



Product Spec.

Customer Name	Tymphany		
Project Name	FS1 MK2		
Customer P/N			
TE P/N	2195501-2		
Description	WLAN		
DWG. Version		Doc. Version	A
Green Part			

ME engineer	RD engineer	RD Supervisor	RD Manager
			

Customer engineer Approval

Manufacturer : TE Connectivity
Address : 1050 Westlakes Drive, Berwyn, PA 19312, United States



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4
3
2
1

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RELEASED FOR PUBLICATION

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LOC		DIST		REVISIONS			
GP	00	LN	DESCRIPTION	DATE	SW	APD	
14			ADD PART 2195501-2	11JULY17	AH	RG	

① (0.50)
(PCB THICKNESS INCLUDE ADHESIVE)

PCB ADHESIVE: 3M 4914-02 (VHB)

COPPER FOIL WITH CONDUCTIVE ADHESIVE:
BTX6815SD (YIERDA)

NOTES, UNLESS OTHERWISE SPECIFIED:

- THE PRODUCT AND PROCESS SHOULD COMPLY WITH TE SPEC: TEC-138-702, SPECIFICALLY HALOGEN ELEMENTS AND COMPOUNDS ARE RESTRICTED AS DEFINED IN TEC-138-702
- CABLE: DIA. 1.37MM, LOW LOSS
COLOR: BLACK
- CONNECTOR: I-PEX P/N REFER TO PART LIST OR TE APPROVED EQUIVALENT

PART LIST

2195501-*

③

1: I-PEX MHF4L, 20632-001R-37
2: I-PEX MHF, 20351-112R-37

TE PART NO.	2195501-*
3	COPPER FOIL
2	CABLE
1	PCB WITH ADHESIVE
ITEM	DESCRIPTION
QTY	

ITEM	DESCRIPTION	QTY
3	COPPER FOIL	1
2	CABLE	1
1	PCB WITH ADHESIVE	1

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS:		TOLERANCES UNLESS OTHERWISE SPECIFIED:	
mm			
0	PLC	±	0.50
1	PLC	±	0.50
2	PLC	±	0.50
3	PLC	±	0.50
4	PLC	±	0.50
5	PLC	±	0.50
6	PLC	±	0.50
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64	PLC	±	0.50
65	PLC	±	0.50
66	PLC	±	0.50
67	PLC	±	0.50



3. Antenna Related Data.

Antenna Type

WLAN : PCB

Frequency Range:

WLAN : 2400~2500MHz & 5150 ~ 5875MHz

Cable Color:

WLAN : Black

Cable Type :

WLAN : Φ 1.13mm

VSWR:

