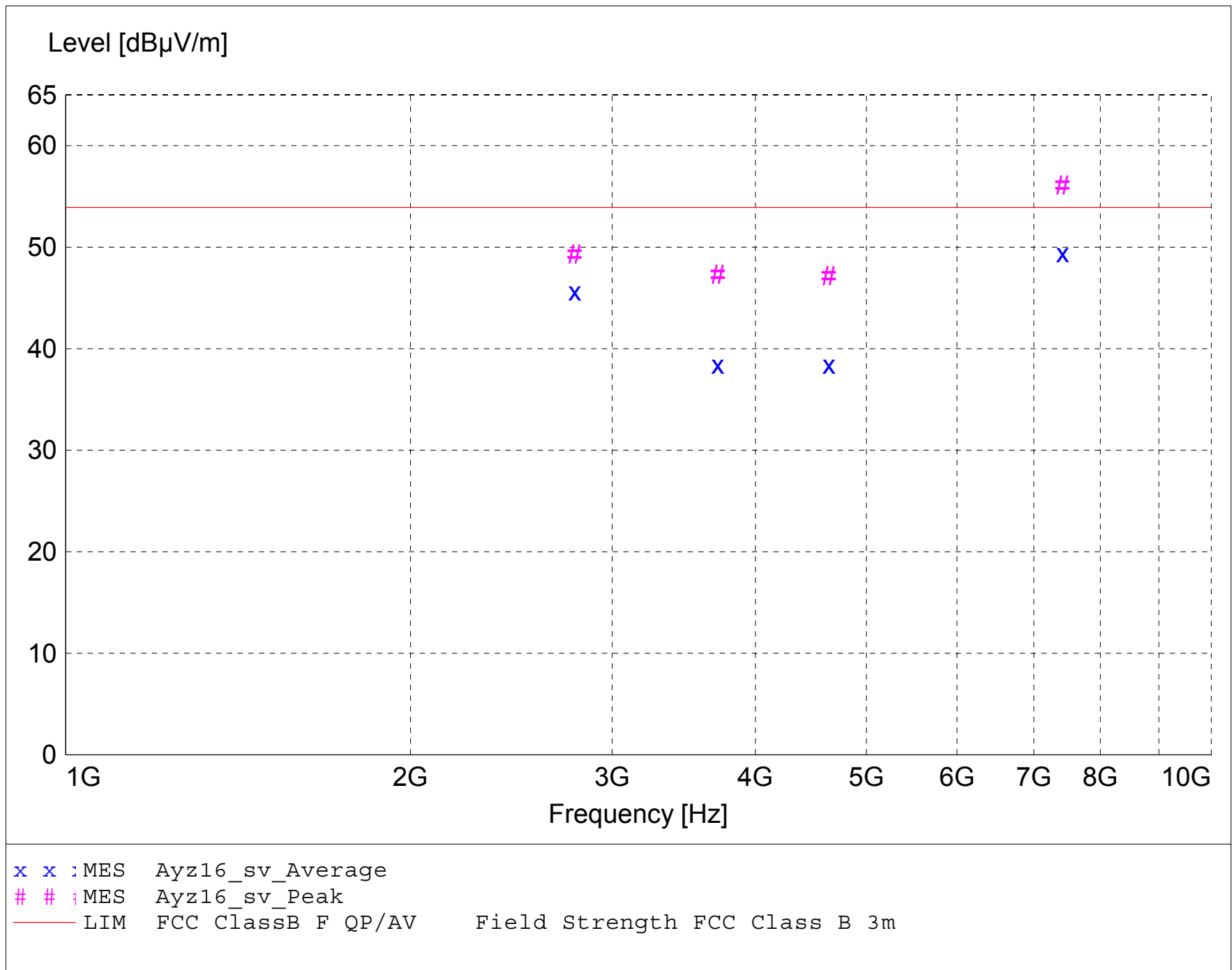
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz16_sv_Final"

6/14/2005 1:49PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	52.92	36.33	-33.2	56.1	53.9	-2.2	1.30	315	MAX PEAK	None
7417.500000	46.26	36.33	-33.2	49.4	53.9	4.5	1.30	315	AVERAGE	None
2781.600000	57.69	29.51	-38.0	49.2	53.9	4.7	1.00	90	MAX PEAK	None
3708.750000	51.99	31.77	-36.5	47.2	53.9	6.7	1.10	100	MAX PEAK	None
4636.000000	50.31	32.60	-35.8	47.1	53.9	6.8	1.20	0	MAX PEAK	None
2781.600000	54.08	29.51	-38.0	45.6	53.9	8.3	1.00	90	AVERAGE	None
3708.750000	43.18	31.77	-36.5	38.4	53.9	15.5	1.10	100	AVERAGE	None
4636.000000	41.59	32.60	-35.8	38.4	53.9	15.5	1.20	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R170XiIII Coupler ZPN: 27050
Comment: Tx mode; Max Power; High Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

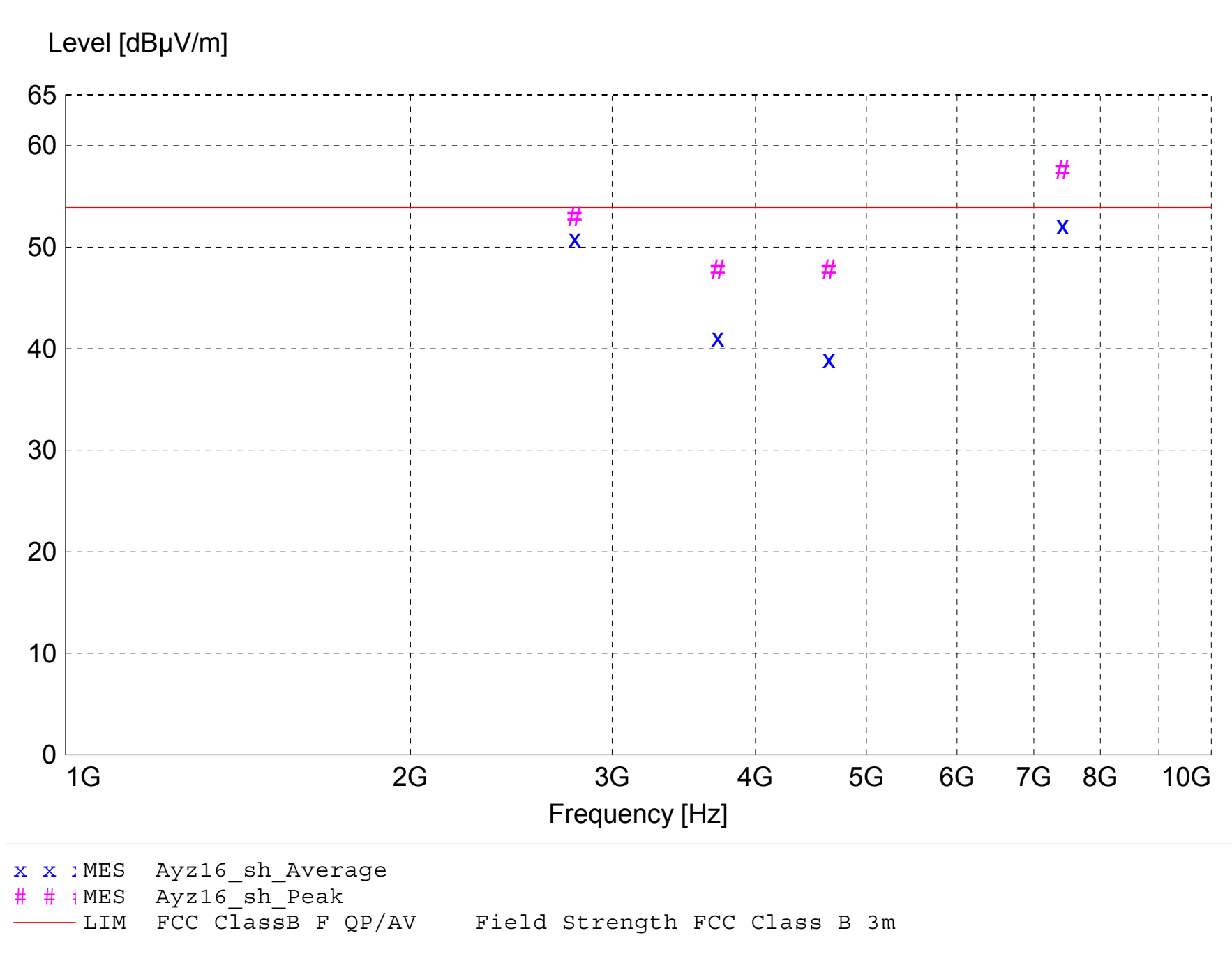
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz16_sh_Final"

6/14/2005 1:54PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	54.40	36.33	-33.2	57.5	53.9	-3.6	2.00	290	MAX PEAK	None
2781.600000	61.41	29.51	-38.0	52.9	53.9	1.0	1.20	135	MAX PEAK	None
7417.500000	49.02	36.33	-33.2	52.2	53.9	1.7	2.00	290	AVERAGE	None
2781.600000	59.27	29.51	-38.0	50.8	53.9	3.1	1.20	135	AVERAGE	None
4636.000000	50.97	32.60	-35.8	47.8	53.9	6.1	2.00	290	MAX PEAK	None
3708.750000	52.52	31.77	-36.5	47.8	53.9	6.1	2.00	290	MAX PEAK	None
3708.750000	45.80	31.77	-36.5	41.0	53.9	12.9	2.00	290	AVERAGE	None
4636.000000	42.18	32.60	-35.8	39.0	53.9	14.9	2.00	290	AVERAGE	None



Company: Zebra Technologies Corporation
Model Tested: ZM4e
Report Number: 11475

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

RADIATED DATA AND GRAPH(S) TAKEN FOR

SPURIOUS EMISSION MEASUREMENTS

ZPN 27060 ANTENNA

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 63% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Rx mode; Low, Mid, High channels
Date: 06-15-2005

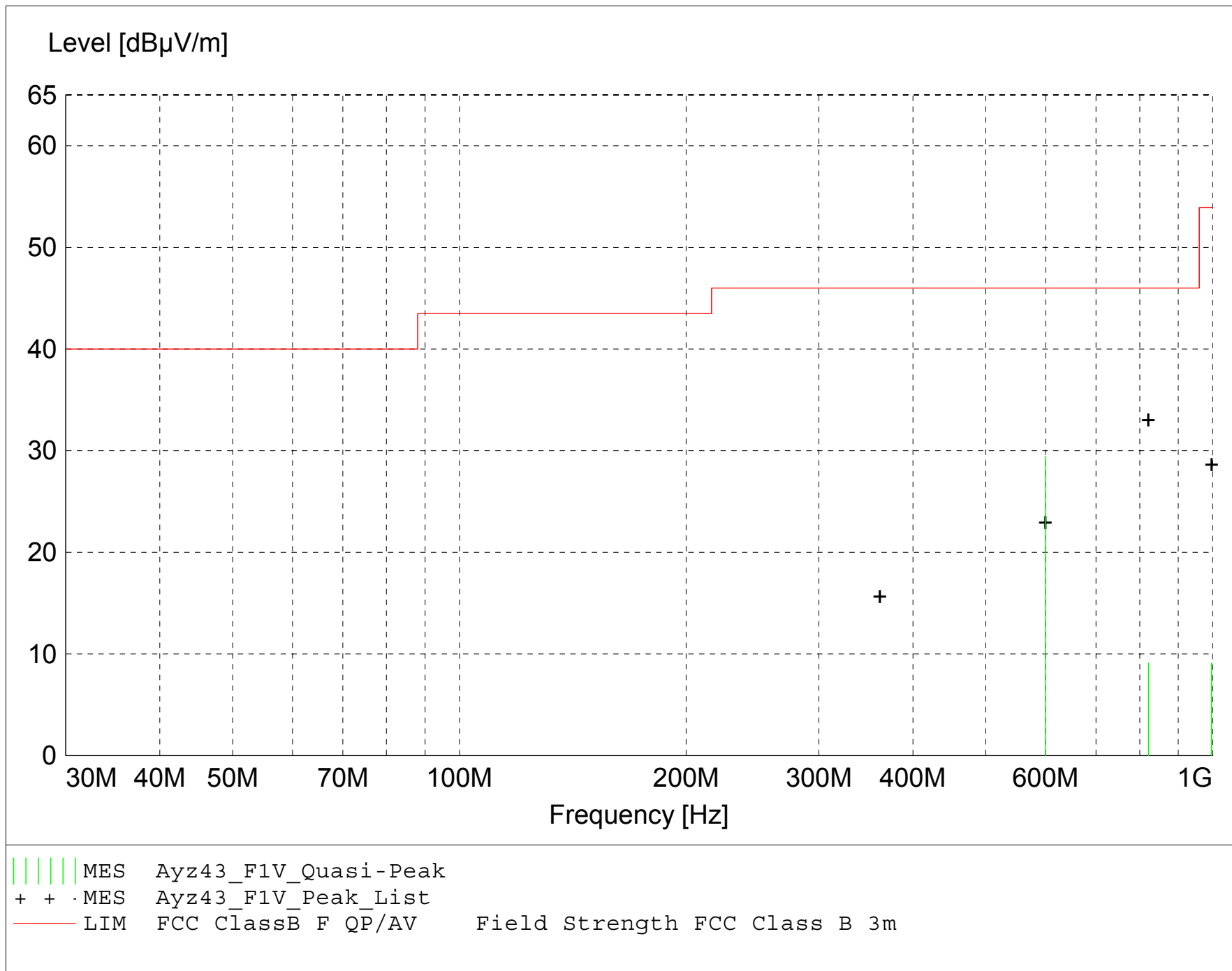
TEXT: "Site 3 MidV 3M"

Short Description: Test Set-up Vert30-1000MHz
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 26 SN: 837491/010

Antennas ---
Biconical -- EMCO 3104C SN: 9701-4785
Log Periodic -- EMCO 3146 SN: 9702-4895

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/005

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz43_F1V_Final"

6/15/2005 3:24PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
0.000000	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0		
599.990000	30.80	18.95	-20.3	29.4	46.0	16.6	1.00	135	QUASI-PEAK	None
822.070000	6.34	21.88	-19.1	9.1	46.0	36.9	2.20	45	QUASI-PEAK	None
996.950000	2.67	23.88	-17.4	9.1	53.9	44.8	1.00	45	QUASI-PEAK	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 63% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Rx mode; Low, Mid, High channels
Date: 06-15-2005

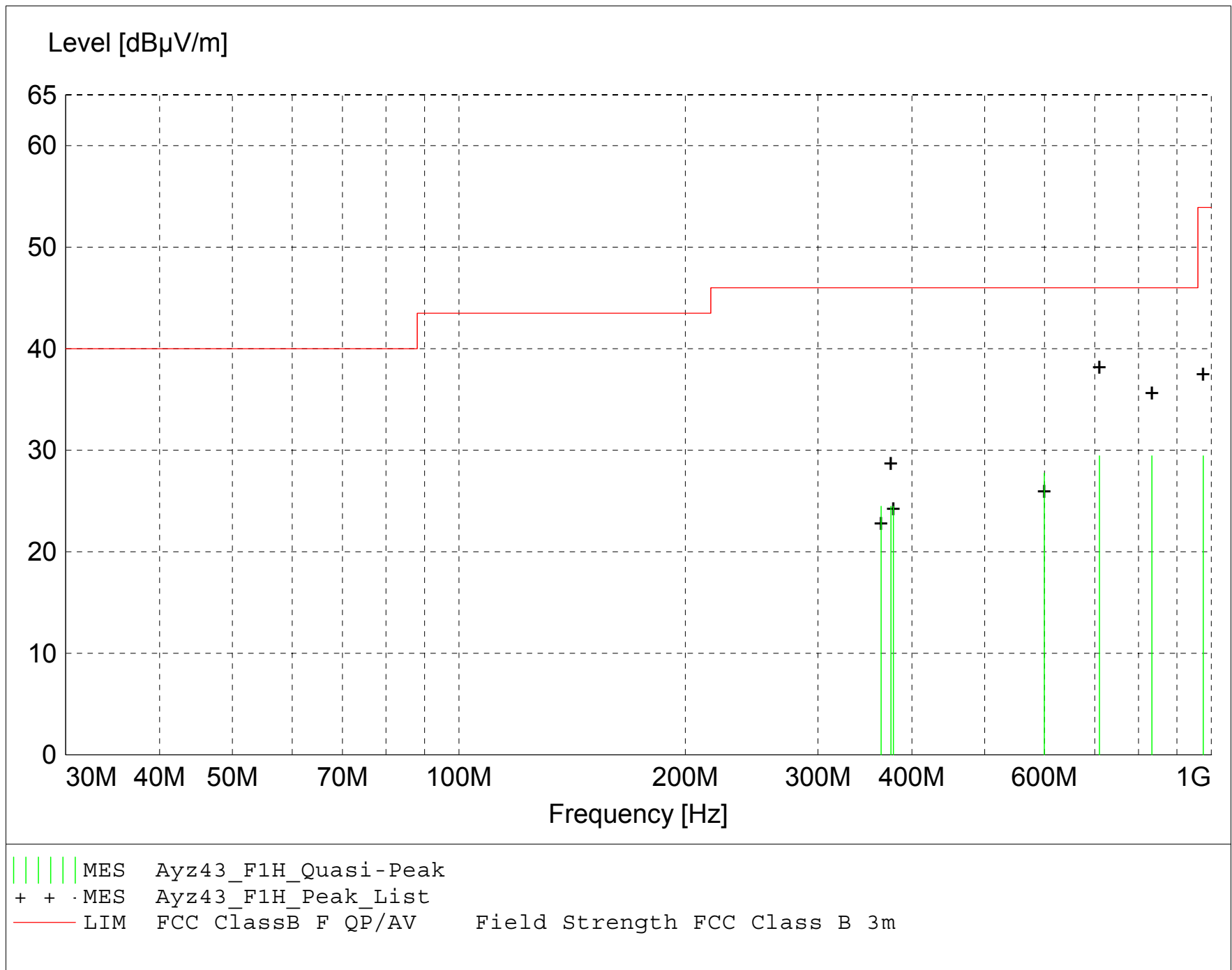
TEXT: "Site 3 MidH 3M"

