

PART NO. 28713590		SHT. 0 OF 13	APTIV ADVANCED SAFETY & USER EXPERIENCE		
DATE	SYMBOL	REVISION - UPDATE DOCUMENTATION ONLY		AUTHORITY	DR. AP.
19AP21	A	RELEASED-PRODUCTION		1080654278	KS KA

REFERENCE INFORMATION (add sheets if necessary)

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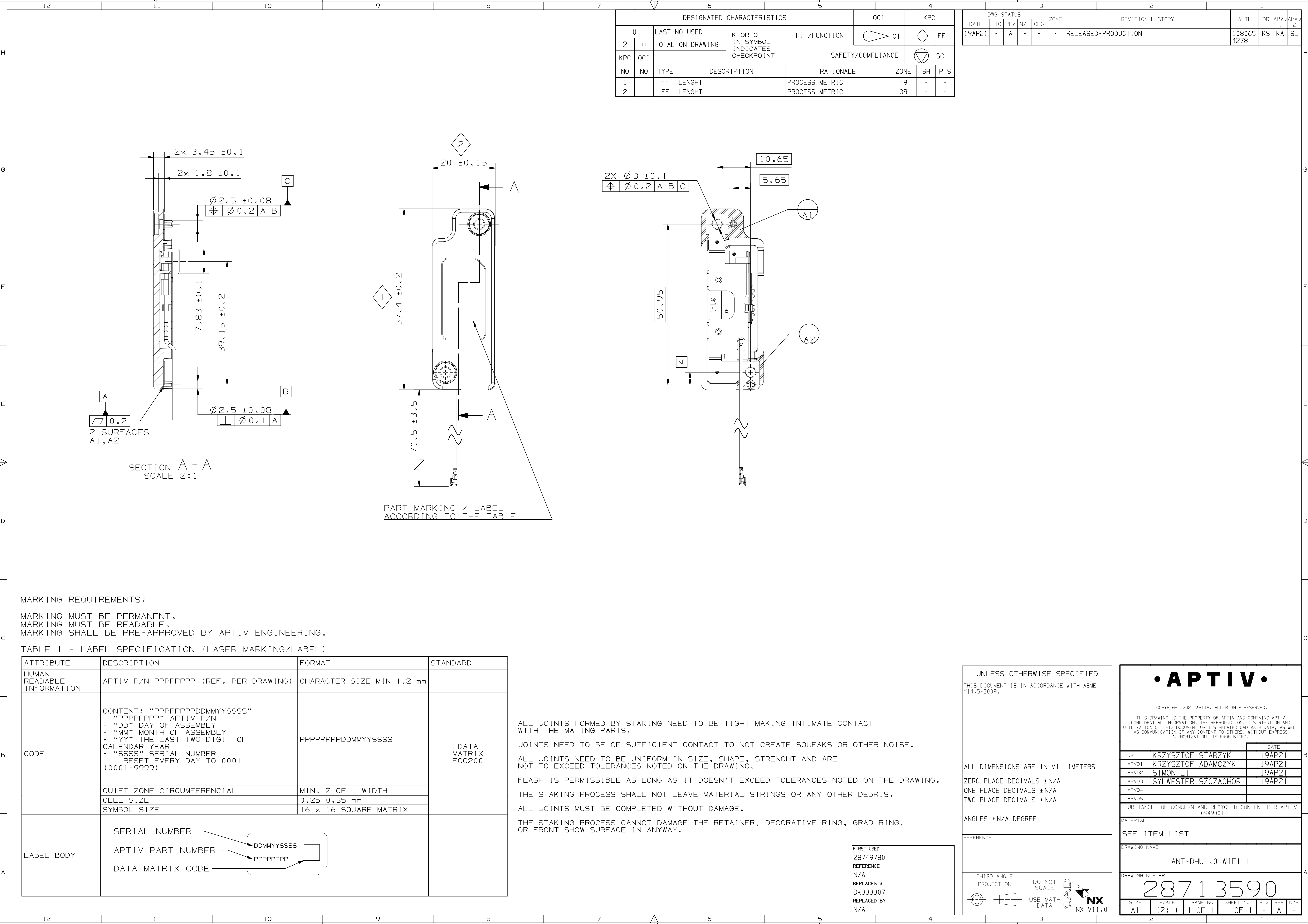
NUMBER OF ADDITIONS TO COVER SHEET: 0

