



Product Spec.

Customer Name	Tymphany		
Project Name	S53		
Customer P/N			
TE P/N	1-2195498-3		
Description	WLAN (Free Space)		
DWG. Version		Doc. Version	A
Green Part			

ME engineer	RD engineer	RD Supervisor	RD Manager
<i>Allen Lu</i>	<i>Raymond Wang</i>		

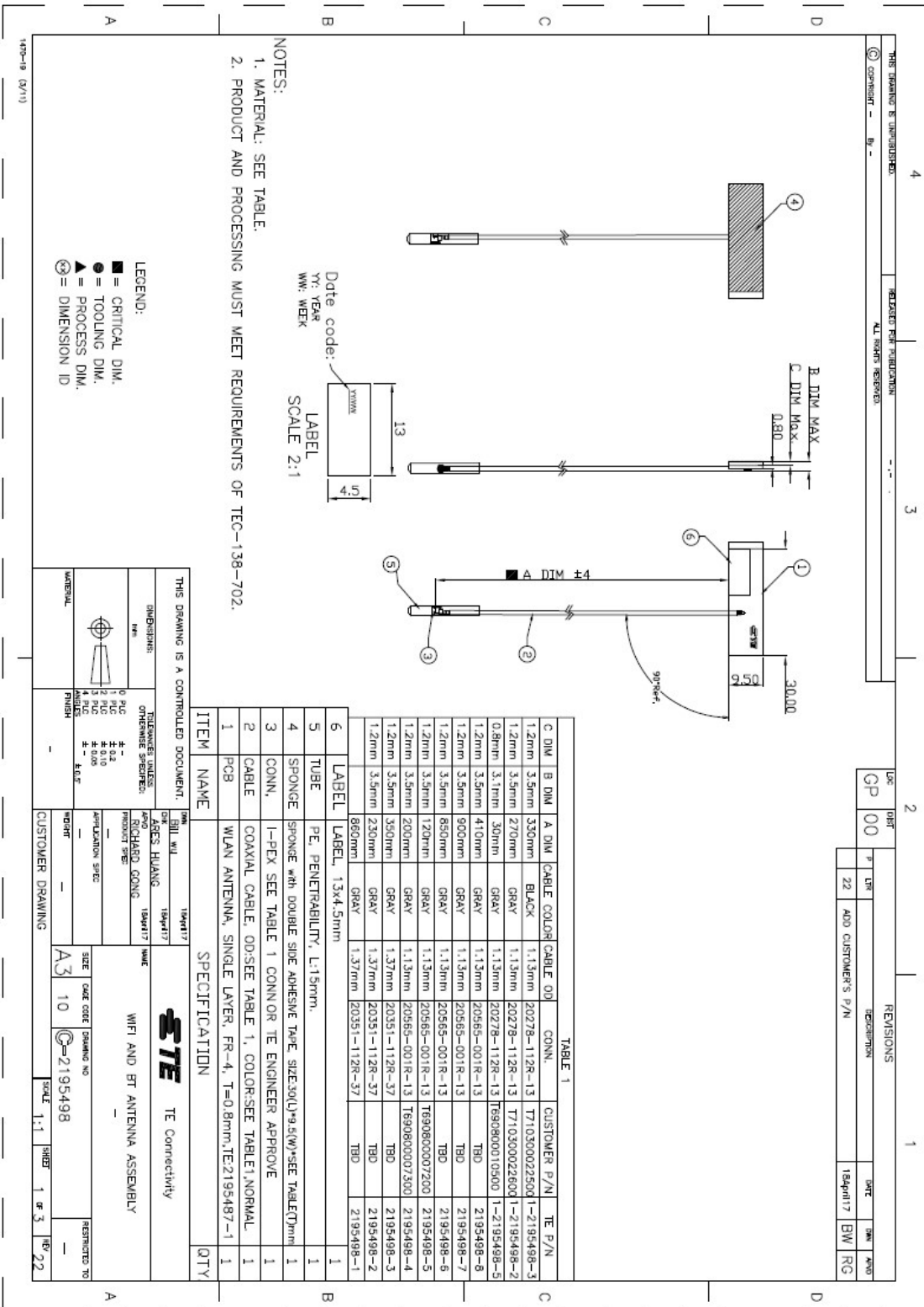
Customer engineer Approval



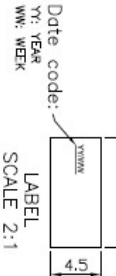
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1. Drawing(Te)



NOTES:
 1. MATERIAL: SEE TABLE.
 2. PRODUCT AND PROCESSING MUST MEET REQUIREMENTS OF TEC-138-702.