Short Description: Test Set-up Horz30-1000MHz
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 26 SN: 837491/010

Antennas ---
Biconical -- EMCO 3104C SN: 9701-4785
Log Periodic -- EMCO 3146 SN: 9702-4895

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/005

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz43_F1H_Final"

6/15/2005 3:27PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
833.670000	26.32	22.17	-19.0	29.4	46.0	16.6	2.00	0	QUASI-PEAK	None
709.950000	26.54	21.33	-18.4	29.4	46.0	16.6	2.00	315	QUASI-PEAK	None
599.990000	29.10	18.95	-20.3	27.7	46.0	18.3	1.80	135	QUASI-PEAK	None
377.950000	30.87	15.16	-21.6	24.5	46.0	21.5	2.00	45	QUASI-PEAK	None
375.115000	30.92	15.13	-21.6	24.5	46.0	21.5	2.00	0	QUASI-PEAK	None
363.910000	31.16	14.96	-21.6	24.5	46.0	21.5	2.00	45	QUASI-PEAK	None
975.370000	23.65	23.47	-17.7	29.4	53.9	24.5	2.00	0	QUASI-PEAK	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Low Power; Low Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

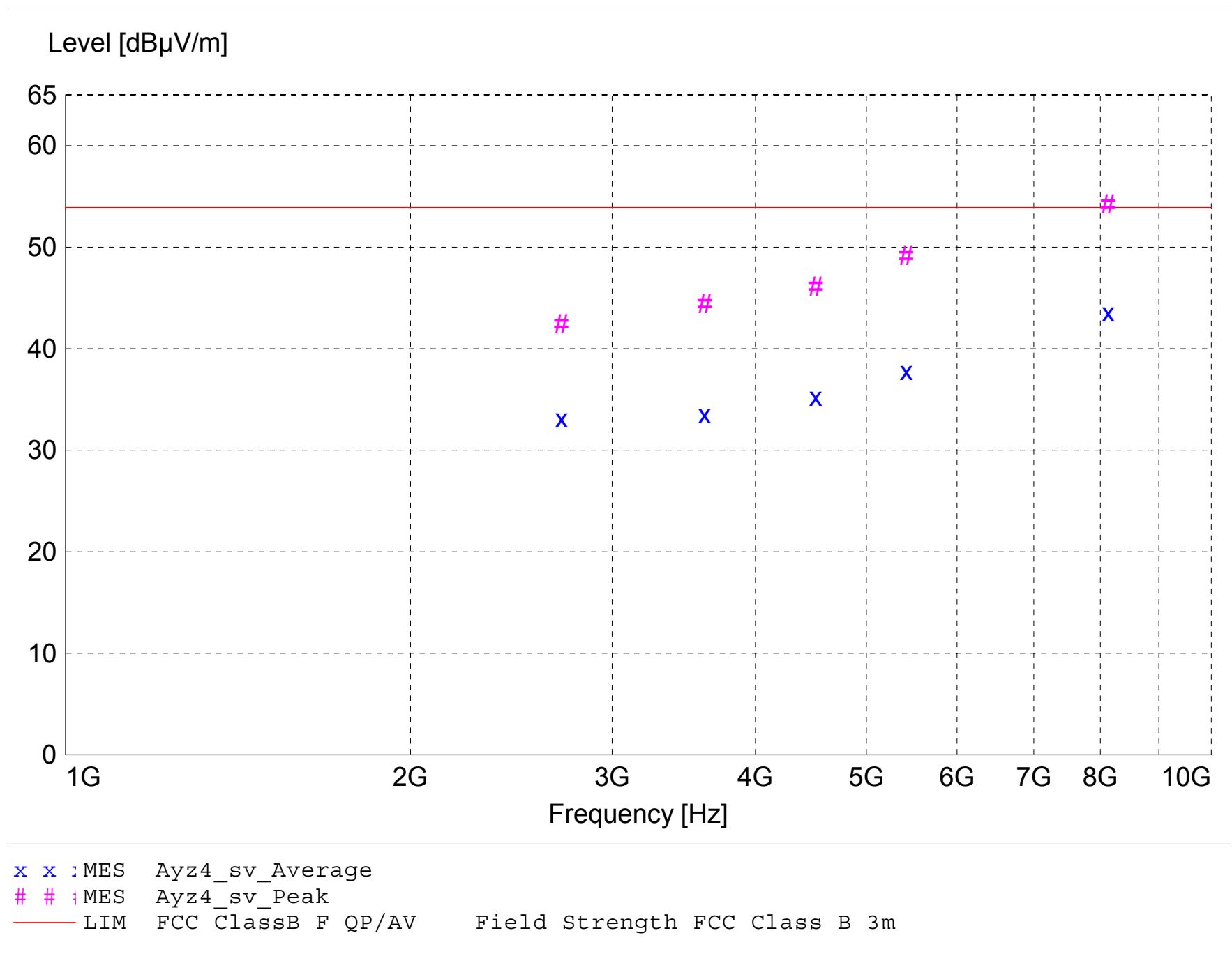
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz4_sv_Final"

6/14/2005 10:07AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8126.950000	49.90	36.98	-32.7	54.2	53.9	-0.3	1.40	270	MAX PEAK	None
5417.950000	50.31	33.97	-35.2	49.1	53.9	4.8	1.40	30	MAX PEAK	None
4514.950000	49.33	32.35	-35.6	46.1	53.9	7.8	2.00	0	MAX PEAK	None
3612.000000	49.48	31.49	-36.6	44.4	53.9	9.5	1.00	0	MAX PEAK	None
8126.950000	39.23	36.98	-32.7	43.5	53.9	10.4	1.40	270	AVERAGE	None
2709.000000	51.35	29.28	-38.3	42.4	53.9	11.5	1.00	180	MAX PEAK	None
5417.950000	38.95	33.97	-35.2	37.7	53.9	16.2	1.40	30	AVERAGE	None
4514.950000	38.50	32.35	-35.6	35.3	53.9	18.6	2.00	0	AVERAGE	None
3612.000000	38.66	31.49	-36.6	33.5	53.9	20.4	1.00	0	AVERAGE	None
2709.000000	42.11	29.28	-38.3	33.1	53.9	20.8	1.00	180	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Low Power; Low Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

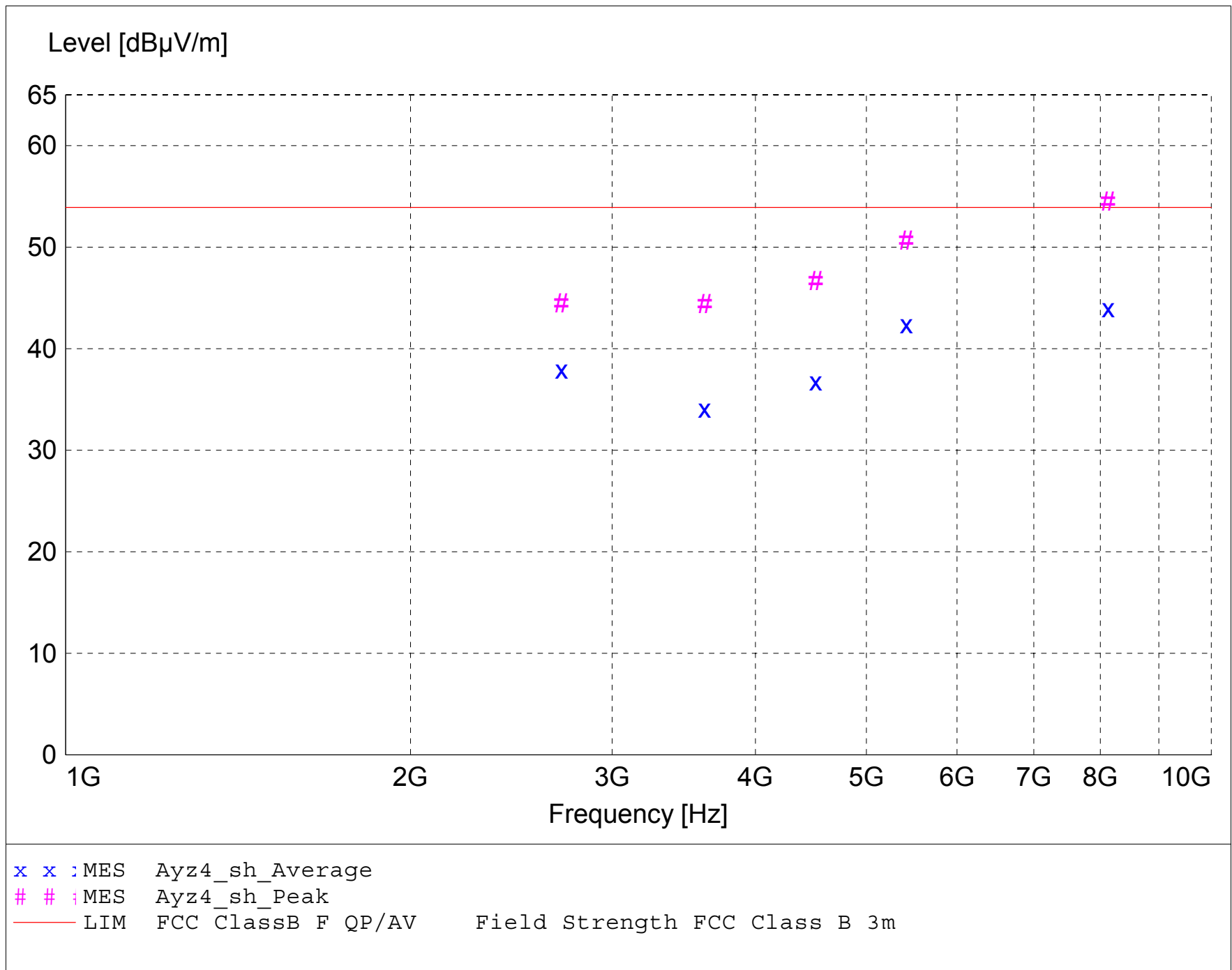
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz4_sh_Final"

6/14/2005 10:12AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8126.950000	50.17	36.98	-32.7	54.5	53.9	-0.6	2.00	0	MAX PEAK	None
5417.950000	51.86	33.97	-35.2	50.7	53.9	3.2	2.50	90	MAX PEAK	None
4514.950000	49.90	32.35	-35.6	46.7	53.9	7.2	2.50	45	MAX PEAK	None
2709.000000	53.45	29.28	-38.3	44.5	53.9	9.4	1.20	45	MAX PEAK	None
3612.000000	49.48	31.49	-36.6	44.4	53.9	9.5	1.20	0	MAX PEAK	None
8126.950000	39.69	36.98	-32.7	44.0	53.9	9.9	2.00	0	AVERAGE	None
5417.950000	43.58	33.97	-35.2	42.4	53.9	11.5	2.50	90	AVERAGE	None
2709.000000	46.90	29.28	-38.3	37.9	53.9	16.0	1.20	45	AVERAGE	None
4514.950000	40.00	32.35	-35.6	36.8	53.9	17.1	2.50	45	AVERAGE	None
3612.000000	39.17	31.49	-36.6	34.1	53.9	19.8	1.20	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Low Power; Mid Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

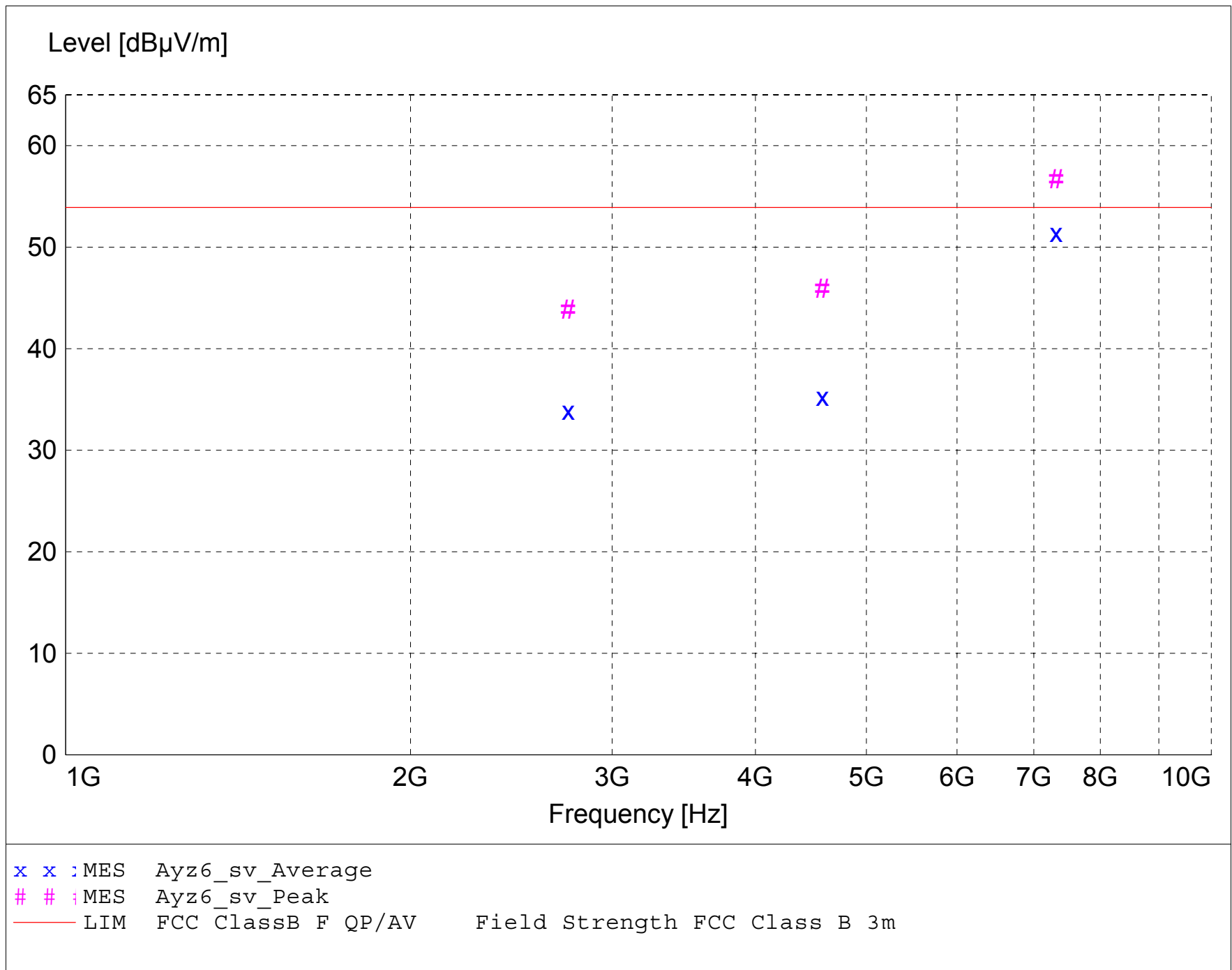
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz6_sv_Final"

6/14/2005 10:41AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant. m	EuT Angle deg	Final Detector	Comment
MHz	dBμV	dBμV/m	dB	dBμV/m	dBμV/m	dB				
7321.000000	54.12	36.09	-33.6	56.6	53.9	-2.7	1.30	0	MAX PEAK	None
7321.000000	48.89	36.09	-33.6	51.4	53.9	2.5	1.30	0	AVERAGE	None
4575.650000	49.05	32.47	-35.7	45.8	53.9	8.1	1.10	0	MAX PEAK	None
2745.400000	52.52	29.40	-38.1	43.8	53.9	10.1	1.00	135	MAX PEAK	None
4575.650000	38.43	32.47	-35.7	35.2	53.9	18.7	1.10	0	AVERAGE	None
2745.400000	42.59	29.40	-38.1	33.9	53.9	20.0	1.00	135	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Low Power; Mid Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

