



# Product Spec.

Customer Name	Tymphany		
Project Name	S53		
Customer P/N			
TE P/N	1-2195498-2		
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



## [Index](#)

- 1. Drawing**
- 2. Antenna Photo**
- 3. Antenna Related Data**
- 4. Antenna Testing Conditions**
- 5. Test Result**

# 1. Drawing (TE)

THIS DRAWING IS UNCLASSIFIED. REQUEST FOR PERMISSION. ALL RIGHTS RESERVED.				4 3 2 1			
COMMENTS: By:				GP 00			
REVISIONS				22 ADD CUSTOMER'S P/N			
DATE: 18April17				DATE: 18April17			
DRAWN BY: BW				DATE: 18April17			
CHECKED BY:				DATE:			
APPROVED BY:				DATE:			

**TABLE 1**  
 C DIM    B DIM    A DIM    CABLE COLOR    CABLE OD    CONN.    CUSTOMER P/N    TE P/N  
 1.2mm    3.5mm    330mm    BLACK    1.13mm    20278-1128-13    T71030002250Q    2195498-3  
 1.2mm    3.5mm    270mm    GRAY    1.13mm    20278-1128-13    T71030002280Q    2195498-2  
 0.8mm    3.1mm    30mm    GRAY    1.13mm    20278-1128-13    T690800010500    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    T690800007200    2195498-5  
 1.2mm    3.5mm    200mm    GRAY    1.13mm    20565-001R-13    T690800007300    2195498-4  
 1.2mm    3.5mm    350mm    GRAY    1.37mm    20351-1128-37    TBD    2195498-3  
 1.2mm    3.5mm    230mm    GRAY    1.37mm    20351-1128-37    TBD    2195498-2  
 6    LABEL    13x4.5mm    GRAY    1.37mm    20351-1128-37    TBD    2195498-1

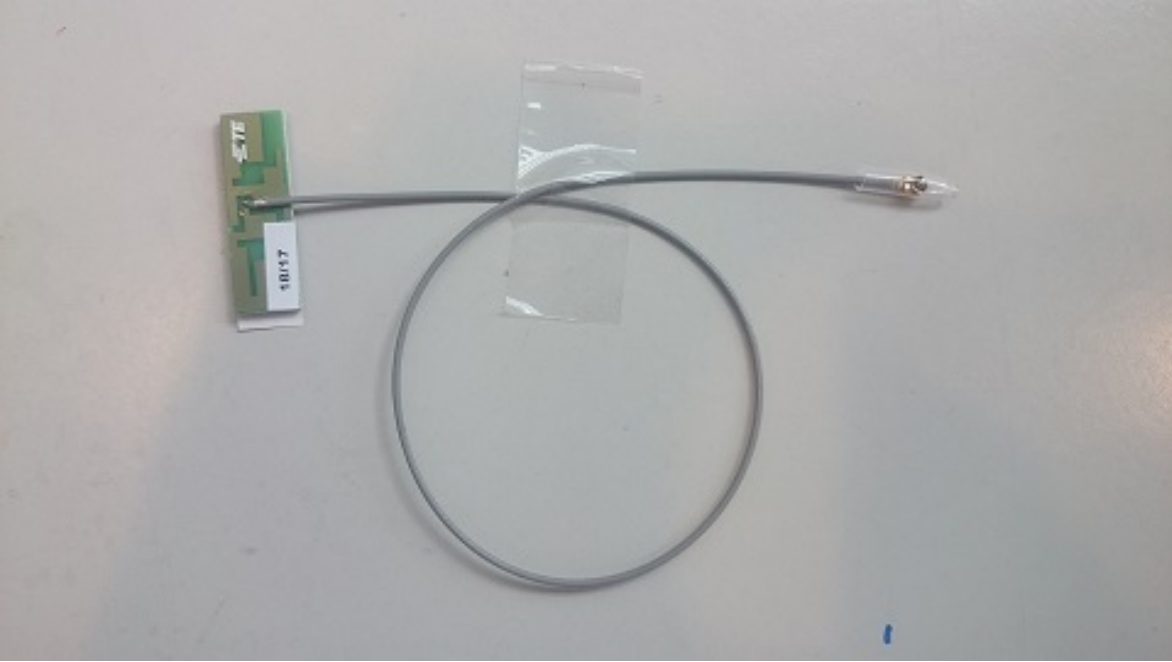
Date code: YY: YEAR    WW: WEEK  
 LABEL SCALE 2:1