TOTAL NUMBER OF SHEETS: 13

NON-STANDARD DRAWING SOURCE (IF CSD, ENTER CUSTOMER) AMOTECH

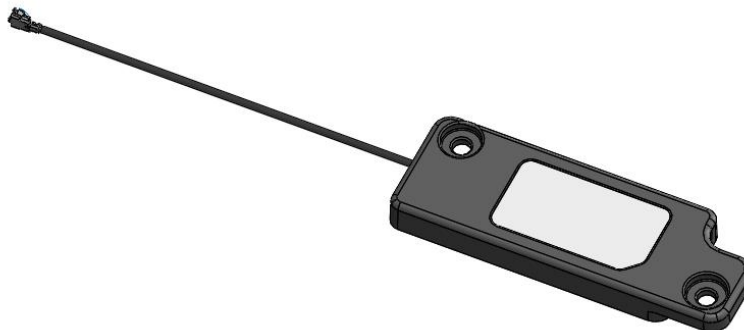
ADDITIONAL INFORMATION:

KEY CHARACTERISTICS		DR KRZYSZTOF STARZYK		DATE 19AP21
YES ☐ NO ☒		Appv KRZYSZTOF ADAMCZYK		DATE 19AP21
 • APTIV • ADVANCED SAFETY & USER EXPERIENCE		Appv SIMON LI		DATE 19AP21
		Appv SYLWESTER SZCZACHOR		DATE 19AP21
		FIRST USED		
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		ANT-DHU1.0 WIFI 1		
		PART NO		SHT OF
		<u>28713590</u>		0 13



DATASHEET

Type	Cable assembly antenna
Application	WiFi
Customer P/N	28713590
AMOTECH P/N	AMO-MHA-AP001



2021. 04. 12

AMOTECH

History

Rev. No	Date	Title	Contents	Page
0	2021. 04. 12		New published	

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1. Specification

1.1 Electrical Specifications

No	Item		Specification			Unit
			Min	Typical	Max	
1	Operating Frequency		2400		2485	MHz
			5150		5850	MHz
2	VSWR	Low Band	1	1.4	3.0	
		High Band	1	1.3	3.0	
3	Efficiency	Low Band		55		%
		High Band		27		%
4	Peak gain	Low Band		2.4		dBi
		High Band		1.9		dBi
5	Polarization		Linear			
6	Impedance [Ω]		Nominal 50			

※ Notice

- Measured data is based on Customer's SET, DHU1 unit.
- Antenna could be changed to applied other SET condition.

1.2 Mechanical Specifications

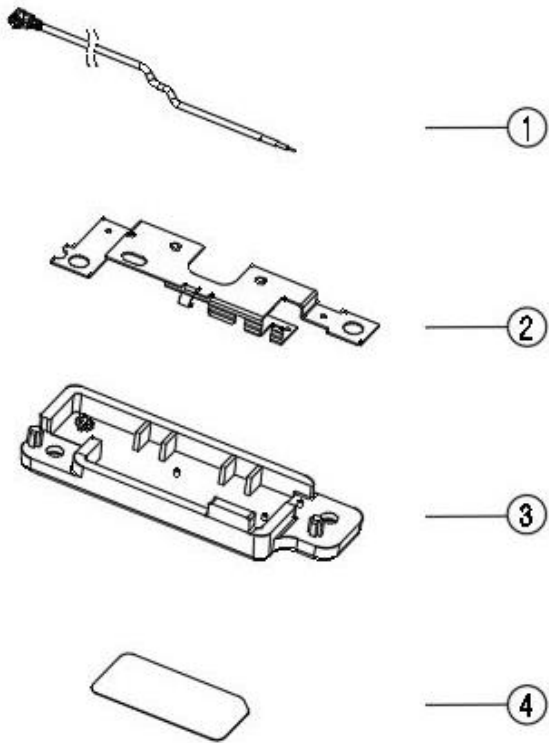
No	Item	Specification	Remark
1	Dimensions (L x W x H)	127.9 mm x 20 mm x 8.5 mm	
2	Cable	Ø1.13 mm, 114.5 mm, Black color	
3	RF connector	IPEX MHF I	
3	Unit weight	6 g	