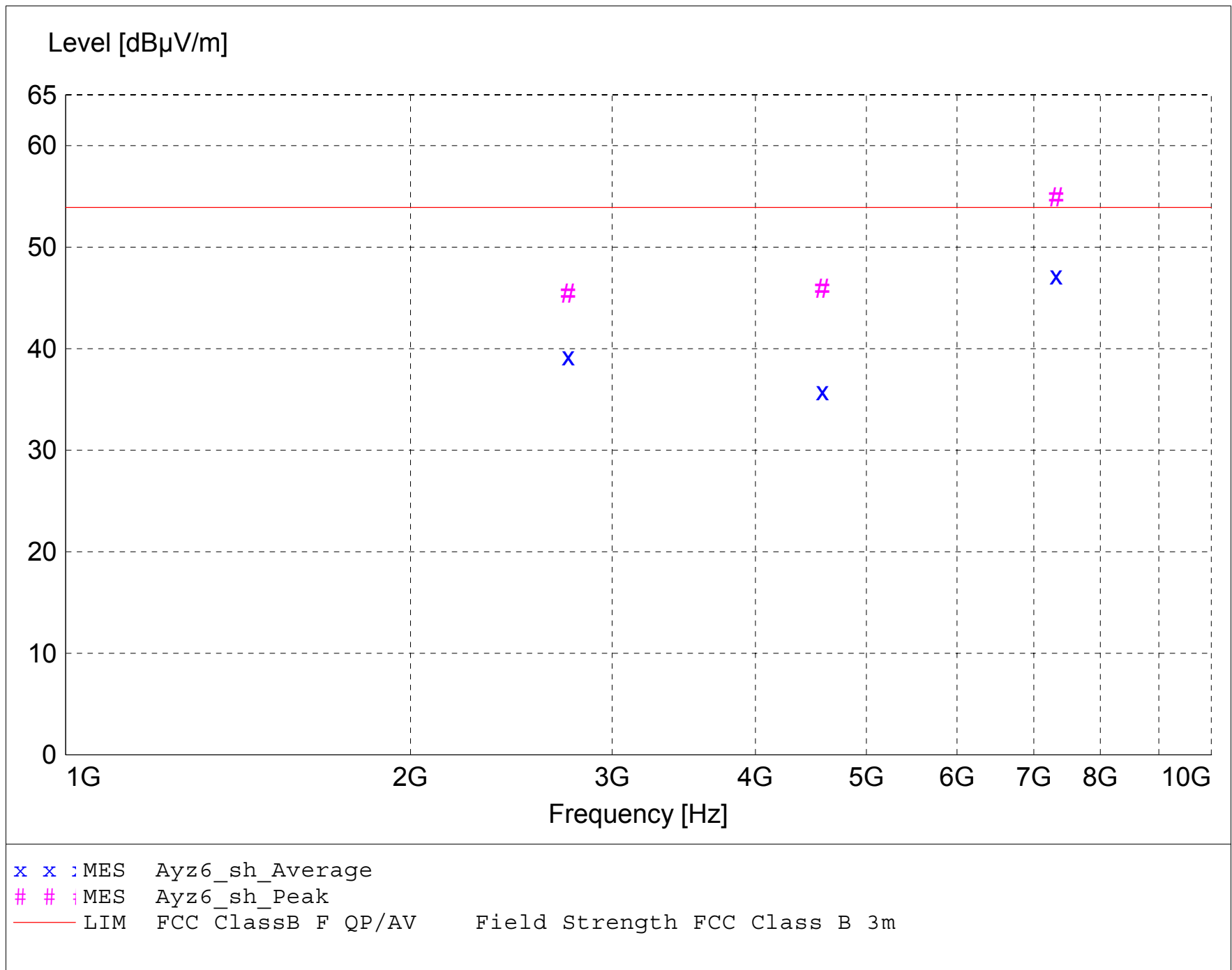
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz6_sh_Final"

6/14/2005 10:45AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7321.000000	52.39	36.09	-33.6	54.9	53.9	-1.0	2.00	0	MAX PEAK	None
7321.000000	44.69	36.09	-33.6	47.2	53.9	6.7	2.00	0	AVERAGE	None
4575.650000	49.05	32.47	-35.7	45.8	53.9	8.1	2.00	315	MAX PEAK	None
2745.400000	54.12	29.40	-38.1	45.4	53.9	8.5	2.00	0	MAX PEAK	None
2745.400000	47.95	29.40	-38.1	39.2	53.9	14.7	2.00	0	AVERAGE	None
4575.650000	38.99	32.47	-35.7	35.8	53.9	18.1	2.00	315	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Low Power; High Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

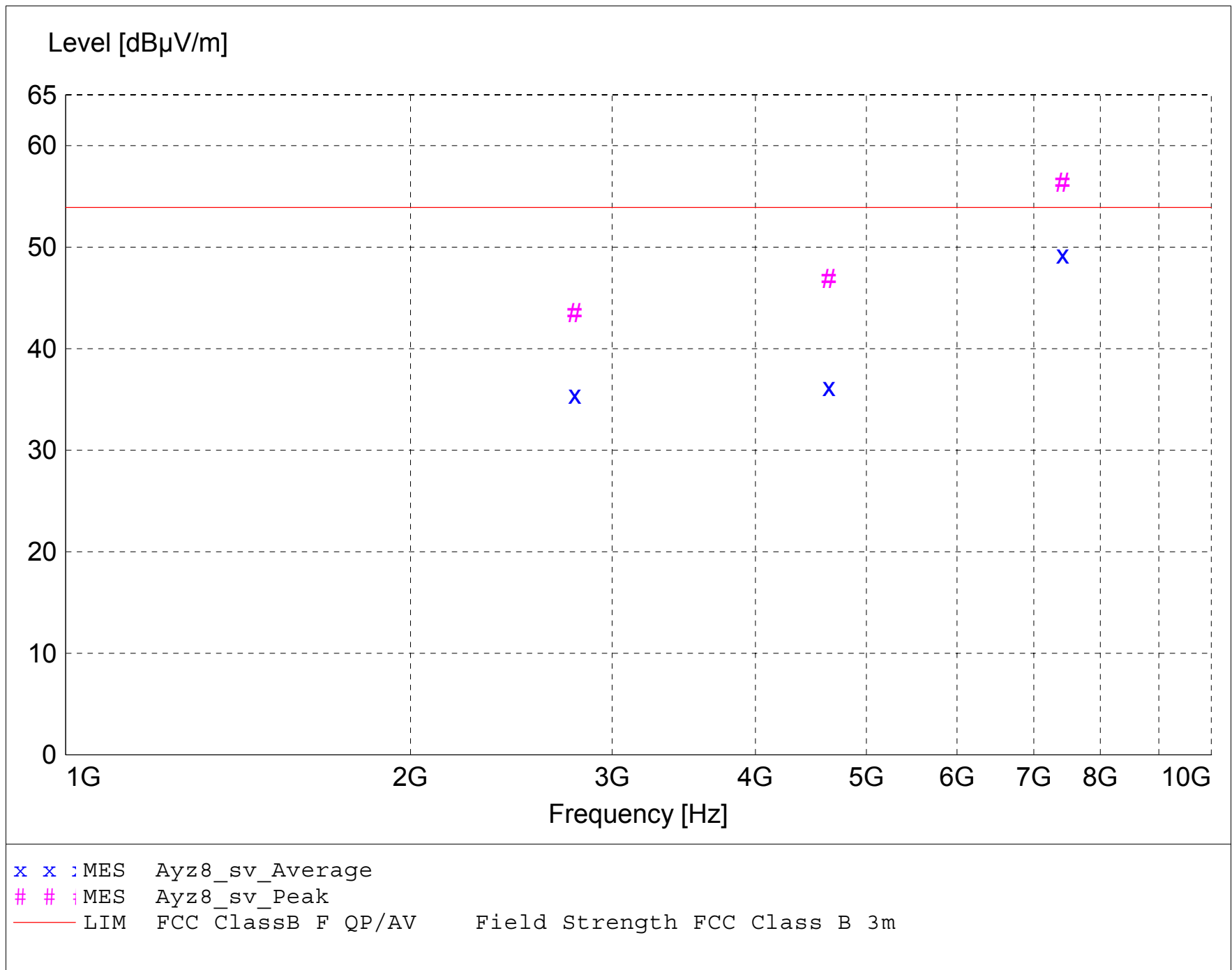
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz8_sv_Final"

6/14/2005 11:14AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	53.19	36.33	-33.2	56.3	53.9	-2.4	1.20	0	MAX PEAK	None
7417.500000	46.10	36.33	-33.2	49.2	53.9	4.7	1.20	0	AVERAGE	None
4636.000000	50.04	32.60	-35.8	46.8	53.9	7.1	1.00	315	MAX PEAK	None
2781.600000	51.99	29.51	-38.0	43.5	53.9	10.4	1.00	135	MAX PEAK	None
4636.000000	39.43	32.60	-35.8	36.2	53.9	17.7	1.00	315	AVERAGE	None
2781.600000	43.90	29.51	-38.0	35.4	53.9	18.5	1.00	135	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Low Power; High Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

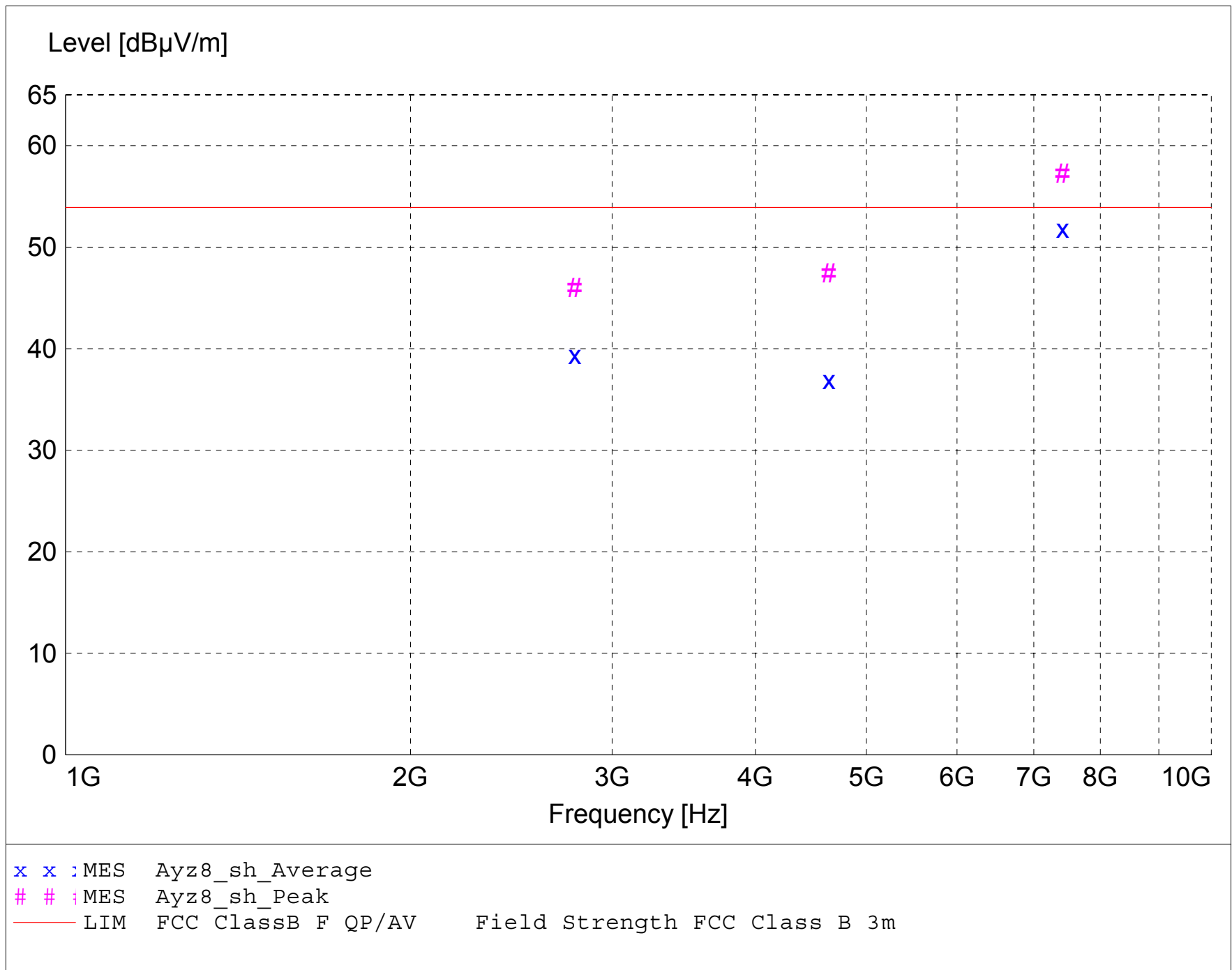
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz8_sh_Final"

6/14/2005 11:18AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	54.12	36.33	-33.2	57.3	53.9	-3.4	2.00	0	MAX PEAK	None
7417.500000	48.65	36.33	-33.2	51.8	53.9	2.1	2.00	0	AVERAGE	None
4636.000000	50.57	32.60	-35.8	47.4	53.9	6.5	2.20	315	MAX PEAK	None
2781.600000	54.40	29.51	-38.0	45.9	53.9	8.0	2.00	45	MAX PEAK	None
2781.600000	47.86	29.51	-38.0	39.4	53.9	14.5	2.00	45	AVERAGE	None
4636.000000	40.12	32.60	-35.8	36.9	53.9	17.0	2.20	315	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Max Power; Low Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

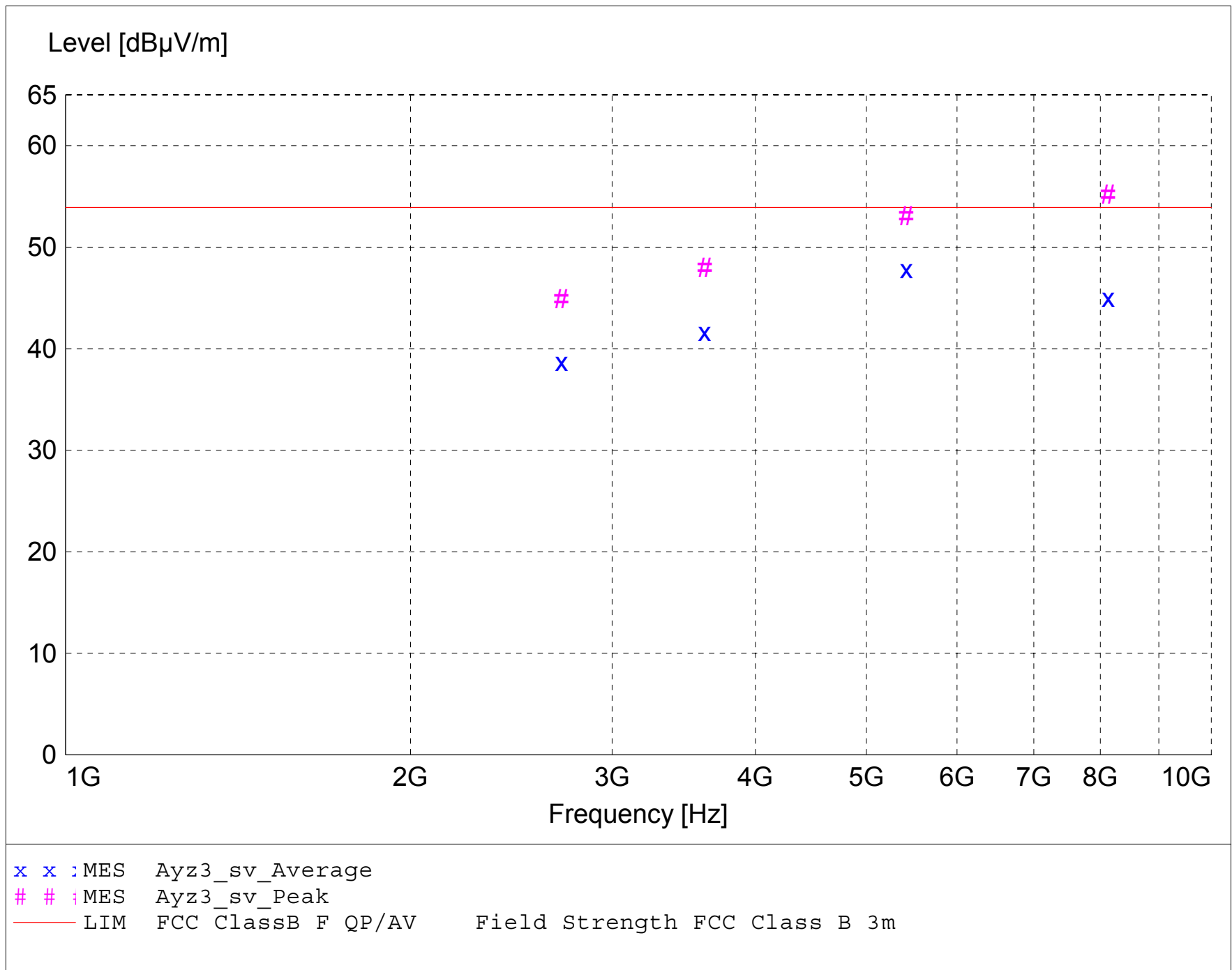
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz3_sv_Final"

6/20/2005 8:58AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8126.900000	50.84	36.98	-32.7	55.1	53.9	-1.2	1.30	315	MAX PEAK	None
5417.900000	54.26	33.97	-35.2	53.1	53.9	0.8	1.20	0	MAX PEAK	None
3611.950000	53.05	31.49	-36.6	47.9	53.9	6.0	2.00	45	MAX PEAK	None
5417.900000	49.00	33.97	-35.2	47.8	53.9	6.1	1.20	0	AVERAGE	None
8126.900000	40.72	36.98	-32.7	45.0	53.9	8.9	1.30	315	AVERAGE	None
2709.000000	53.85	29.28	-38.3	44.9	53.9	9.0	1.10	90	MAX PEAK	None
3611.950000	46.69	31.49	-36.6	41.6	53.9	12.3	2.00	45	AVERAGE	None
2709.000000	47.66	29.28	-38.3	38.7	53.9	15.2	1.10	90	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Max Power; Low Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