LEGEND:
 ● = CRITICAL DIM.
 ○ = TOOLING DIM.
 ▲ = PROCESS DIM.
 ⊕ = DIMENSION ID

LOC	REV	DESCRIPTION	DATE	BY	APP
GP	00	ADD CUSTOMER'S P/N	18Apr17	BW	RG

TABLE 1

C DIM	B DIM	A DIM	CABLE COLOR	CABLE OD	CONN.	CUSTOMER P/N	TE P/N
1.2mm	3.5mm	336mm	BLACK	1.13mm	20278-112R-13	T7103000226001	1-2195498-3
1.2mm	3.5mm	270mm	GRAY	1.13mm	20278-112R-13	T7103000226001	1-2195498-2
0.8mm	3.1mm	30mm	GRAY	1.13mm	20278-112R-13	T6908000105001	1-2195498-5
1.2mm	3.5mm	410mm	GRAY	1.13mm	20565-001R-13	TBD	2195498-8
1.2mm	3.5mm	900mm	GRAY	1.13mm	20565-001R-13	TBD	2195498-7
1.2mm	3.5mm	850mm	GRAY	1.13mm	20565-001R-13	TBD	2195498-6
1.2mm	3.5mm	120mm	GRAY	1.13mm	20565-001R-13	T6908000072001	2195498-5
1.2mm	3.5mm	200mm	GRAY	1.13mm	20565-001R-13	T6908000073001	2195498-4
1.2mm	3.5mm	350mm	GRAY	1.37mm	20351-112R-37	TBD	2195498-3
1.2mm	3.5mm	230mm	GRAY	1.37mm	20351-112R-37	TBD	2195498-2
1.2mm	3.5mm	860mm	GRAY	1.37mm	20351-112R-37	TBD	2195498-1

ITEM	NAME	SPECIFICATION	QTY
4	TUBE	PE, PENETRABILITY, L:15mm.	1
5	SPONGE	SPONGE with DOUBLE SIDE ADHESIVE TAPE, SIZE:30(L)*9.5(W)*SEE TABLE(T)mm	1
3	CONN.	I-PEX SEE TABLE 1 CONN OR TE ENGINEER APPROVE	1
2	CABLE	COAXIAL CABLE, OD:SEE TABLE 1, COLOR:SEE TABLE1,NORMAL	1
1	PCB	WLAN ANTENNA, SINGLE LAYER, FR-4, T=0.8mm,TE:2195487-1	1

THIS DRAWING IS A CONTROLLED DOCUMENT.

DESIGNED BY: WJ	DATE: 18Apr17	REV: 1
CHECKED BY: WJ	DATE: 18Apr17	REV: 1
APPROVED BY: WJ	DATE: 18Apr17	REV: 1

TE Connectivity

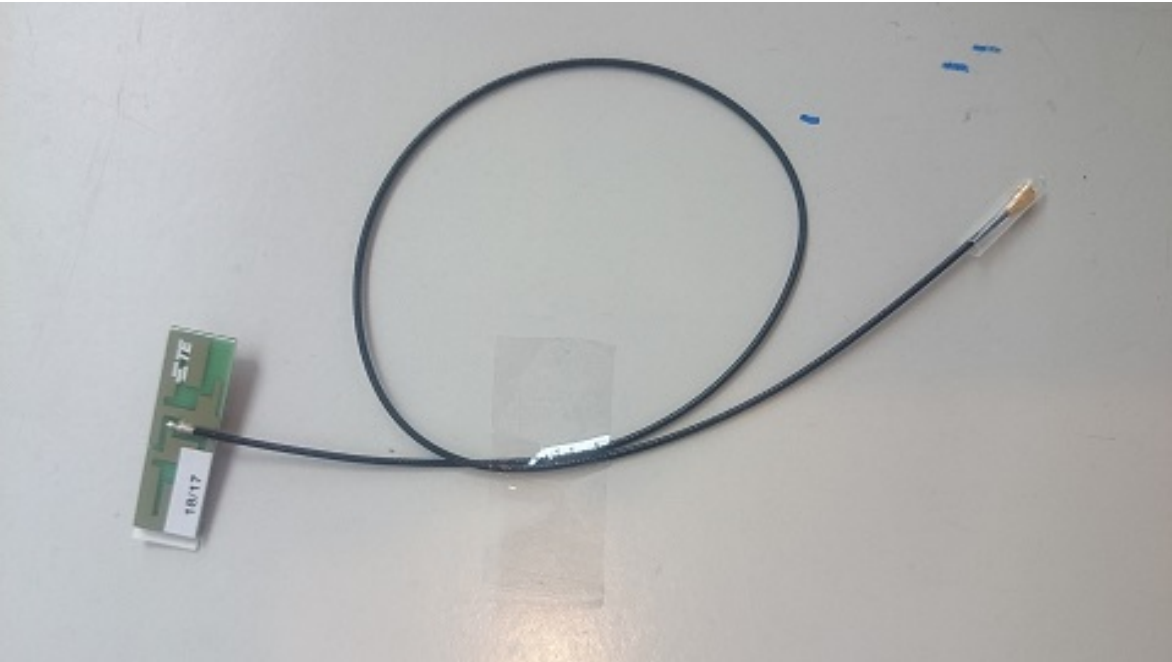
WIFI AND BT ANTENNA ASSEMBLY

SIZE: Code Code Drawing No: A3 10 2195498

SCALE: 1:1

REVISIONS: 1

2. Antenna Photo





3. Antenna Related Data.

Frequency Range:

WLAN : 2400~2500MHz & 5150 ~ 5875MHz

Cable Color:

WLAN : Black

Cable Type :

WLAN : Φ 1.13mm

VSWR:

2400~2500MHz \leq 6.5

5150~5875MHz \leq 3.5

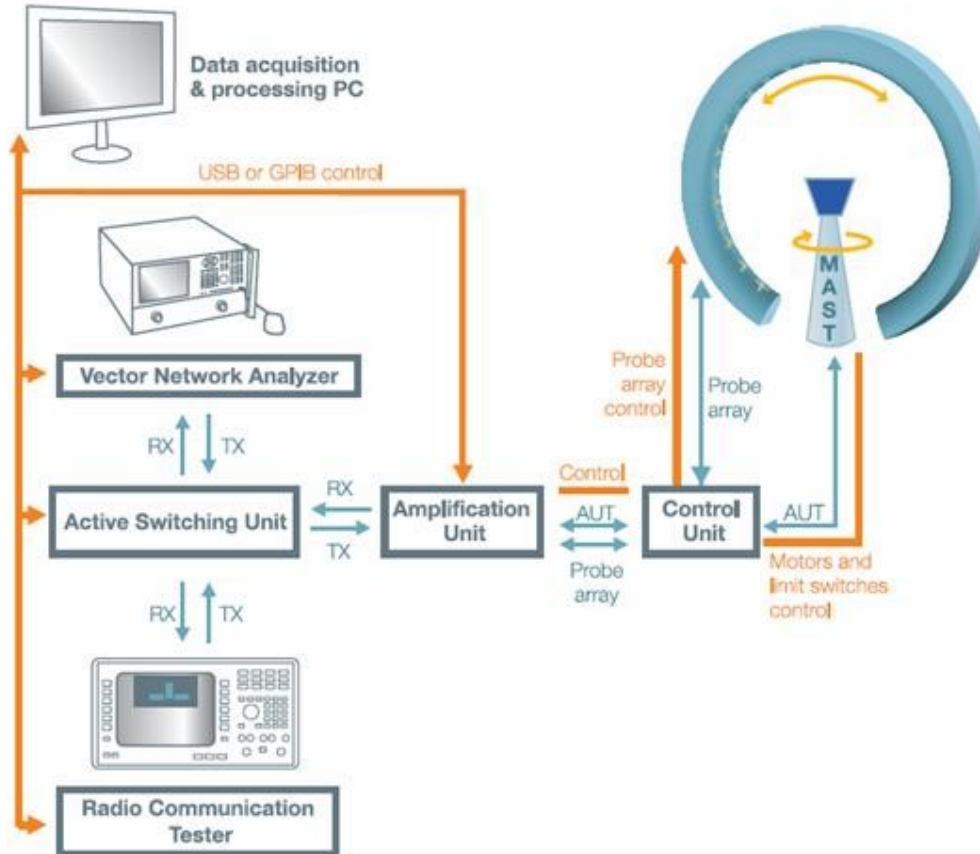
Average Gain :

\geq -8.0 dBi @ 2400~2500MHz

\geq -5.0 dBi @ 5150~5875MHz

4. Antenna Testing Conditions

Test Configuration(3D):