**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

THIS DRAWING IS A CONTROLLED DOCUMENT.		BILL NO: 18April17	
INSTRUCTIONS:		DESIGNED BY: RICHARD HUIANG	
DIMENSIONS:		CHECKED BY: RICHARD CONG	
TOLERANCES: UNLESS OTHERWISE SPECIFIED:		DATE CODE: 2195498	
0 P/C ± 0.2 1 P/C ± 0.1 2 P/C ± 0.05 3 P/C ± 0.02 4 P/C ± 0.01 FINISH: # - 4.0	APPLICABLE SPEC:	SIZE: A3	DRAWING NO: 2195498
MATERIAL:		PART:	RESTRICTED TO:
CUSTOMER DRAWING:		SCALE: 1:1	SHEET: 1 of 3

## 2. Antenna Photo





### **3. Antenna Related Data.**

Frequency Range:

WLAN : 2400~2500MHz & 5150 ~ 5875MHz

Cable Color:

WLAN : Gray

Cable Type :

WLAN :  $\Phi$ 1.13mm

VSWR:

2400~2500MHz  $\leq$  7.5

5150~5875MHz  $\leq$  3.5

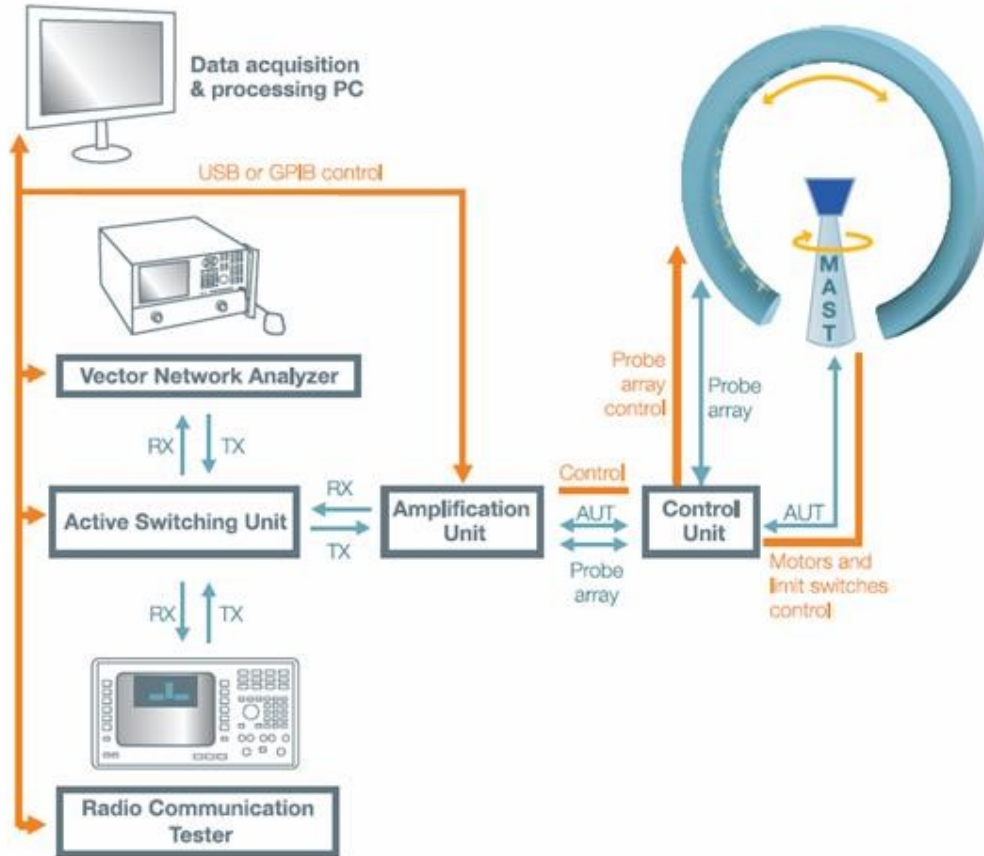
Average Gain :