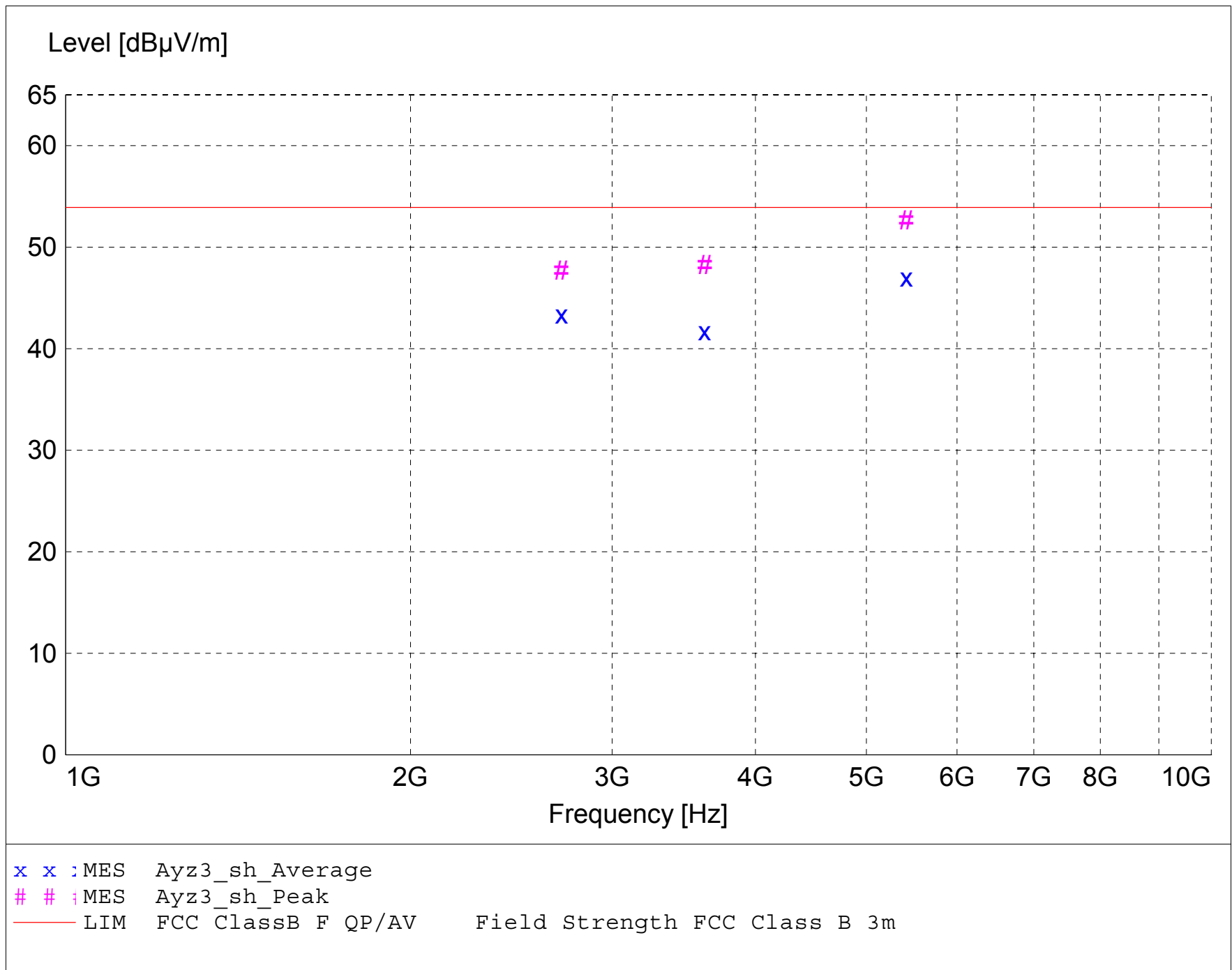
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz3_sh_Final"

6/20/2005 8:55AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
5417.950000	53.85	33.97	-35.2	52.6	53.9	1.3	2.10	90	MAX PEAK	None
3611.950000	53.32	31.49	-36.6	48.2	53.9	5.7	1.20	0	MAX PEAK	None
2709.000000	56.67	29.28	-38.3	47.7	53.9	6.2	1.10	180	MAX PEAK	None
5417.950000	48.16	33.97	-35.2	47.0	53.9	6.9	2.10	90	AVERAGE	None
2709.000000	52.35	29.28	-38.3	43.4	53.9	10.5	1.10	180	AVERAGE	None
3611.950000	46.80	31.49	-36.6	41.7	53.9	12.2	1.20	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Max Power; Mid Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

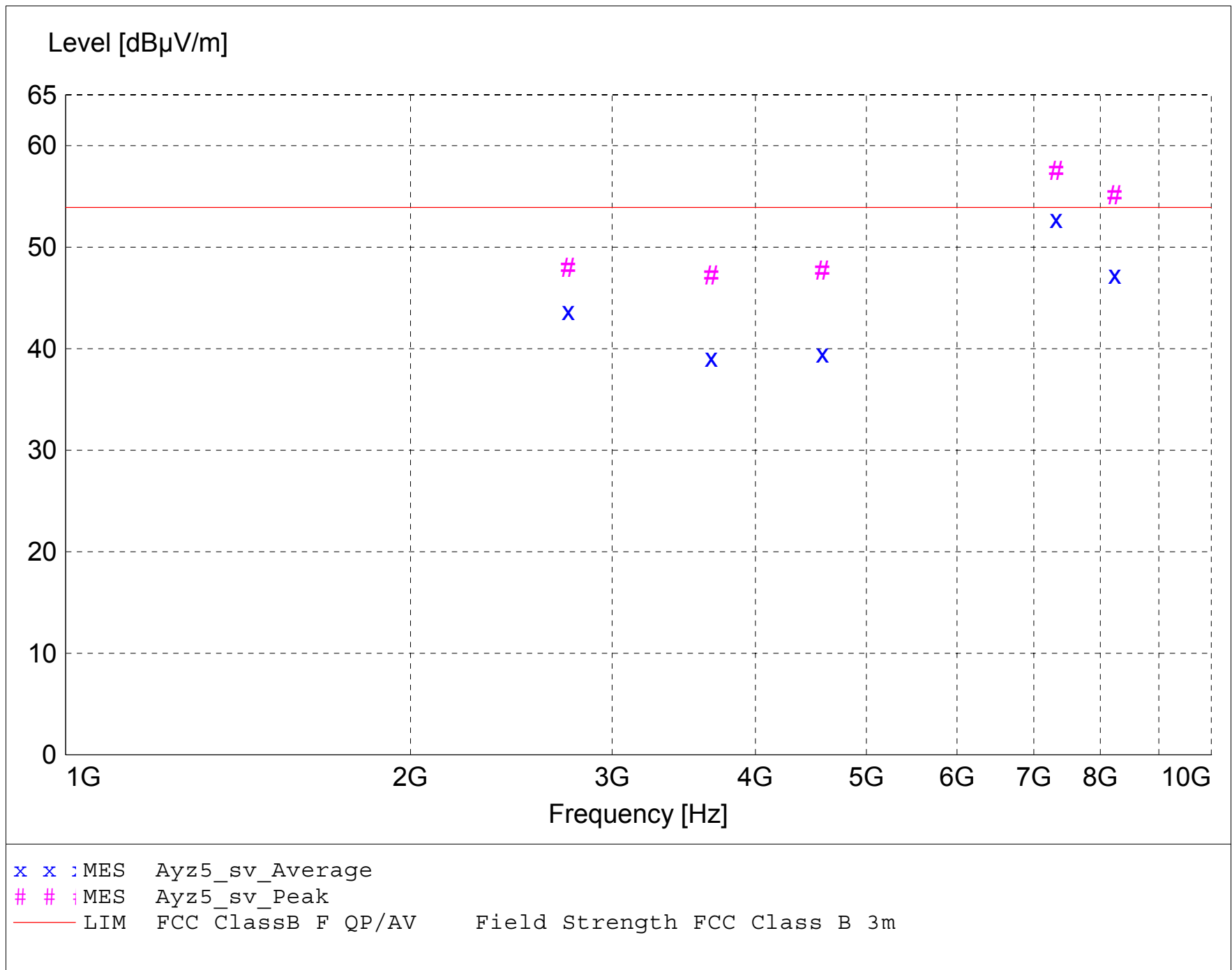
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz5_sv_Final"

6/14/2005 10:23AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7321.000000	54.95	36.09	-33.6	57.5	53.9	-3.6	1.10	315	MAX PEAK	None
8236.150000	50.84	37.11	-32.8	55.1	53.9	-1.2	1.10	0	MAX PEAK	None
7321.000000	50.21	36.09	-33.6	52.7	53.9	1.2	1.10	315	AVERAGE	None
2745.400000	56.67	29.40	-38.1	48.0	53.9	5.9	1.20	100	MAX PEAK	None
4575.650000	50.84	32.47	-35.7	47.6	53.9	6.3	1.10	0	MAX PEAK	None
8236.150000	43.02	37.11	-32.8	47.3	53.9	6.6	1.10	0	AVERAGE	None
3660.500000	52.12	31.63	-36.6	47.2	53.9	6.7	1.10	0	MAX PEAK	None
2745.400000	52.41	29.40	-38.1	43.7	53.9	10.2	1.20	100	AVERAGE	None
4575.650000	42.74	32.47	-35.7	39.5	53.9	14.4	1.10	0	AVERAGE	None
3660.500000	44.01	31.63	-36.6	39.1	53.9	14.8	1.10	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Max Power; Mid Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

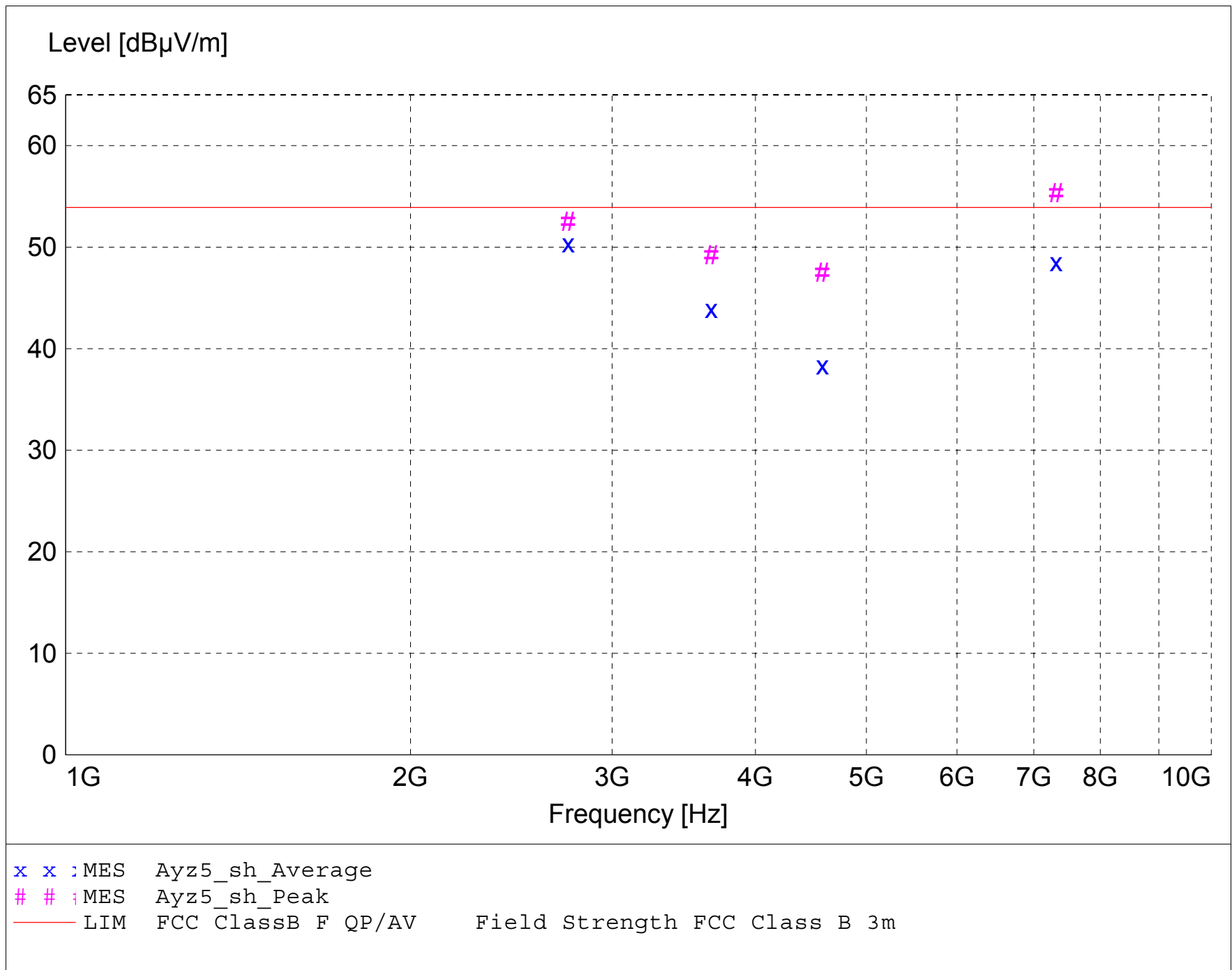
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz5_sh_Final"

6/14/2005 10:29AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7321.000000	52.79	36.09	-33.6	55.3	53.9	-1.4	2.00	0	MAX PEAK	None
2745.400000	61.15	29.40	-38.1	52.4	53.9	1.5	1.10	90	MAX PEAK	None
2745.400000	59.04	29.40	-38.1	50.3	53.9	3.6	1.10	90	AVERAGE	None
3660.500000	54.12	31.63	-36.6	49.2	53.9	4.7	2.20	90	MAX PEAK	None
7321.000000	45.99	36.09	-33.6	48.5	53.9	5.4	2.00	0	AVERAGE	None
4575.650000	50.71	32.47	-35.7	47.5	53.9	6.4	2.20	0	MAX PEAK	None
3660.500000	48.81	31.63	-36.6	43.9	53.9	10.0	2.20	90	AVERAGE	None
4575.650000	41.54	32.47	-35.7	38.3	53.9	15.6	2.20	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Max Power; High Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

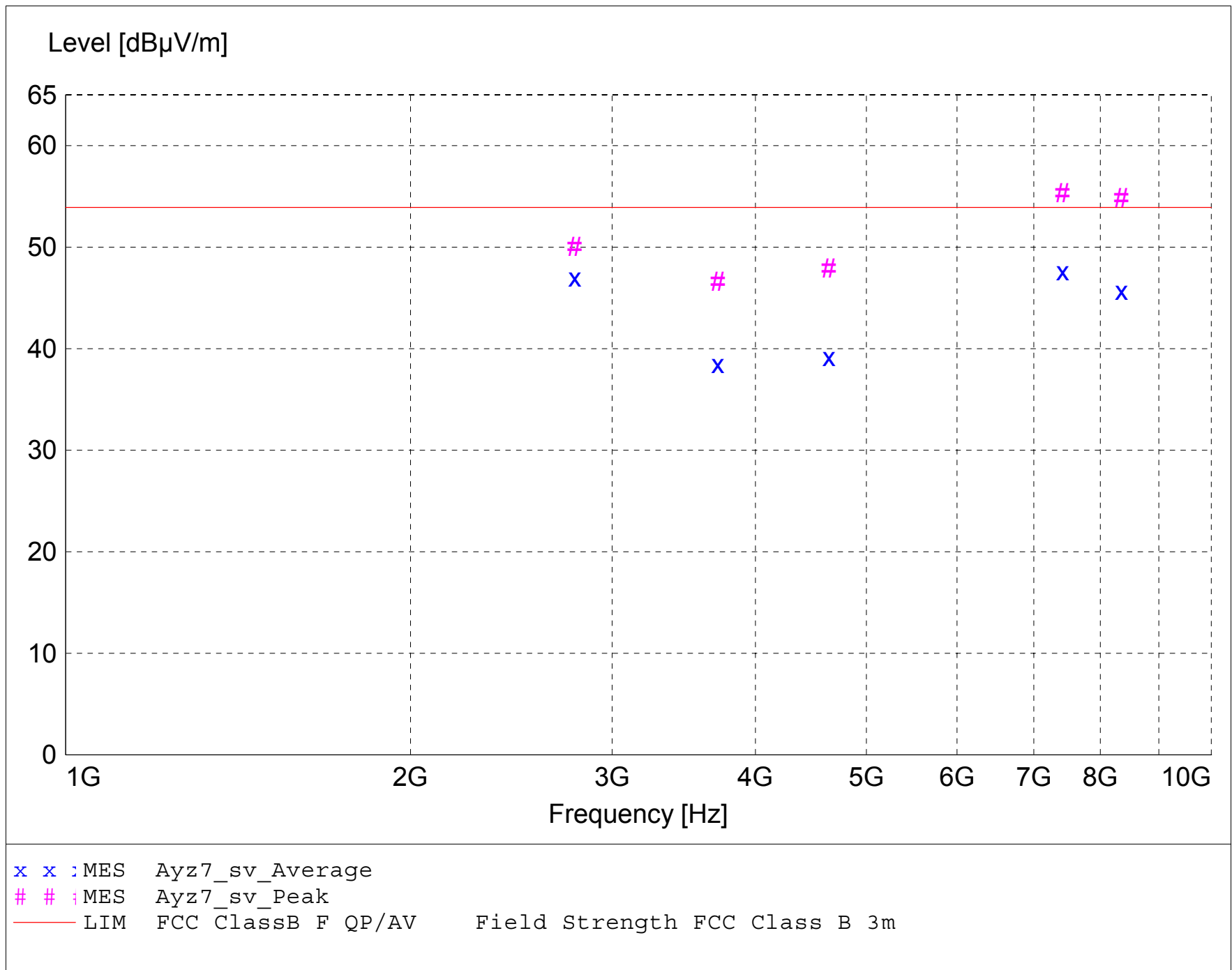
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz7_sv_Final"

6/14/2005 10:55AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	52.12	36.33	-33.2	55.3	53.9	-1.4	2.00	315	MAX PEAK	None
8344.700000	50.57	37.25	-33.0	54.8	53.9	-0.9	1.80	0	MAX PEAK	None
2781.600000	58.49	29.51	-38.0	50.0	53.9	3.9	1.00	135	MAX PEAK	None
4636.000000	51.10	32.60	-35.8	47.9	53.9	6.0	1.00	0	MAX PEAK	None
7417.500000	44.49	36.33	-33.2	47.6	53.9	6.3	2.00	315	AVERAGE	None
2781.600000	55.47	29.51	-38.0	47.0	53.9	6.9	1.00	135	AVERAGE	None
3708.750000	51.35	31.77	-36.5	46.6	53.9	7.3	1.10	0	MAX PEAK	None
8344.700000	41.45	37.25	-33.0	45.7	53.9	8.2	1.80	0	AVERAGE	None
4636.000000	42.38	32.60	-35.8	39.2	53.9	14.7	1.00	0	AVERAGE	None
3708.750000	43.23	31.77	-36.5	38.5	53.9	15.4	1.10	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: R110XiIII Coupler ZPN: 27060
Comment: Tx mode; Max Power; High Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