- Drawing

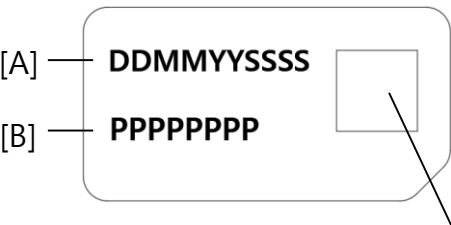


- Material information

No	Description	Material
①	RF Cable	RF Cable & connector
②	Press antenna	German silver (Thickness 0.3 mm)
③	Carrier	PC+ABS (LG LUPOY GP5008BFH)
④	Label	PolyPropylene (Thickness 0.1 mm)



- Product label information



	<u>DD</u>	<u>MM</u>	<u>YY</u>	<u>SSSS</u>
[A]	Date	Month	Year	Serial number

[B] Customer P/N

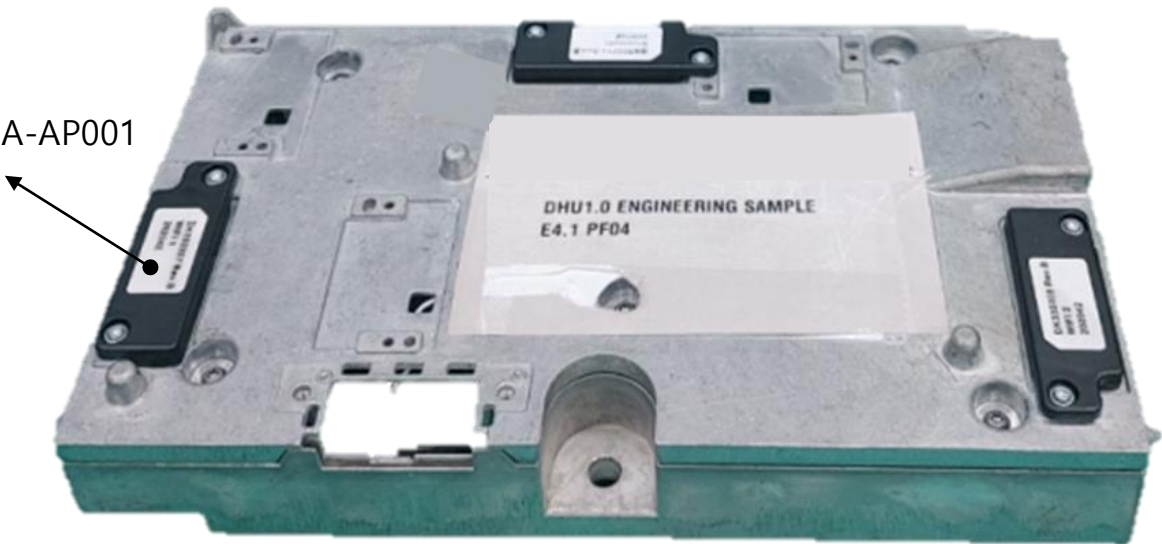
[C] Data Matrix Code

※ Matrix code will contain [B]+[A].