2400~2500MHz ≤ 3

5150~5875MHz ≤ 4

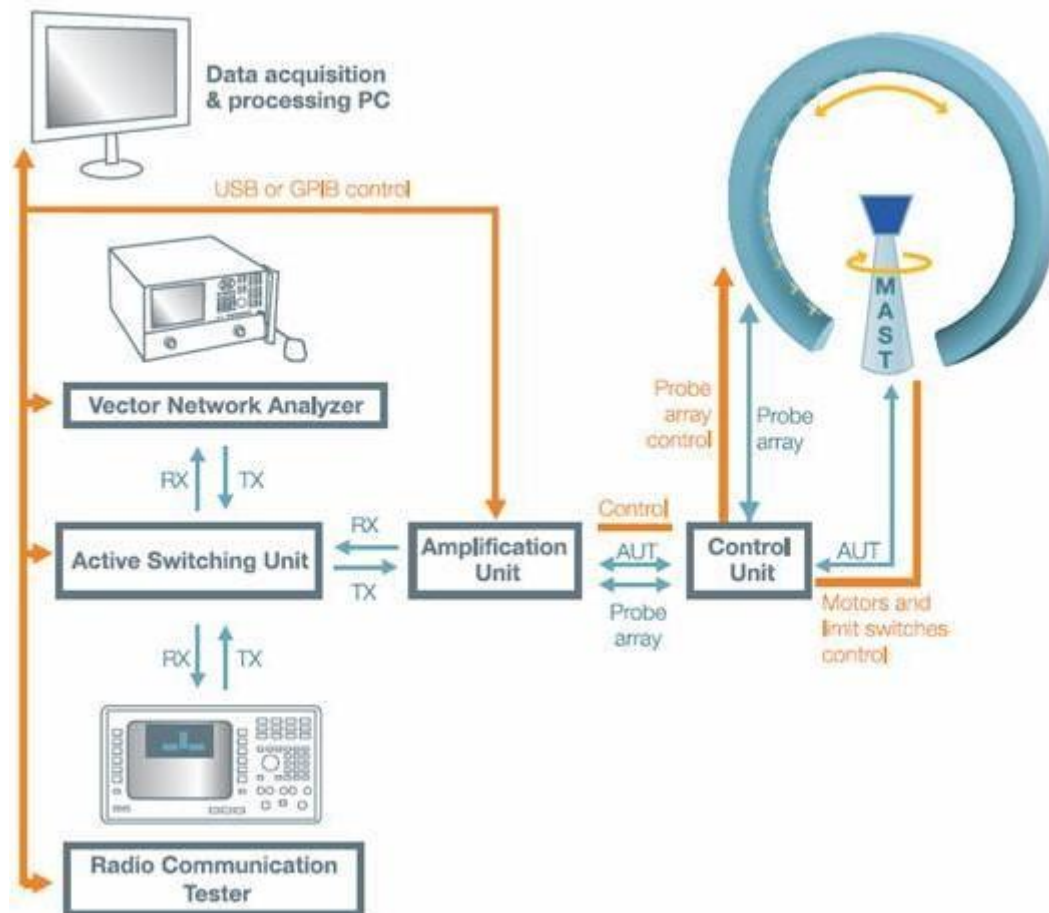
Average Gain :

≥ -5.0 dBi @ 2400~2500MHz

≥ -6.5 dBi @ 5150~5875MHz

4. Antenna Testing Conditions

Test Configuration(3D):



(Testing by 3D anechoic chamber)

Support Equipment			
No.	Equipment	Brand Name	Model Name
1	Chamber	Satimo	StarLab
2	Network Analyzer	Agilent	E5071C