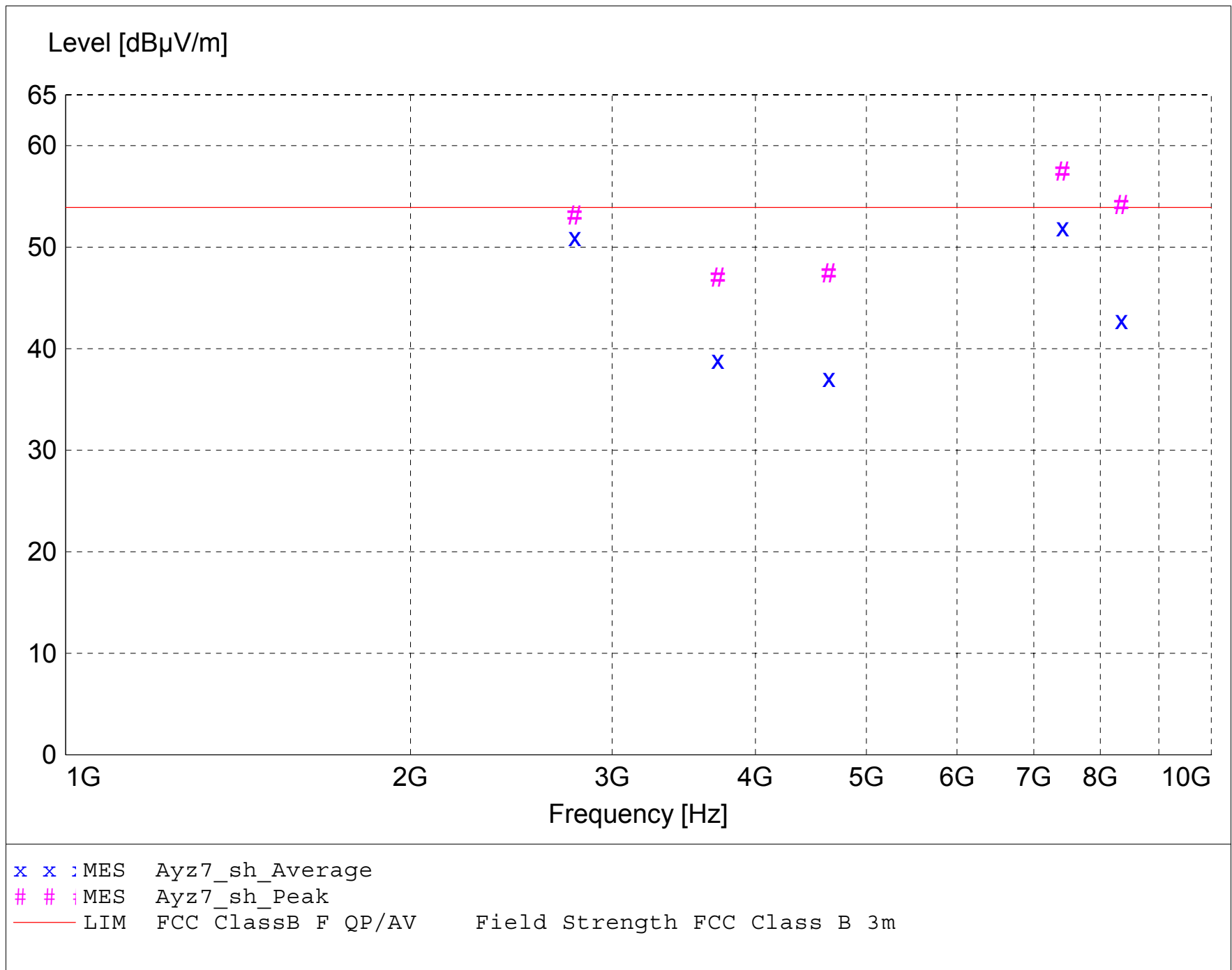
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz7_sh_Final"

6/14/2005 11:03AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBμV	dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	54.26	36.33	-33.2	57.4	53.9	-3.5	2.10	0	MAX PEAK	None
8344.700000	49.90	37.25	-33.0	54.1	53.9	-0.2	2.20	45	MAX PEAK	None
2781.600000	61.54	29.51	-38.0	53.1	53.9	0.8	1.10	60	MAX PEAK	None
7417.500000	48.82	36.33	-33.2	52.0	53.9	1.9	2.10	0	AVERAGE	None
2781.600000	59.45	29.51	-38.0	51.0	53.9	2.9	1.10	60	AVERAGE	None
4636.000000	50.57	32.60	-35.8	47.4	53.9	6.5	1.10	30	MAX PEAK	None
3708.750000	51.74	31.77	-36.5	47.0	53.9	6.9	1.10	0	MAX PEAK	None
8344.700000	38.58	37.25	-33.0	42.8	53.9	11.1	2.20	45	AVERAGE	None
3708.750000	43.64	31.77	-36.5	38.9	53.9	15.0	1.10	0	AVERAGE	None
4636.000000	40.27	32.60	-35.8	37.1	53.9	16.8	1.10	30	AVERAGE	None



Company: Zebra Technologies Corporation
Model Tested: ZM4e
Report Number: 11475

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

RADIATED DATA AND GRAPH(S) TAKEN FOR

SPURIOUS EMISSION MEASUREMENTS

ZPN 58989 ANTENNA

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 63% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Rx mode; Low, Mid, High channels
Date: 06-15-2005

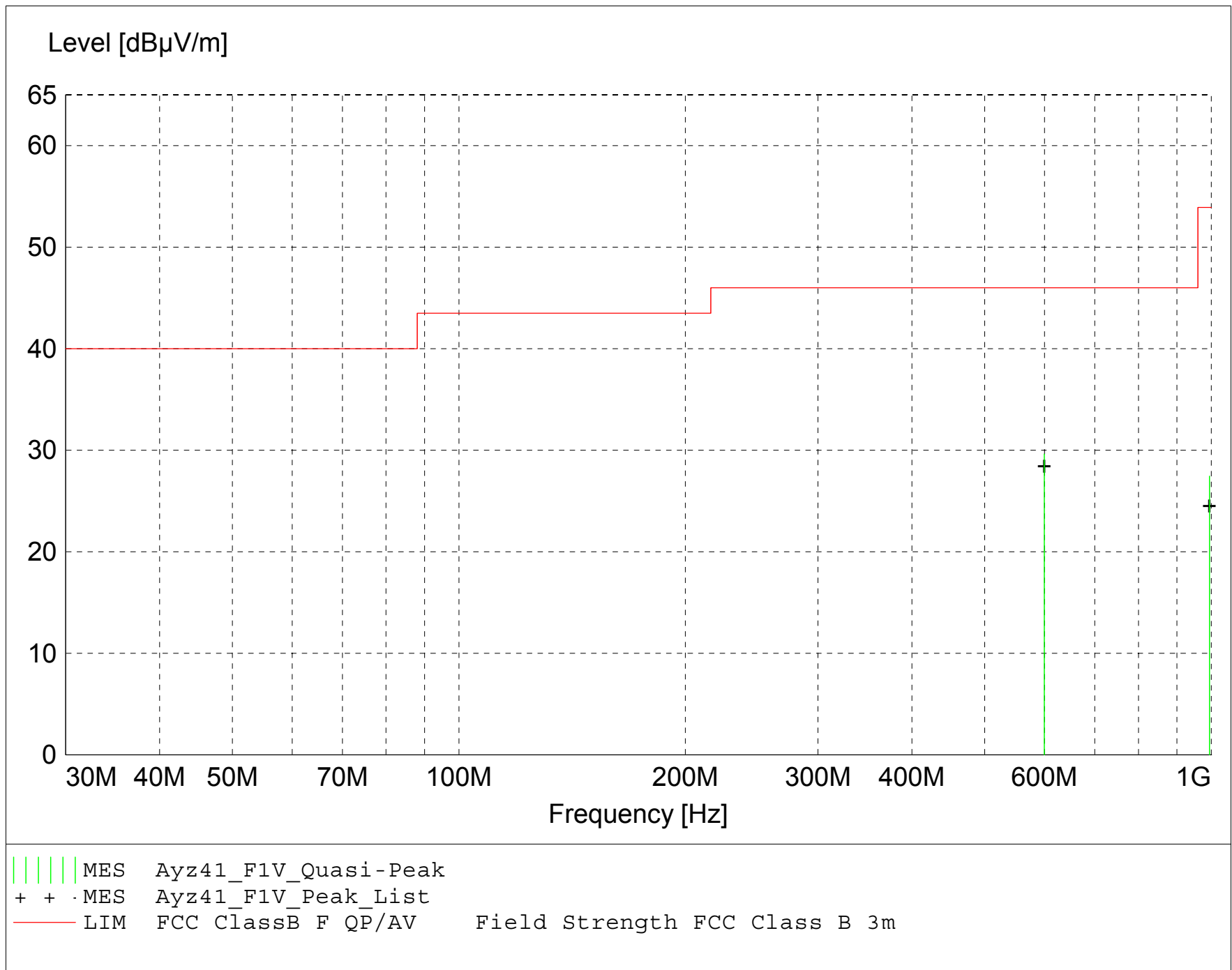
TEXT: "Site 3 MidV 3M"

Short Description: Test Set-up Vert30-1000MHz
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 26 SN: 837491/010

Antennas ---
Biconical -- EMCO 3104C SN: 9701-4785
Log Periodic -- EMCO 3146 SN: 9702-4895

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/005

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz41_F1V_Final"

6/15/2005 2:06PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBμV	dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
599.990000	30.98	18.95	-20.3	29.6	46.0	16.4	1.00	135	QUASI-PEAK	None
994.210000	20.99	23.93	-17.5	27.5	53.9	26.4	1.00	225	QUASI-PEAK	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 72 deg. F; 63% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Rx mode; Low, Mid, High channels
Date: 06-15-2005

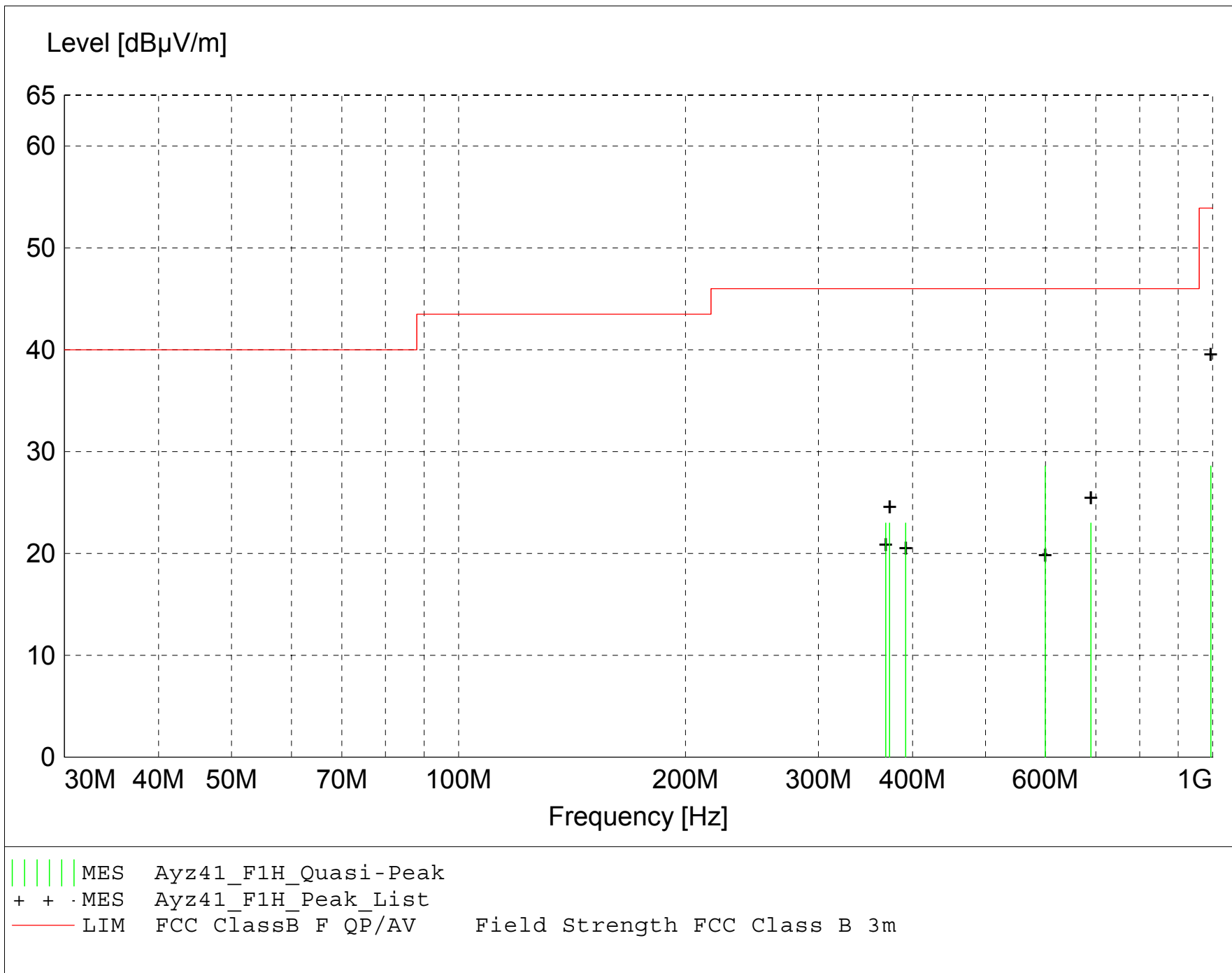
TEXT: "Site 3 MidH 3M"

Short Description: Test Set-up Horz30-1000MHz
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 26 SN: 837491/010

Antennas ---
Biconical -- EMCO 3104C SN: 9701-4785
Log Periodic -- EMCO 3146 SN: 9702-4895

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/005

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz41_F1H_Final"

6/15/2005 1:54PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
599.990000	29.97	18.95	-20.3	28.6	46.0	17.4	1.70	135	QUASI-PEAK	None
689.560000	21.07	21.22	-19.3	23.0	46.0	23.0	2.00	10	QUASI-PEAK	None
391.700000	28.96	15.48	-21.5	23.0	46.0	23.0	2.00	135	QUASI-PEAK	None
372.800000	29.52	15.06	-21.6	23.0	46.0	23.0	2.00	135	QUASI-PEAK	None
368.485000	29.64	14.97	-21.6	23.0	46.0	23.0	2.00	135	QUASI-PEAK	None
994.140000	22.15	23.93	-17.5	28.6	53.9	25.3	1.00	135	QUASI-PEAK	None
391.700000	26.36	15.48	-21.5	20.4	46.0	25.6	2.00	135	QUASI-PEAK	None
994.140000	16.53	23.93	-17.5	23.0	53.9	30.9	1.00	10	QUASI-PEAK	None
372.800000	*	15.06	-21.6	*	46.0	#####	2.00	135	QUASI-PEAK	None
368.485000	*	14.97	-21.6	*	46.0	#####	2.00	135	QUASI-PEAK	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Low power; Low Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

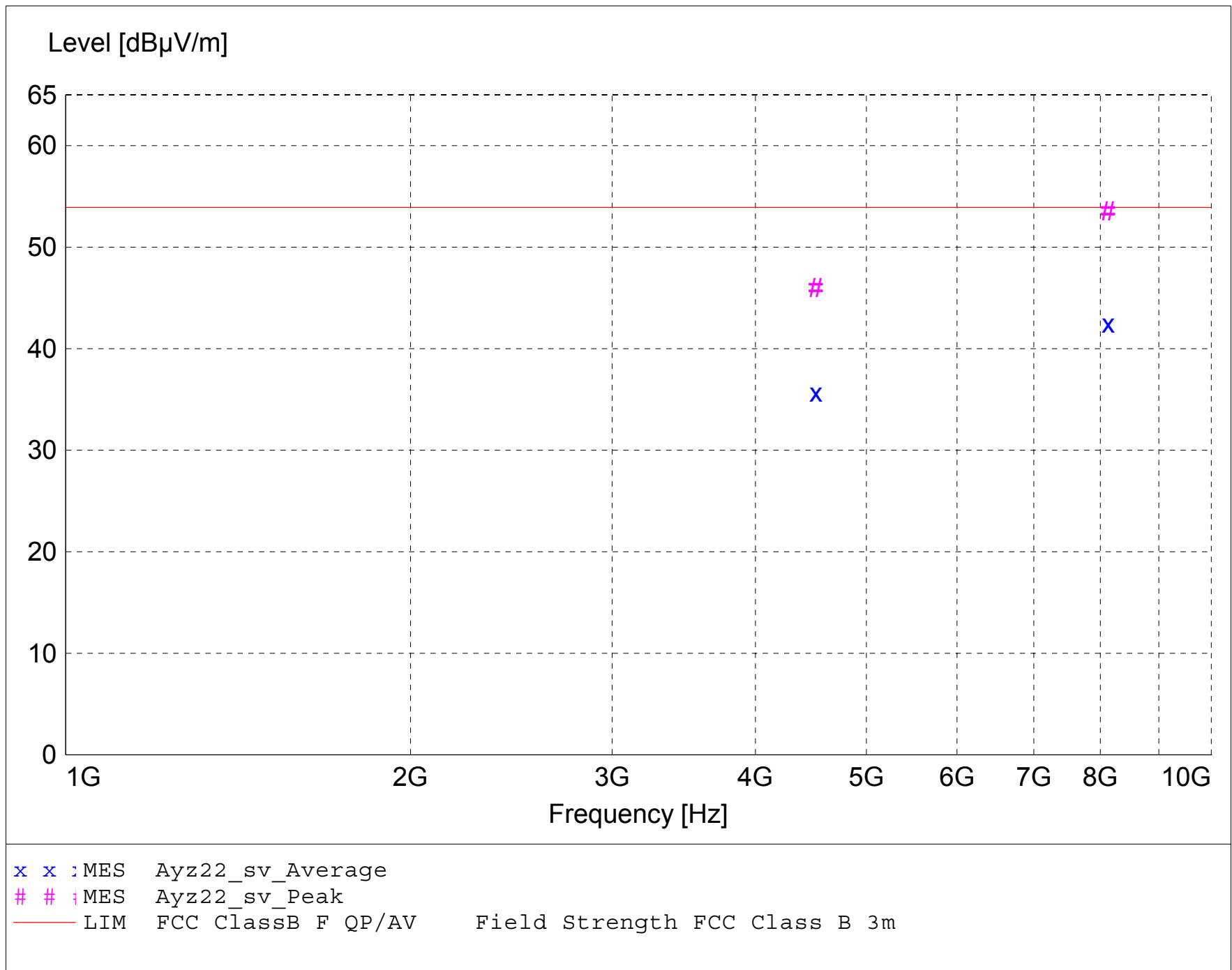
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz22_sv_Final"

