

MPACT-MB1101-01-WR

Antenna Specification

Project Name: MPACT-MB1101-01-WR

Author: Wistron NeWeb Corporation

Revision: 1.0

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Revision History

Rev. #	Author	Summary of Changes	Date
1.0	Nick	Initial release	2022/10/24

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1. MPACT-MB1101-01-WR antenna specification

- Antenna Type
 - PIFA Antenna
- Test environment
 - SATIMO Chamber SG64
- Test Procedure
 - OTA Passive Antenna measurement
- VSWR
 - Under 2.7 for all of antennas
- Radiation efficiency
 - ~69% of MPACT-MB1101-01-WR antenna
- Peak gain
 - ~1dBi of MPACT-MB1101-01-WR antenna

2. Equipment list

Radiated Setup #1

ID#	Device	Type/Model	Serial #	Manufacturer	Cal. Date	Cal. Due Date
0135	Anechoic Chamber	FACT3	5720	ETS-Lindgren	2020-07-06	2022-01-07
0136	Turn Table	ETS	-	ETS-Lindgren	N/A	N/A
0147	Switch & Positioning systems	EMC Center	00159757	ETS-Lindgren	N/A	N/A
0530	Measurement SW	EMC32, v10.40.10	100623	Rohde & Schwarz	N/A	N/A
1033	Boresight antenna mast	BAM 4.0-P	P/278/2890.01	Maturo	N/A	N/A
1076	Spectrum Analyzer	FSW43	101847	Rohde & Schwarz	2020-11-02	2022-11-02
0993	Biconical antenna 30 MHz – 1 GHz	UBAA9115 BBVU9135 DGA9552N	+ + 0286 + CH 9044	Schwarzbeck	2019-11-22	2021-11-22
0325	Horn antenna	3117	00157734	ETS-Lindgren	2019-08-12	2021-08-12
0141	Horn Antenna + Amplifier + HPF6.4	3117	00157736	ETS-Lindgren	2020-04-02	2022-04-02
0334	Double-Ridged Waveguide Horn with Pre-Amplifier 18 GHz to 40 GHz	3116C+PA	00169308bis + 00196308	ETS-Lindgren	2019-07-24	2021-07-24
0859	Cable 2.5m - 30MHz to 18GHz	0500990992500KE	19.23.395	Radiall	2020-11-27	2021-05-27
0206	Cable 1.2m – 18 to 40 GHz	UFA147A-0-0480- 200200	MFR 64639223720-003	Micro-coax	2020-08-25	2021-02-25
0263	Cable 1m - 1GHz to 18GHz	UFA147A	-	Utiliflex	2020-08-25	2021-02-25
0369	Cable 2m - 26.5GHz to 40GHz	794-9191-2000A	E00327	Atem	2020-08-25	2021-02-25
0371	Cable 1m – 30 MHz - 18GHz	UFB311A-0-0590- 50U50U	MFR 64639 223230-001	Micro-coax	2020-08-25	2021-02-25
1099	Cable 7m DC-18 GHz	0501051057000GX	19.35.850	Radiall	2020-11-27	2021-05-27
0809	Cable 7m - 18GHz to 40GHz	R286304009	-	Radiall	2020-08-25	2021-02-25
1098	Cable 1.5m - DC-18GHz	CBL-1.5M-SMSM+	202879	Mini-Circuits	2020-11-27	2021-05-27
0797	Temp & Humidity Logger	RA12E-TH1-RAS	RA12-D0EB1A	Avtech	2019-07-04	2021-07-04

N/A: Not Applicable

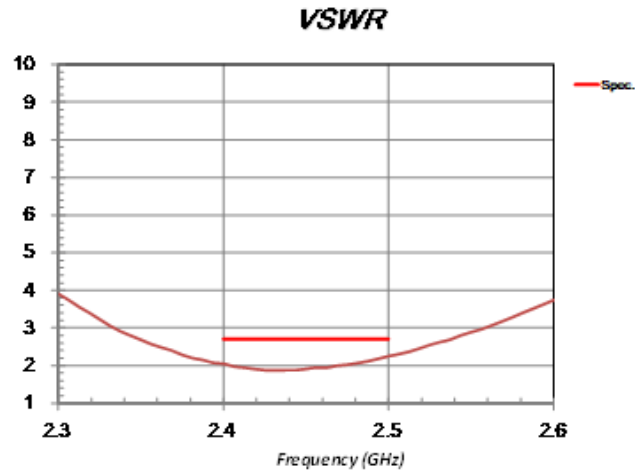
3. MVG SG64 Measurement System

Item	Device	Type/Model	Serial#	Manufacturer	Cal.Date	Cal.Due Date
1	SG64 Chamber	Standard	SG64	MVG	2022/6/15	2023/6/15
2	Turn Table	Customization	-	Machinery Dept.	N/A	N/A
3	New Probe Array Controller	N/A	1102341-4535	MVG	N/A	N/A
4	Power Supply Unit	N/A	1103211-13204	MVG	N/A	N/A
5	Active Switching Unit	N/A	1102347-7214	MVG	N/A	N/A
6	TX Amplification Unit	N/A	1102527-5909	MVG	N/A	N/A
7	RX Amplification Unit	N/A	1102536-3823	MVG	N/A	N/A
8	Transfer Switching Unit	N/A	1102183-3351	MVG	N/A	N/A
9	Mixer Unit	N/A	1102545-7208	MVG	N/A	N/A
10	Power And Control Unit	N/A	1102708-7209	MVG	N/A	N/A
11	Cable 13.7m - 400MHz to 18GHz	SS402	00100A1F5A1XXS	Woken	2022/6/15	2023/6/15
12	Temperature & Humidity Meter	HTC-01	-	Metravi	N/A	N/A

4. Test procedure

1. Open NPAC Spherical Measurement
2. Open SatEnv program
3. In SatEnv program open new file and save path file
4. Setup the test frequency
5. running test
6. Output near field measurement raw data into the SatEnv program
7. Use the program change the near field to far field data.
8. Final the data export to frequency、 efficiency、 gain、 2D pattern、 3D pattern、 row data.....

6. V.S.W.R Measurement



7. Efficiency

MPACT-MB1101-01-WR

Frequency (GHz)	Efficiency (%)	Average Gain (dB)	Peak Gain (dB)
2.4	61.3	-2.12	0.51
2.45	66.1	-1.8	0.8
2.5	59	-2.29	0.38

8. Radiation Pattern