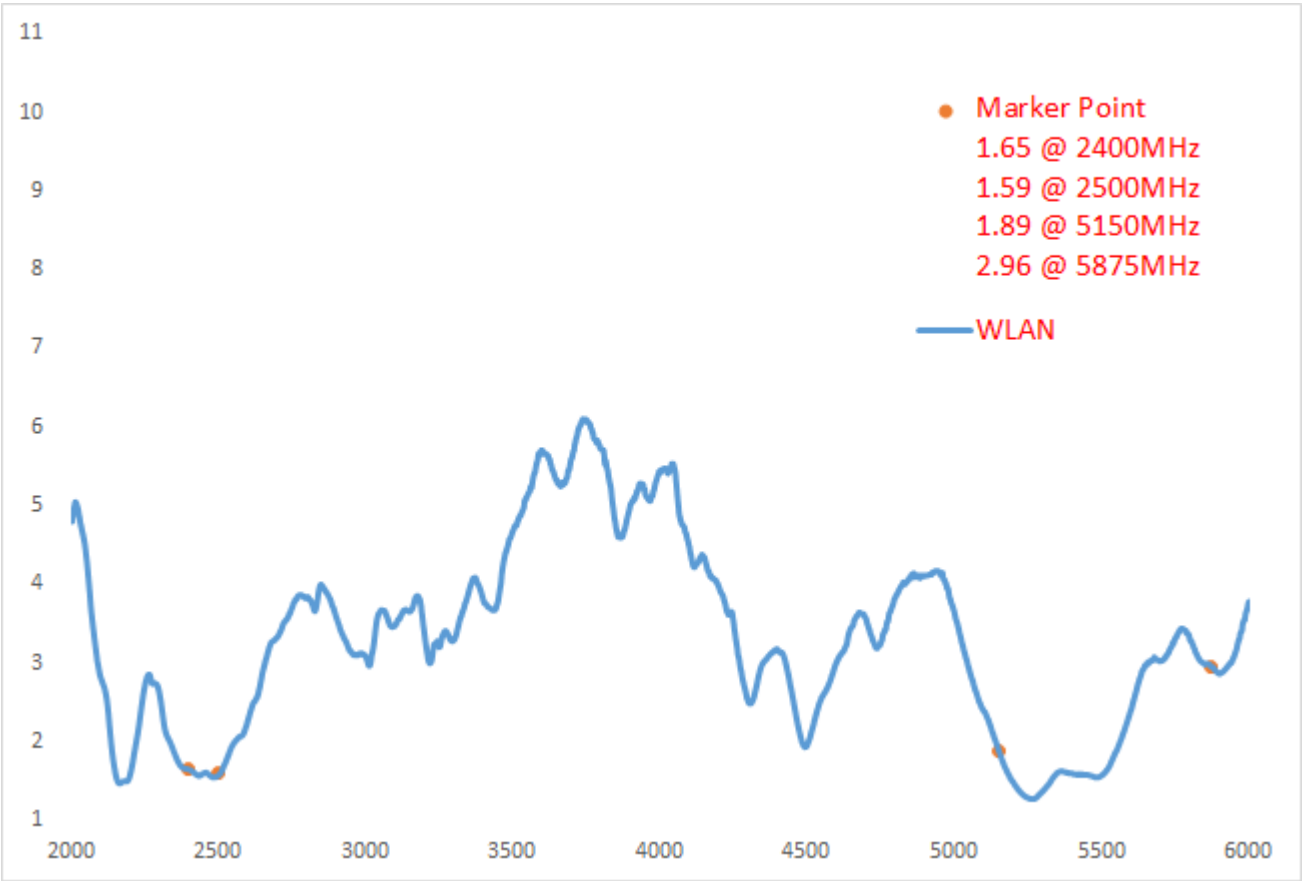
Test Lab			
ADD : 3F, No. 45, Dongsing Road, Taipei 11070, Taiwan R.O.C.			
TEL : 886-2-2171-5349			
Test Information			
Condition	Engineer	Environment	Date
Raidated	Raymond Wang	22~24°C / 55~70%	16/Jul./2018

5. Test Result.

5.1 VSWR

WLAN

Frequency (MHz)	2400	2500	5150	5875
WLAN	1.65	1.59	1.89	2.96



5.2 Gain value (Testing by 3D anechoic chamber)

WLAN

Antenna	WLAN				
Frequency	Gain	Efficiency	Peak Gain		
(MHz)	3D (dBi)	3D (%)	Phi 0 (dBi)	Phi 90 (dBi)	Theta 90 (dBi)
2400	-3.70	42.7%	-0.11	-2.46	-0.08
2450	-3.79	41.8%	0.47	-2.97	0.22
2500	-3.50	44.7%	0.14	-2.85	0.30
4900	-6.84	20.7%	-1.41	-3.88	-6.42
5000	-6.18	24.1%	-0.09	-2.88	-6.69
5100	-5.26	29.8%	-0.74	-1.12	-8.39
5150	-4.62	34.5%	-0.74	-0.83	-6.81
5250	-4.01	39.7%	0.54	-1.79	-4.25
5350	-3.65	43.1%	1.88	-0.81	-4.38
5470	-3.72	42.5%	1.21	0.21	-6.00
5725	-5.37	29.1%	-0.04	-1.95	-4.94
5785	-5.45	28.5%	0.14	-1.86	-5.18
5875	-5.13	30.7%	0.89	-1.56	-5.96

6.3 Gain Pattern (Testing by 3D anechoic chamber)

WLAN