$\geq$  -8.5 dBi @ 2400~2500MHz

$\geq$  -5.0 dBi @ 5150~5875MHz

## 4. Antenna Testing Conditions

### Test Configuration(3D):



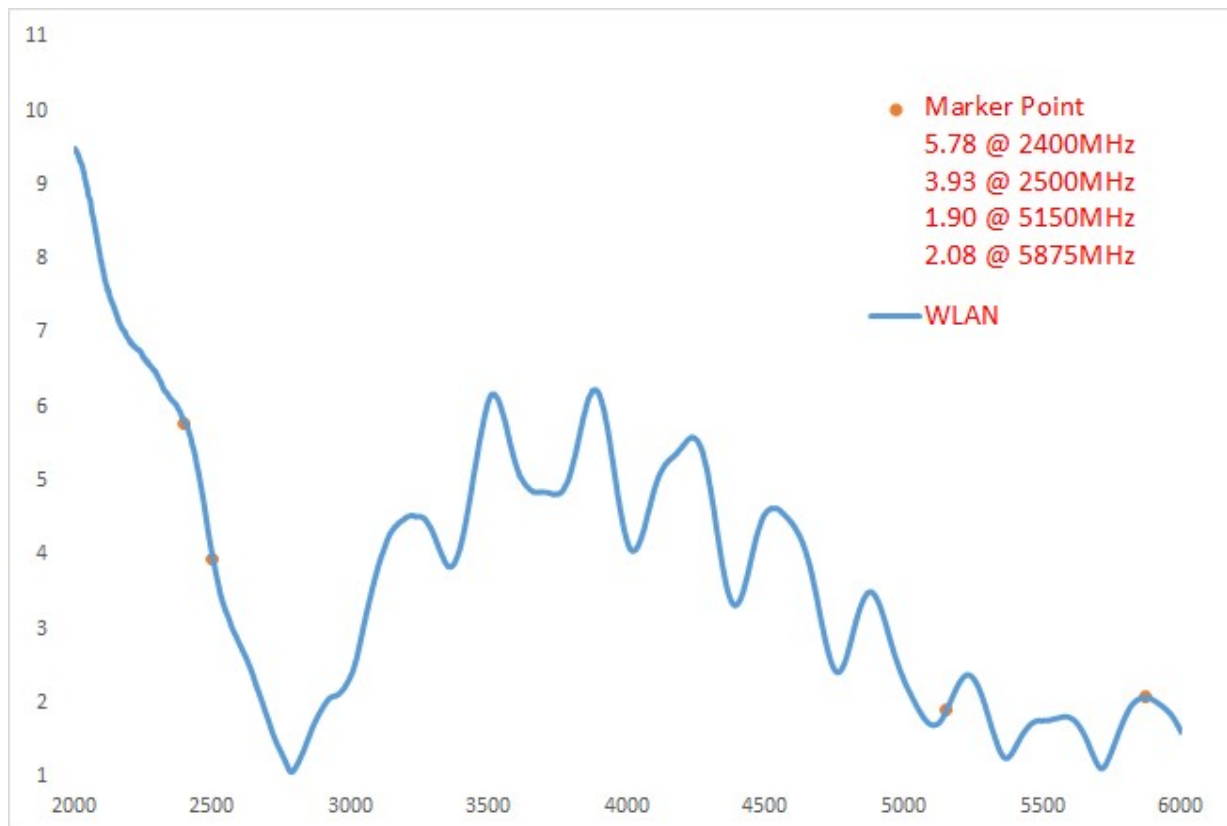
(Testing by 3D anechoic chamber)

## 5. Test Result.

### 5.1 VSWR

#### WLAN

Frequency (MHz)	2400	2500	5150	5875
WLAN	5.78	3.93	1.90	2.08



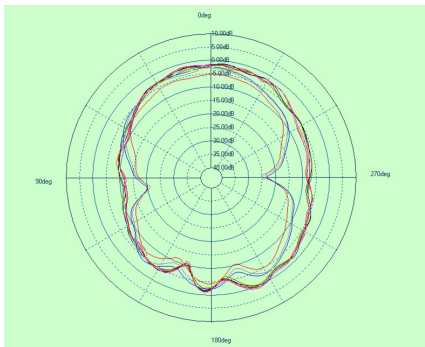
## 5.2 Gain value (Testing by 3D anechoic chamber)

### WLAN

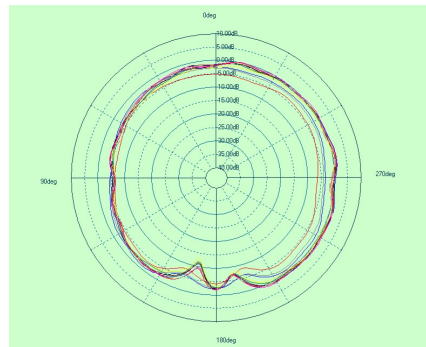
Antenna	WLAN	
Frequency ( MHz )	Gain ( dBi )	Efficiency ( % )
2400	-7.00	20.0%
2450	-5.09	31.0%
2500	-4.46	35.8%
5150	-3.53	44.4%
5250	-3.08	49.2%
5350	-2.68	54.0%
5470	-2.97	50.4%
5725	-2.71	53.5%
5785	-3.13	48.7%
5875	-3.30	46.8%

## 5.3 Gain Pattern (Testing by 3D anechoic chamber)

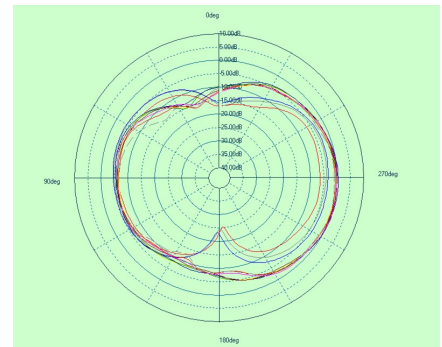
### WLAN



**Phi 0**



**Phi 90**



**Theta 90**