6/14/2005 3:08PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
8126.950000	49.19	36.98	-32.7	53.5	53.9	0.4	1.00	20	MAX PEAK	None
4514.950000	49.19	32.35	-35.6	46.0	53.9	7.9	1.00	350	MAX PEAK	None
8126.950000	38.17	36.98	-32.7	42.5	53.9	11.4	1.00	20	AVERAGE	None
4514.950000	38.88	32.35	-35.6	35.7	53.9	18.2	1.00	350	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Low power; Low Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

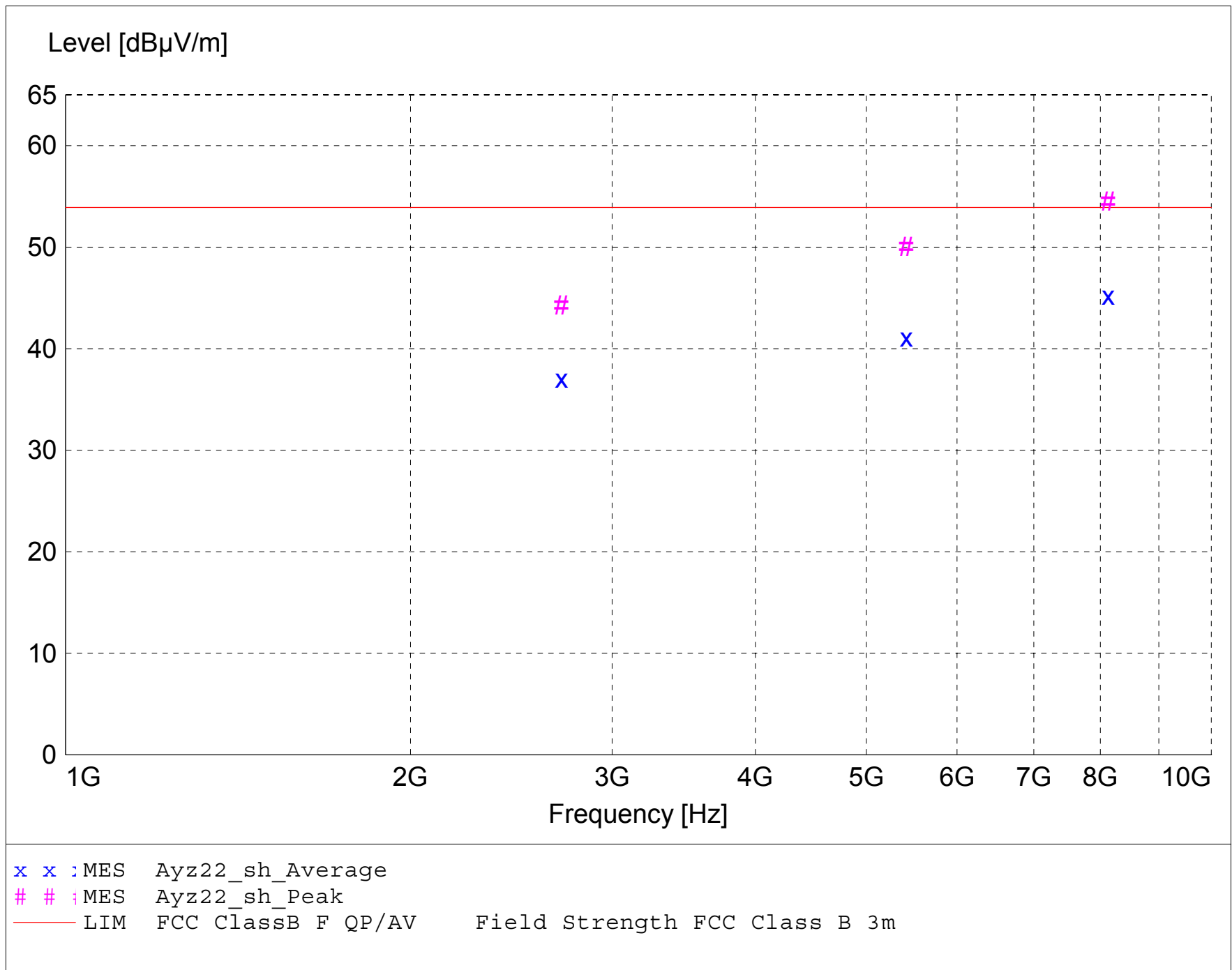
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz22_sh_Final"

6/14/2005 3:13PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8126.950000	50.17	36.98	-32.7	54.5	53.9	-0.6	2.00	340	MAX PEAK	None
5417.950000	51.23	33.97	-35.2	50.0	53.9	3.9	2.10	340	MAX PEAK	None
8126.950000	40.93	36.98	-32.7	45.2	53.9	8.7	2.00	340	AVERAGE	None
2709.000000	53.19	29.28	-38.3	44.2	53.9	9.7	1.20	60	MAX PEAK	None
5417.950000	42.25	33.97	-35.2	41.0	53.9	12.9	2.10	340	AVERAGE	None
2709.000000	46.01	29.28	-38.3	37.0	53.9	16.9	1.20	60	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Low power; Mid Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

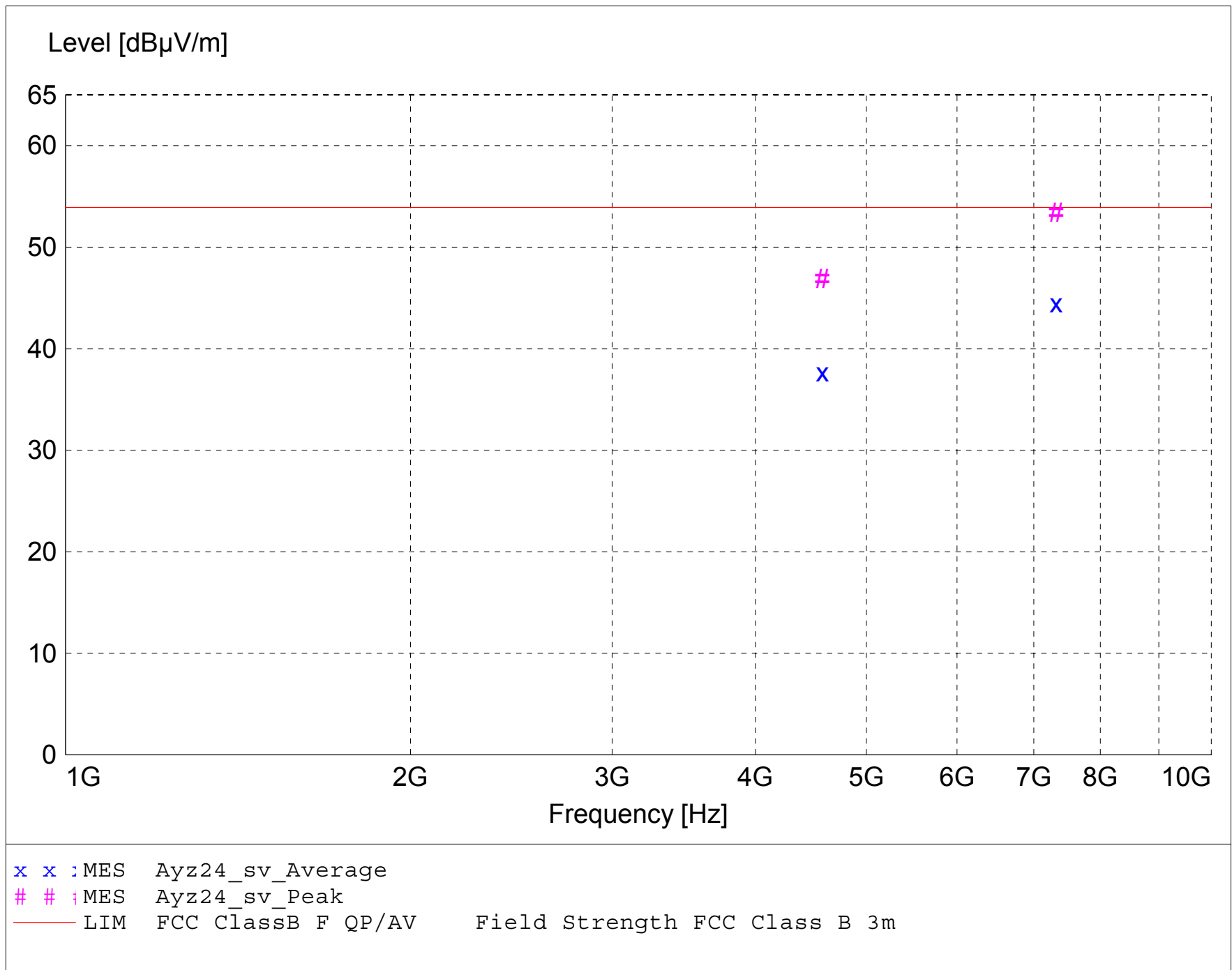
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz24_sv_Final"

6/14/2005 3:32PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBµV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
7321.000000	50.84	36.09	-33.6	53.4	53.9	0.5	1.00	180	MAX PEAK	None
4575.650000	50.04	32.47	-35.7	46.8	53.9	7.1	1.00	0	MAX PEAK	None
7321.000000	41.95	36.09	-33.6	44.5	53.9	9.4	1.00	180	AVERAGE	None
4575.650000	40.85	32.47	-35.7	37.6	53.9	16.3	1.00	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Low power; Mid Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

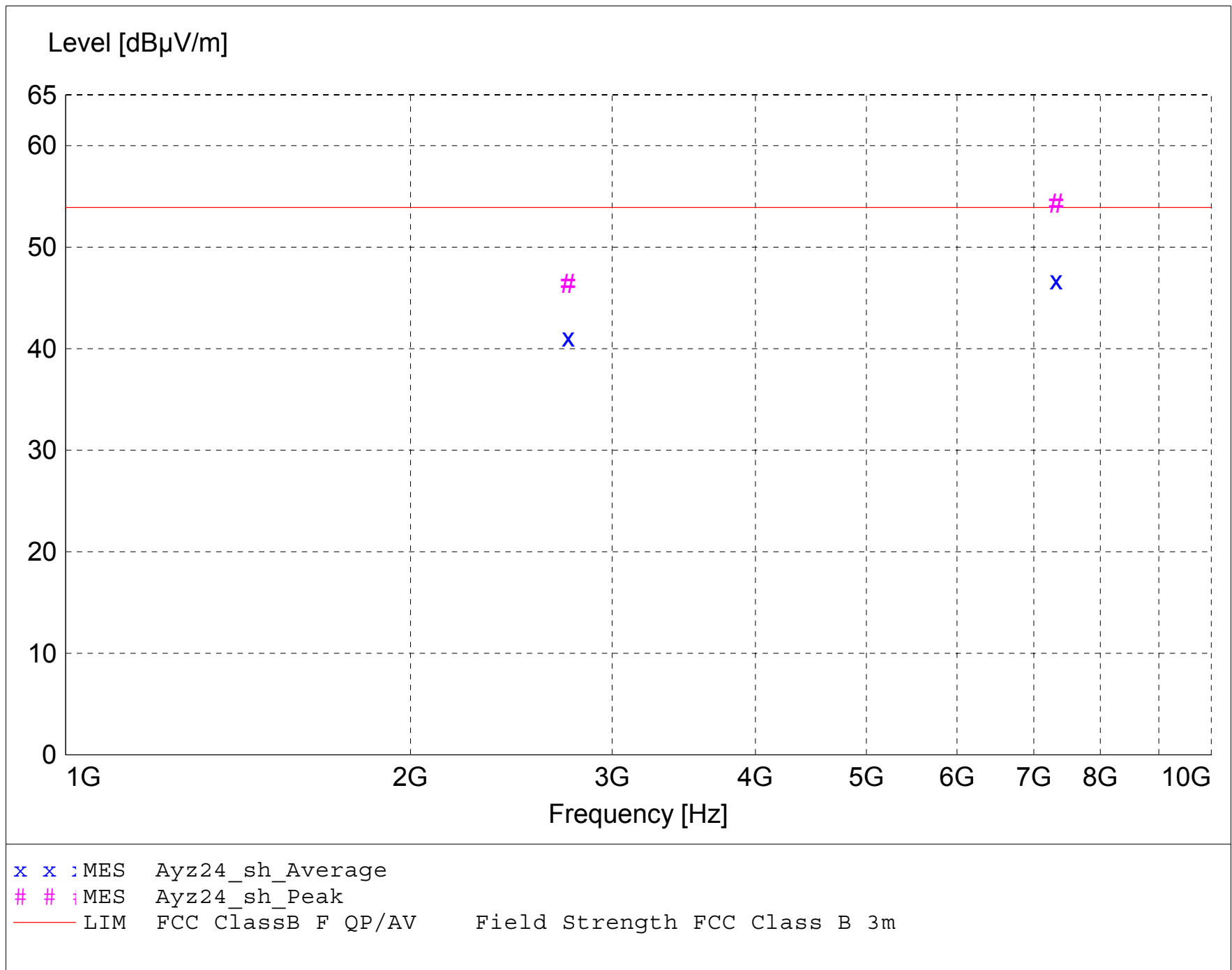
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz24_sh_Final"

6/14/2005 3:37PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
7321.000000	51.74	36.09	-33.6	54.3	53.9	-0.4	1.70	300	MAX PEAK	None
7321.000000	44.17	36.09	-33.6	46.7	53.9	7.2	1.70	300	AVERAGE	None
2745.400000	55.08	29.40	-38.1	46.4	53.9	7.5	1.30	0	MAX PEAK	None
2745.400000	49.79	29.40	-38.1	41.1	53.9	12.8	1.30	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Low power; High Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

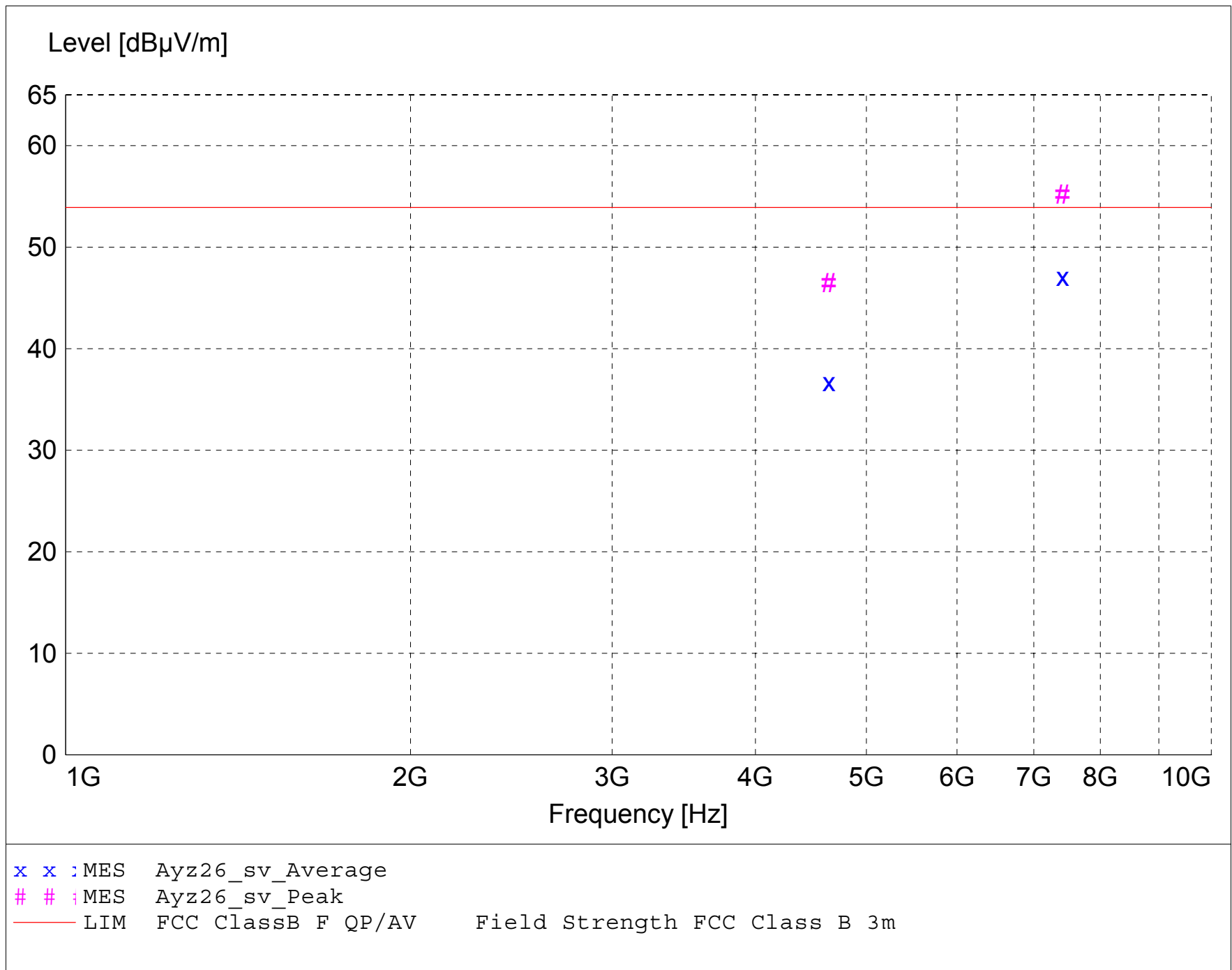
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz26_sv_Final"