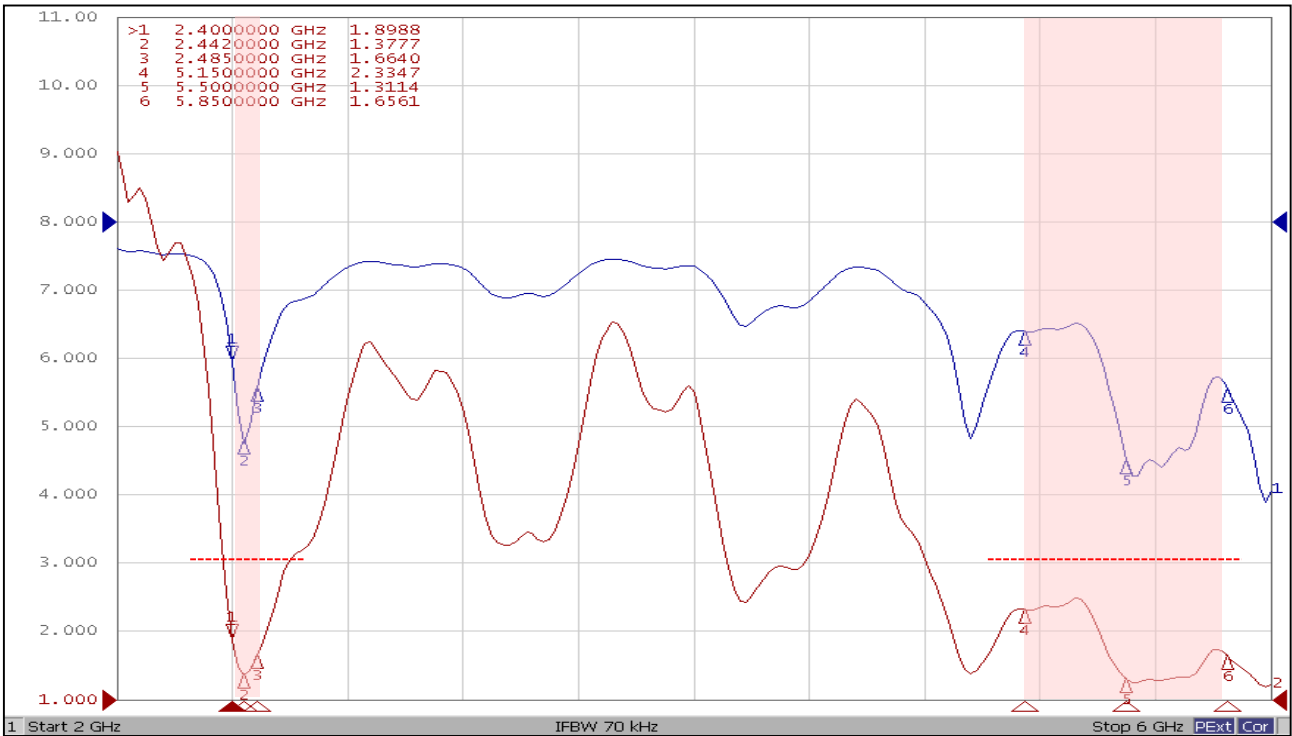
2. Measurement

2.1 Measured VSWR

AMO-MHA-AP001



Antenna on the customer's SET



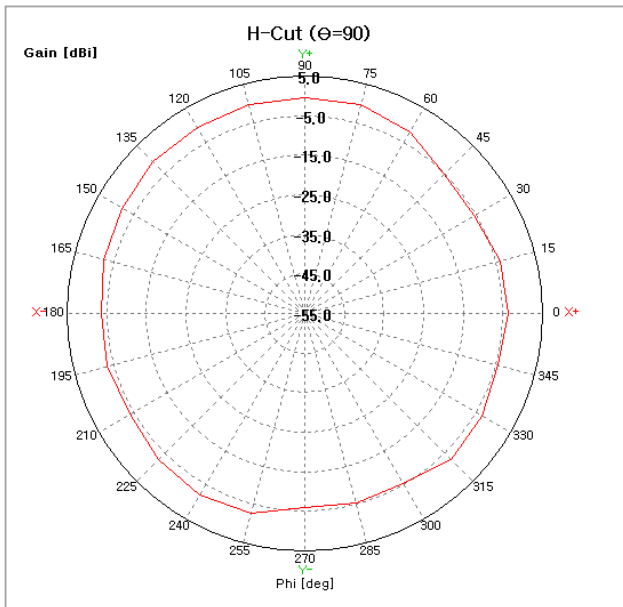
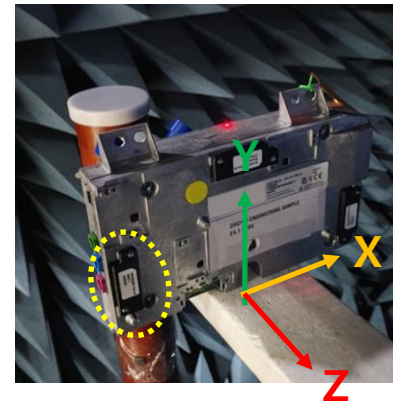
Measured VSWR on the customer's SET

2.2 Measured data of Radiation Gain