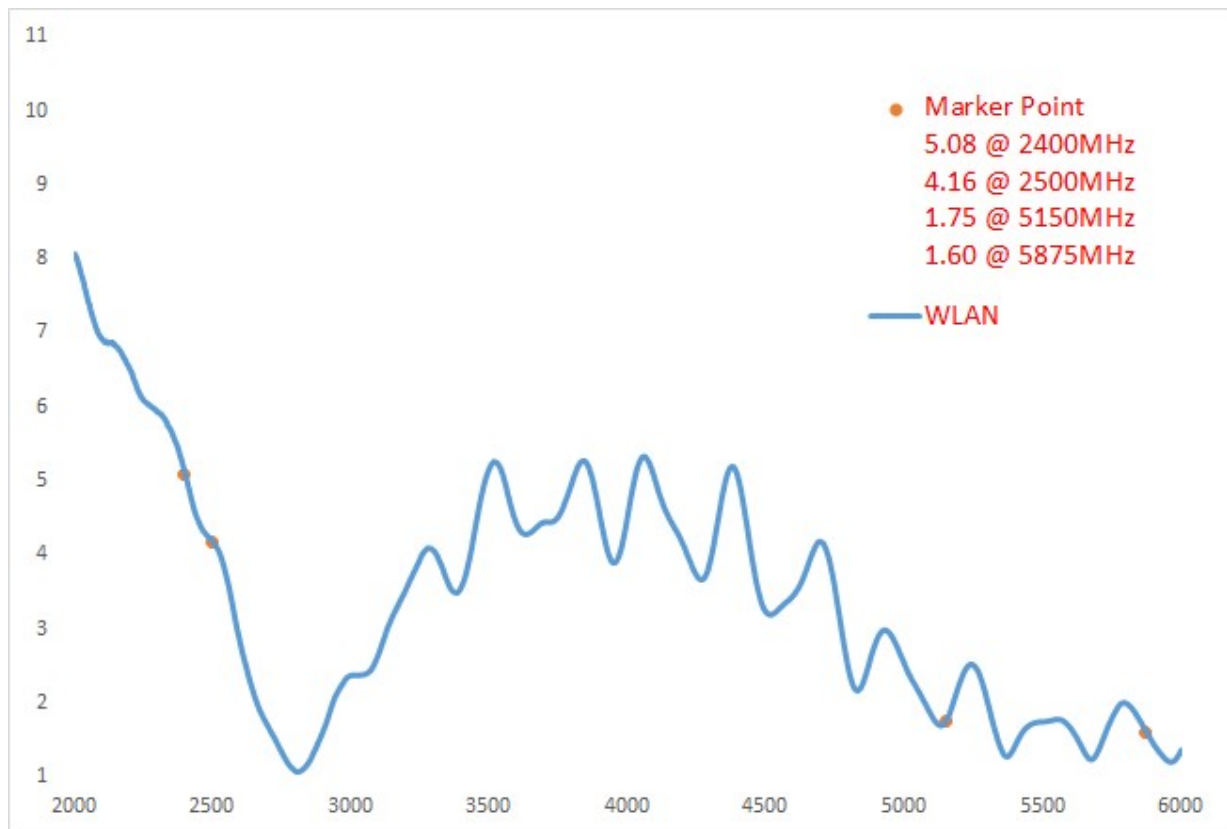
(Testing by 3D anechoic chamber)

5. Test Result.

5.1 VSWR

WLAN

Frequency (MHz)	2400	2500	5150	5875
WLAN	5.08	4.16	1.75	1.60



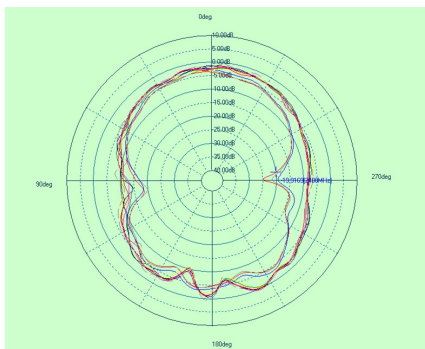
5.2 Gain value (Testing by 3D anechoic chamber)

WLAN

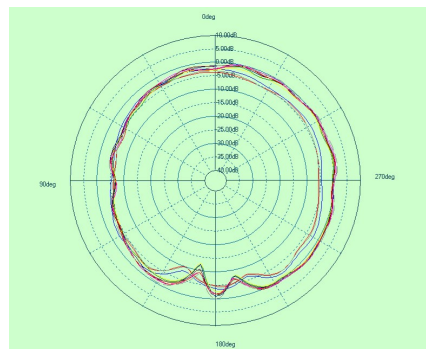
Antenna	WLAN	
Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400	-6.28	23.5%
2450	-6.26	23.7%
2500	-5.22	30.0%
5150	-3.35	46.2%
5250	-3.21	47.8%
5350	-2.85	51.9%
5470	-2.95	50.7%
5725	-2.94	50.8%
5785	-3.31	46.7%
5875	-2.74	53.2%

5.3 Gain Pattern (Testing by 3D anechoic chamber)

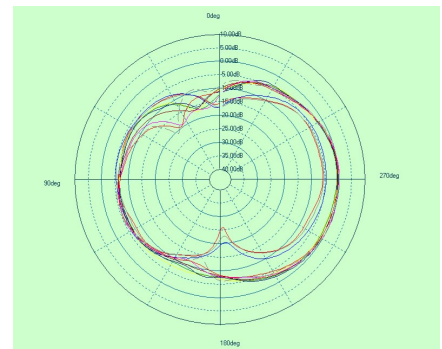
WLAN



Phi 0



Phi 90



Theta90