6/14/2005 3:56PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
7417.500000	51.99	36.33	-33.2	55.1	53.9	-1.2	1.00	315	MAX PEAK	None
7417.500000	43.95	36.33	-33.2	47.1	53.9	6.8	1.00	315	AVERAGE	None
4636.000000	49.62	32.60	-35.8	46.4	53.9	7.5	1.00	0	MAX PEAK	None
4636.000000	39.92	32.60	-35.8	36.7	53.9	17.2	1.00	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Low power; High Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

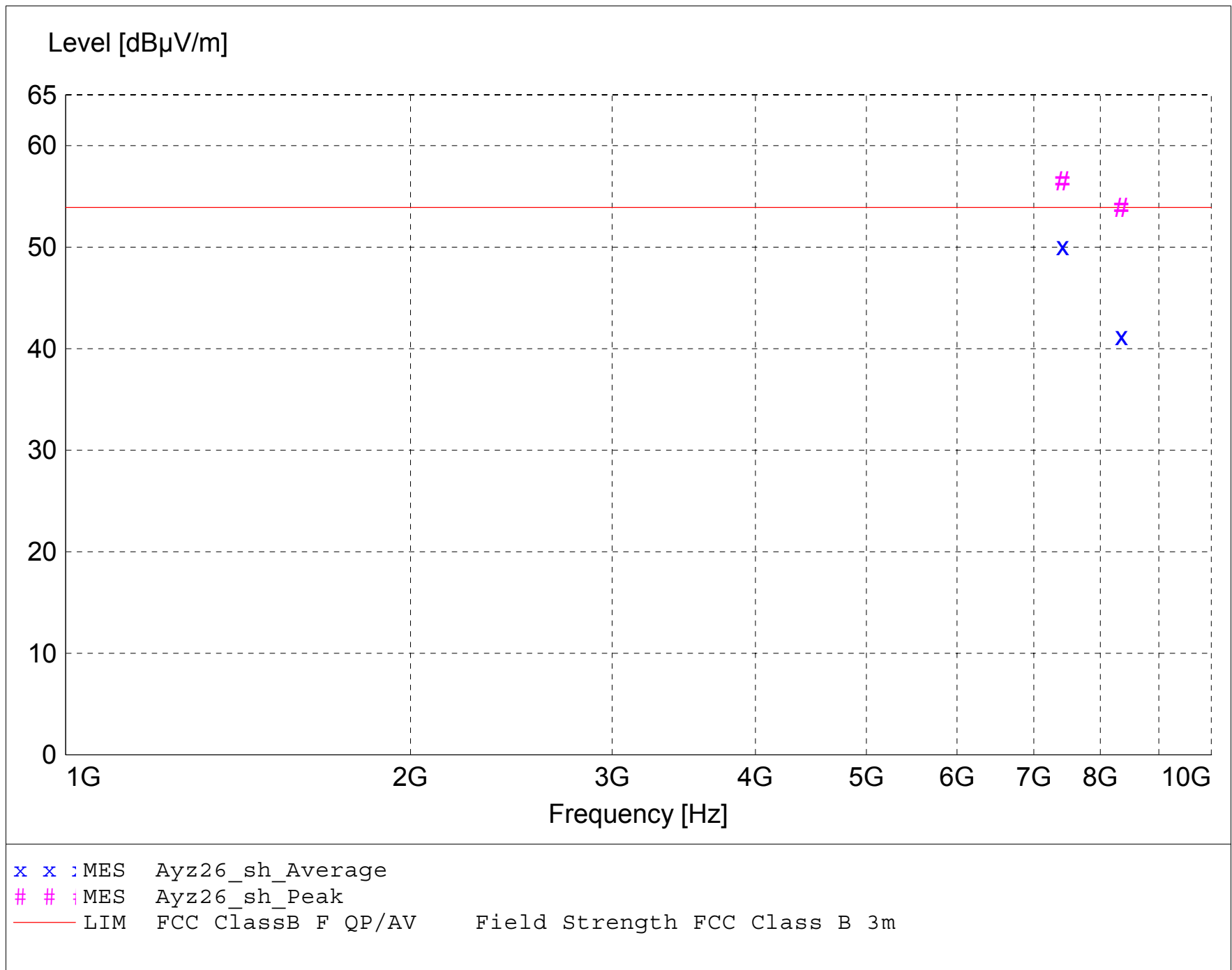
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz26_sh_Final"

6/14/2005 4:01PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
7417.500000	53.32	36.33	-33.2	56.5	53.9	-2.6	1.60	315	MAX PEAK	None
8344.700000	49.62	37.25	-33.0	53.8	53.9	0.1	2.00	60	MAX PEAK	None
7417.500000	46.95	36.33	-33.2	50.1	53.9	3.8	1.60	315	AVERAGE	None
8344.700000	37.03	37.25	-33.0	41.3	53.9	12.6	2.00	60	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Max power; Low Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

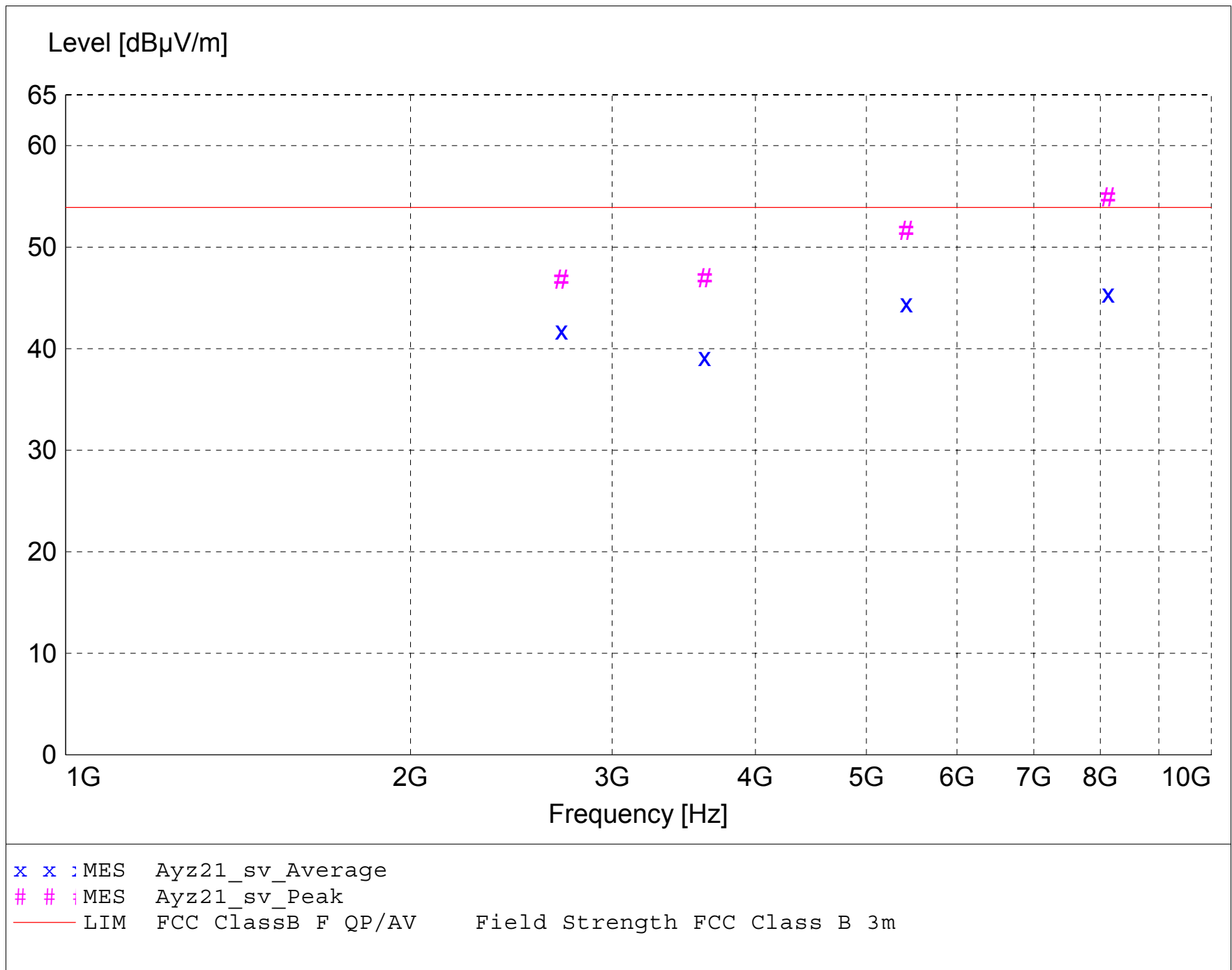
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz21_sv_Final"

6/14/2005 2:55PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8126.950000	50.57	36.98	-32.7	54.9	53.9	-1.0	1.00	330	MAX PEAK	None
5417.950000	52.79	33.97	-35.2	51.6	53.9	2.3	1.00	0	MAX PEAK	None
3612.000000	51.99	31.49	-36.6	46.9	53.9	7.0	1.00	10	MAX PEAK	None
2709.000000	55.75	29.28	-38.3	46.8	53.9	7.1	1.00	80	MAX PEAK	None
8126.950000	41.12	36.98	-32.7	45.4	53.9	8.5	1.00	330	AVERAGE	None
5417.950000	45.64	33.97	-35.2	44.4	53.9	9.5	1.00	0	AVERAGE	None
2709.000000	50.72	29.28	-38.3	41.7	53.9	12.2	1.00	80	AVERAGE	None
3612.000000	44.28	31.49	-36.6	39.2	53.9	14.7	1.00	10	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Max power; Low Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

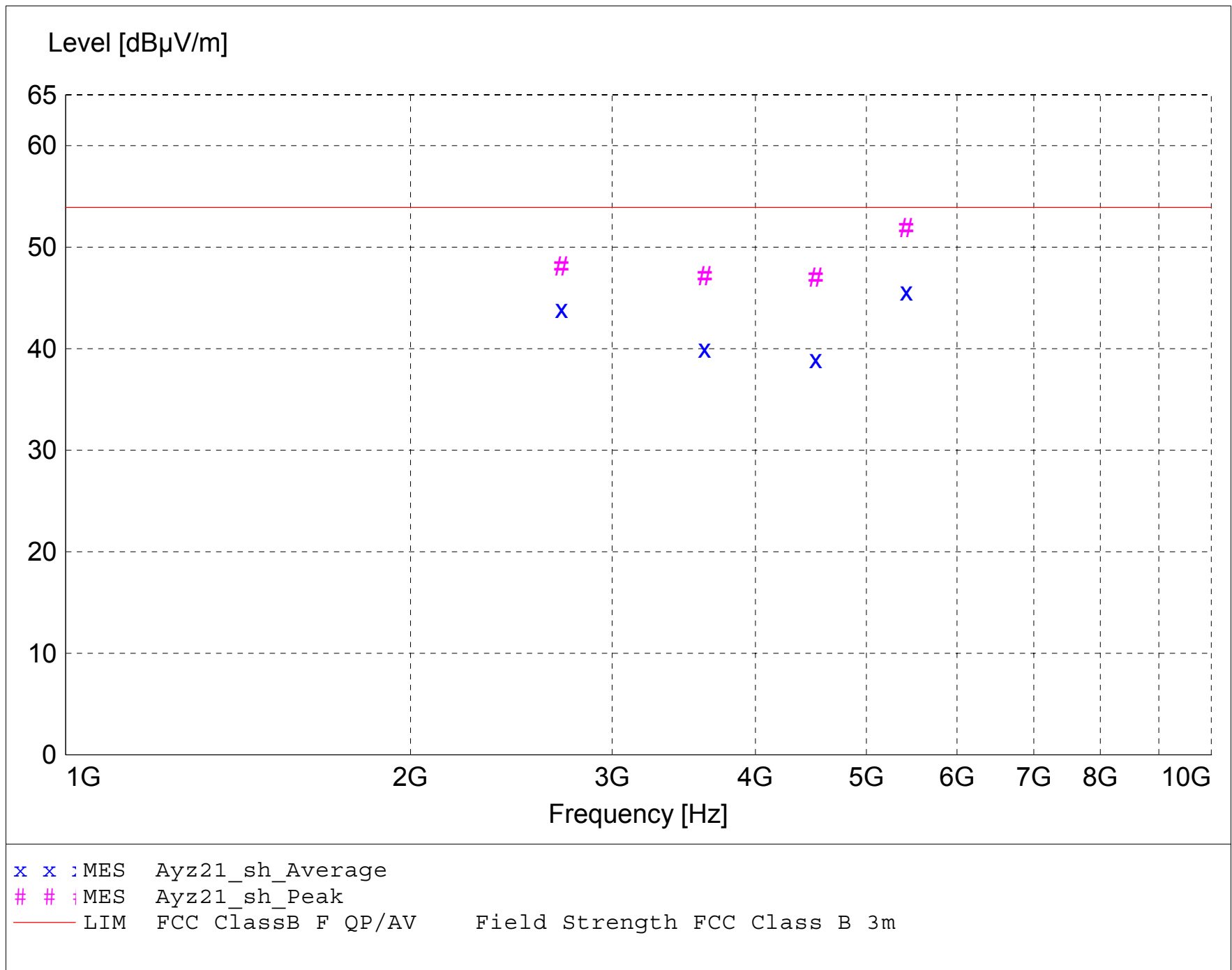
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz21_sh_Final"

6/14/2005 3:02PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
5417.950000	53.05	33.97	-35.2	51.8	53.9	2.1	2.10	45	MAX PEAK	None
2709.000000	57.06	29.28	-38.3	48.1	53.9	5.8	1.10	90	MAX PEAK	None
3612.000000	52.26	31.49	-36.6	47.1	53.9	6.8	1.60	60	MAX PEAK	None
4514.950000	50.17	32.35	-35.6	47.0	53.9	6.9	1.60	0	MAX PEAK	None
5417.950000	46.83	33.97	-35.2	45.6	53.9	8.3	2.10	45	AVERAGE	None
2709.000000	52.86	29.28	-38.3	43.9	53.9	10.0	1.10	90	AVERAGE	None
3612.000000	45.06	31.49	-36.6	40.0	53.9	13.9	1.60	60	AVERAGE	None
4514.950000	42.15	32.35	-35.6	38.9	53.9	15.0	1.60	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Max power; Mid Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

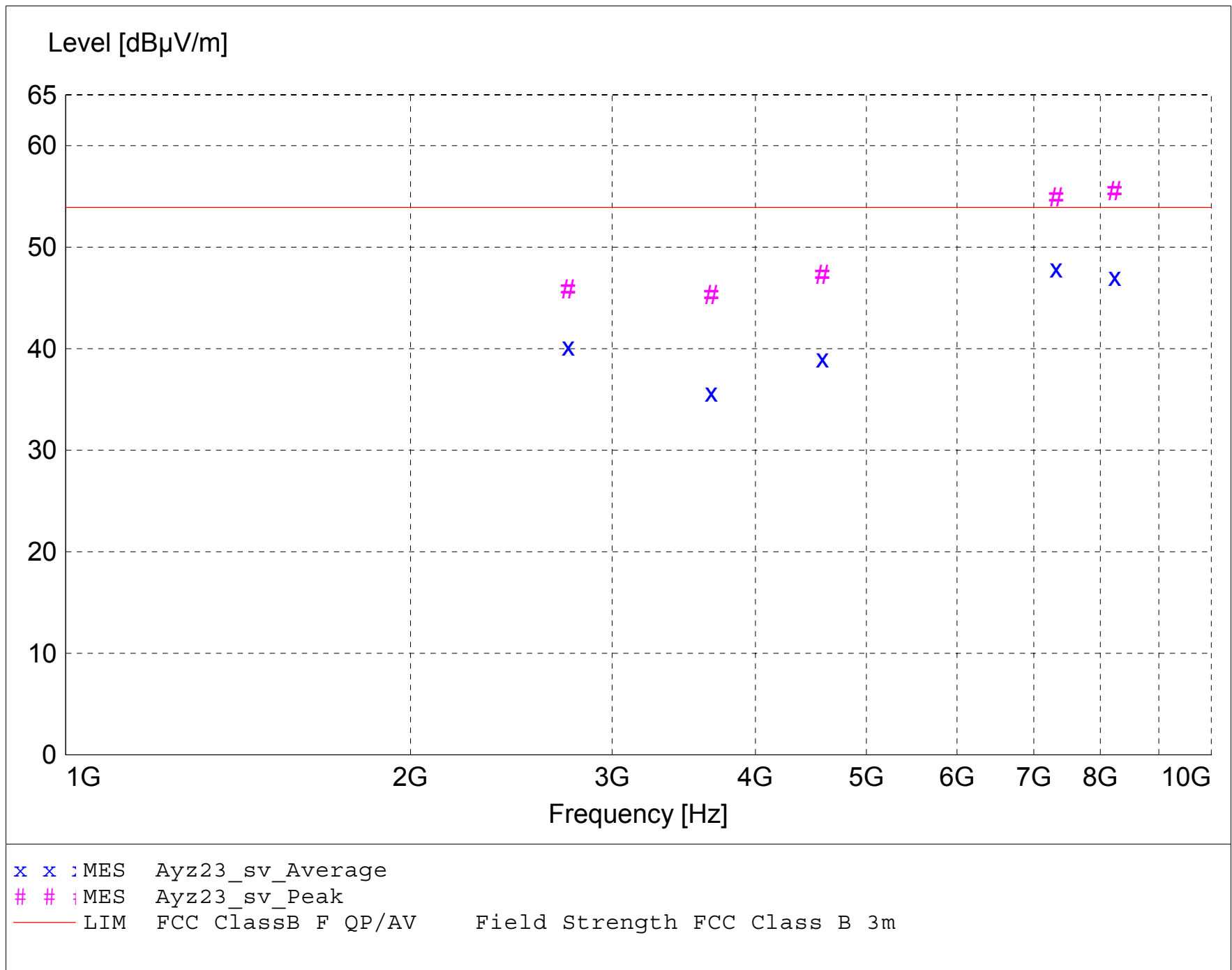
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz23_sv_Final"

6/14/2005 3:21PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level	dBμV/m	dB	Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
8236.150000	51.23	37.11	-32.8	55.5	53.9	-1.6	2.00	315	MAX PEAK	None
7321.000000	52.39	36.09	-33.6	54.9	53.9	-1.0	2.00	315	MAX PEAK	None
7321.000000	45.36	36.09	-33.6	47.9	53.9	6.0	2.00	315	AVERAGE	None
4575.650000	50.44	32.47	-35.7	47.2	53.9	6.7	1.00	350	MAX PEAK	None
8236.150000	42.82	37.11	-32.8	47.1	53.9	6.8	2.00	315	AVERAGE	None
2745.400000	54.53	29.40	-38.1	45.8	53.9	8.1	1.00	270	MAX PEAK	None
3660.500000	50.17	31.63	-36.6	45.2	53.9	8.7	1.20	0	MAX PEAK	None
2745.400000	48.88	29.40	-38.1	40.2	53.9	13.7	1.00	270	AVERAGE	None
4575.650000	42.24	32.47	-35.7	39.0	53.9	14.9	1.00	350	AVERAGE	None
3660.500000	40.61	31.63	-36.6	35.7	53.9	18.2	1.20	0	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Max power; Mid Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

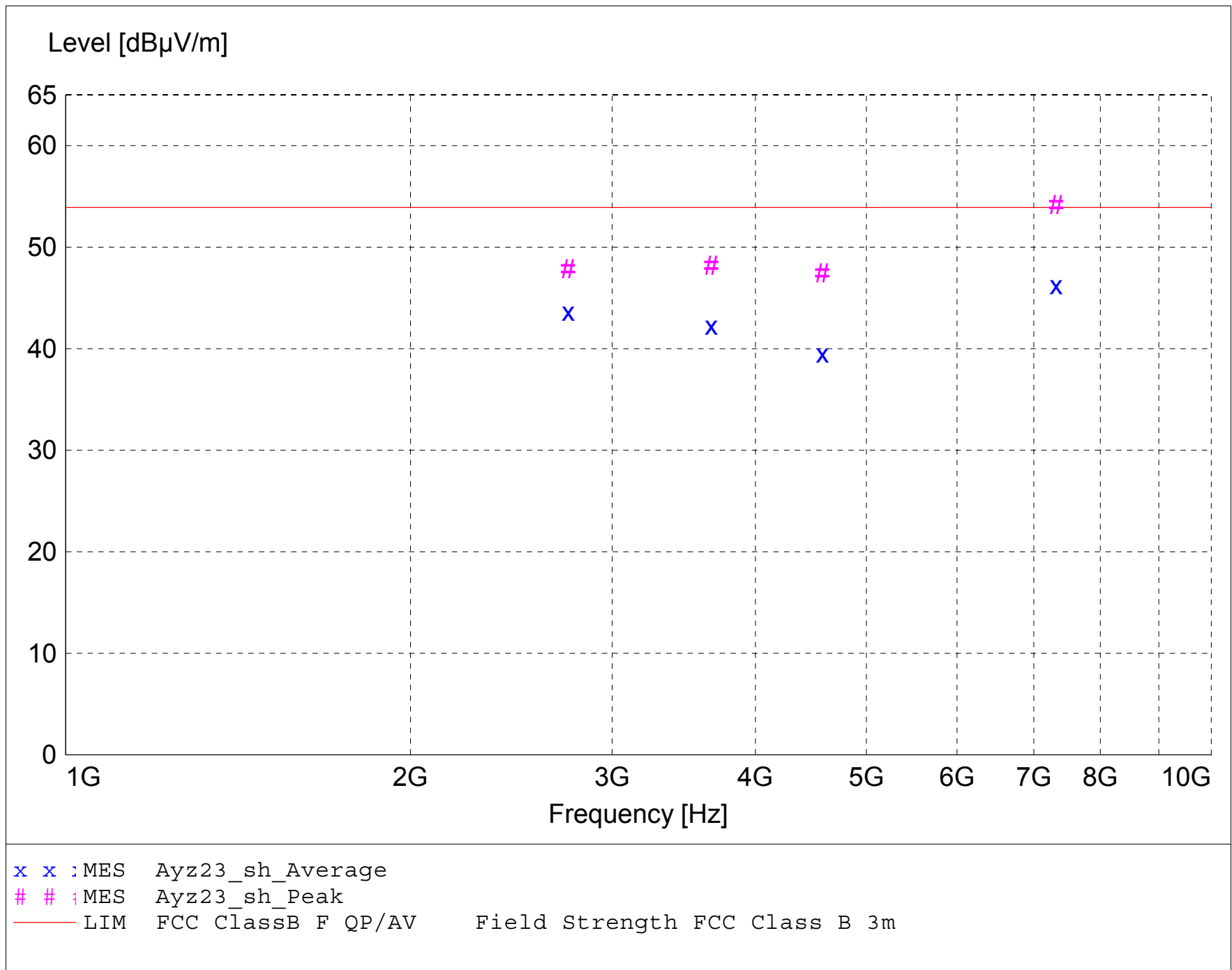
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz23_sh_Final"

6/14/2005 3:27PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7321.000000	51.61	36.09	-33.6	54.1	53.9	-0.2	2.00	0	MAX PEAK	None
3660.500000	53.05	31.63	-36.6	48.1	53.9	5.8	2.20	70	MAX PEAK	None
2745.400000	56.53	29.40	-38.1	47.8	53.9	6.1	2.20	315	MAX PEAK	None
4575.650000	50.57	32.47	-35.7	47.4	53.9	6.5	2.20	45	MAX PEAK	None
7321.000000	43.70	36.09	-33.6	46.2	53.9	7.7	2.00	0	AVERAGE	None
2745.400000	52.33	29.40	-38.1	43.6	53.9	10.3	2.20	315	AVERAGE	None
3660.500000	47.19	31.63	-36.6	42.3	53.9	11.6	2.20	70	AVERAGE	None
4575.650000	42.75	32.47	-35.7	39.5	53.9	14.4	2.20	45	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Max power; High Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 V3M"

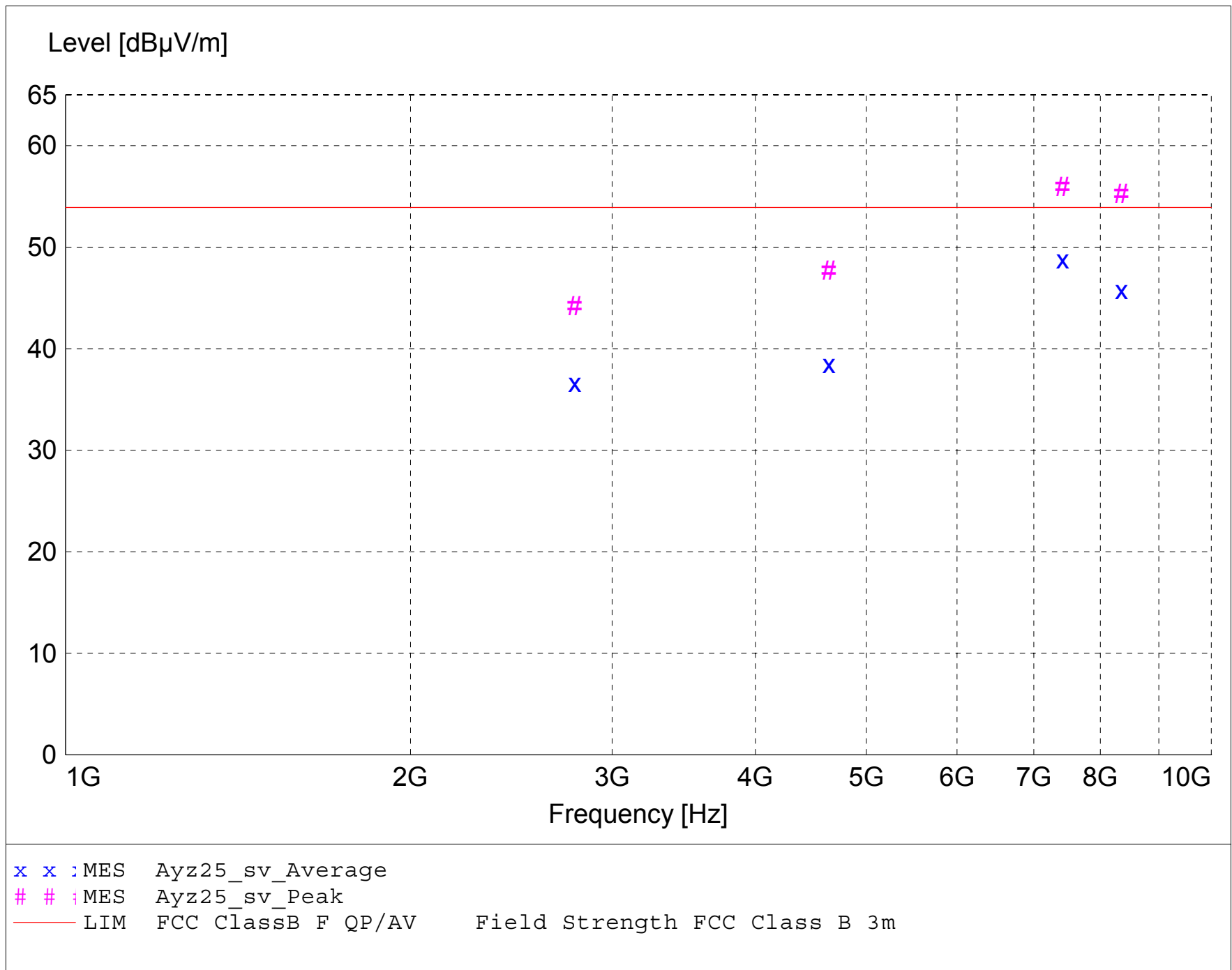
Short Description: Test Set-up Vert1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with VERTICAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz25_sv_Final"

6/14/2005 3:44PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	52.79	36.33	-33.2	55.9	53.9	-2.0	2.00	315	MAX PEAK	None
8344.700000	50.97	37.25	-33.0	55.2	53.9	-1.3	1.50	340	MAX PEAK	None
7417.500000	45.66	36.33	-33.2	48.8	53.9	5.1	2.00	315	AVERAGE	None
4636.000000	50.84	32.60	-35.8	47.6	53.9	6.3	1.00	0	MAX PEAK	None
8344.700000	41.53	37.25	-33.0	45.8	53.9	8.1	1.50	340	AVERAGE	None
2781.600000	52.66	29.51	-38.0	44.2	53.9	9.7	1.00	70	MAX PEAK	None
4636.000000	41.70	32.60	-35.8	38.5	53.9	15.4	1.00	0	AVERAGE	None
2781.600000	45.09	29.51	-38.0	36.6	53.9	17.3	1.00	70	AVERAGE	None

FCC Part 15 Class B

Electric Field Strength

EUT: ZM4e
Manufacturer: Zebra Technologies
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OF Site 3
Operator: Craig Brandt
Test Specification: Rpax110 Coupler ZPN: 58989
Comment: Tx mode; Max power; High Channel
Date: 06-14-2005

TEXT: "Site 3 6204&184 H3M"

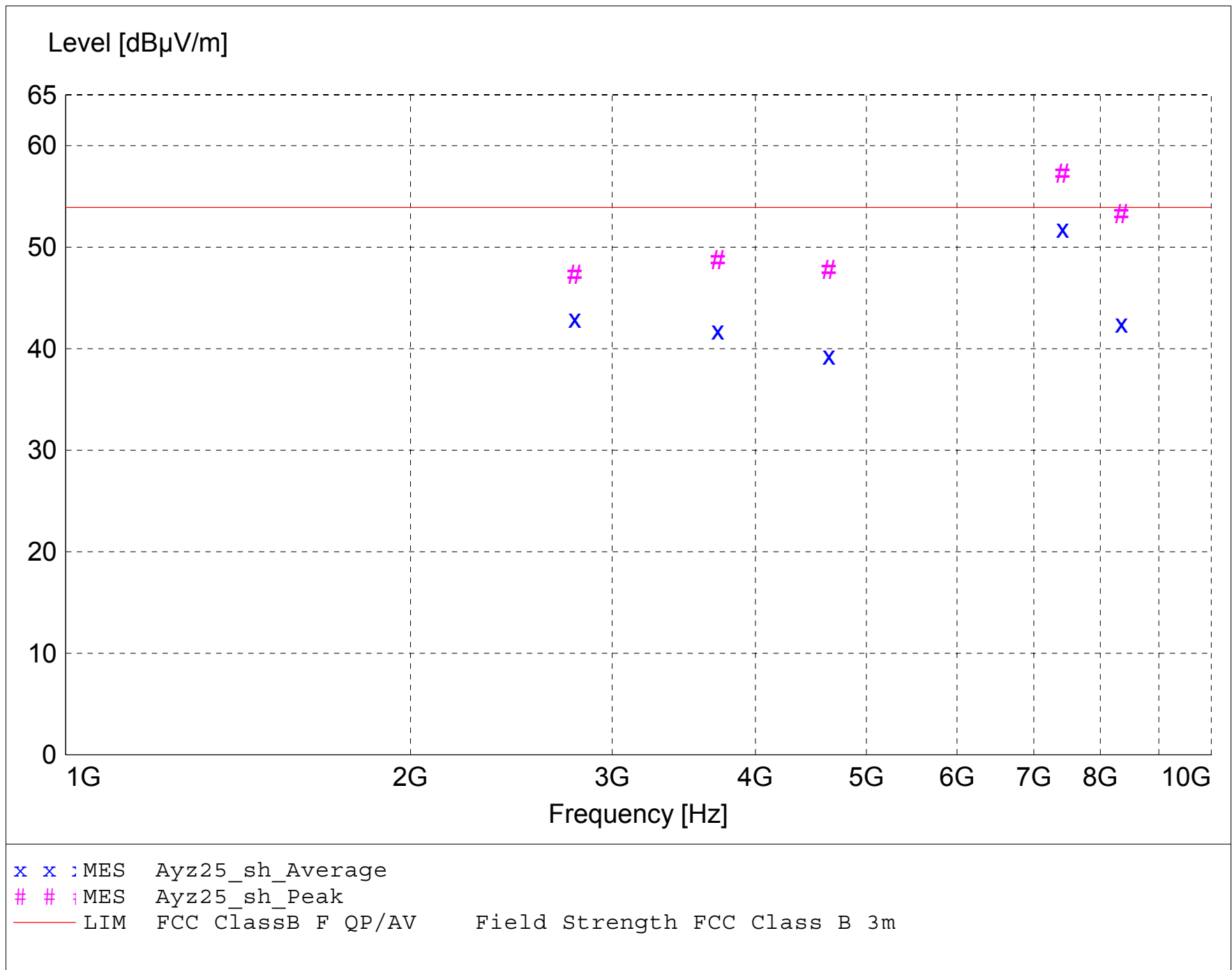
Short Description: Test Set-up Horz1GHz-
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/006

Horn Antenna --- ETS 3115 SN: 6204

Pre-Amps ---

1 - 10 GHz -- Miteq AMF-6D-010100-50 SN: 682425
10 - 18 GHz -- Miteq AMF-6F-100200-50-10P SN: 668382

TEST SET-UP: EuT Measured at 3 Meters with HORIZONTAL Antenna Polarisation



MEASUREMENT RESULT: "Ayz25_sh_Final"

6/14/2005 3:51PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
7417.500000	54.12	36.33	-33.2	57.3	53.9	-3.4	2.00	300	MAX PEAK	None
8344.700000	49.05	37.25	-33.0	53.3	53.9	0.6	2.00	45	MAX PEAK	None
7417.500000	48.62	36.33	-33.2	51.8	53.9	2.1	2.00	300	AVERAGE	None
3708.750000	53.45	31.77	-36.5	48.7	53.9	5.2	2.10	45	MAX PEAK	None
4636.000000	50.97	32.60	-35.8	47.8	53.9	6.1	2.00	315	MAX PEAK	None
2781.600000	55.75	29.51	-38.0	47.3	53.9	6.6	1.50	0	MAX PEAK	None
2781.600000	51.44	29.51	-38.0	43.0	53.9	10.9	1.50	0	AVERAGE	None
8344.700000	38.23	37.25	-33.0	42.5	53.9	11.4	2.00	45	AVERAGE	None
3708.750000	46.57	31.77	-36.5	41.8	53.9	12.1	2.10	45	AVERAGE	None
4636.000000	42.50	32.60	-35.8	39.3	53.9	14.6	2.00	315	AVERAGE	None