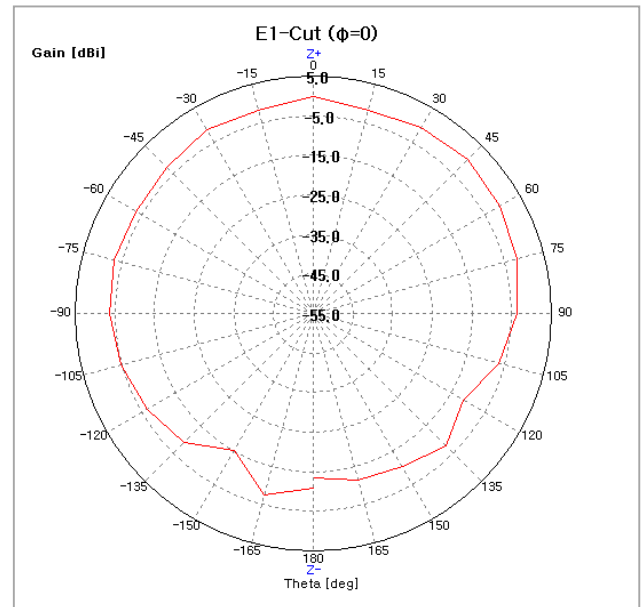
- Antenna gain table on the SET

Frequency [MHz]	Efficiency [%]	Avg. Gain [dBi]	Peak Gain [dBi]
2400	35.3	-4.50	0.3
2442	55.1	-2.6	2.4
2485	44.7	-3.4	1.2

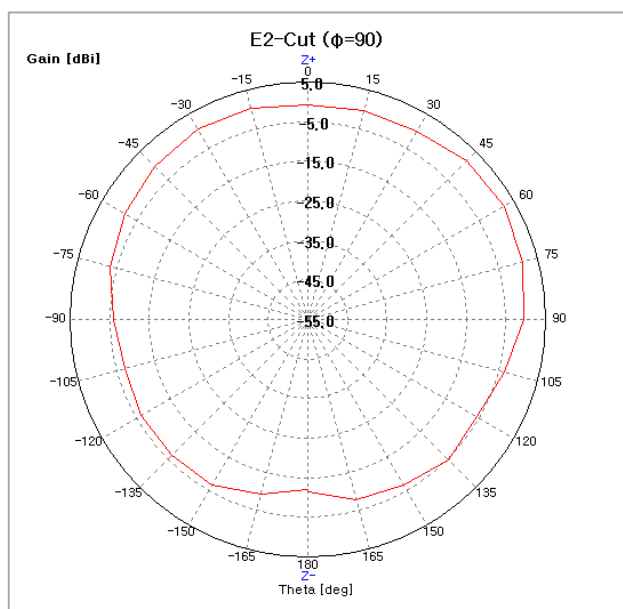
Measured SET @3D chamber



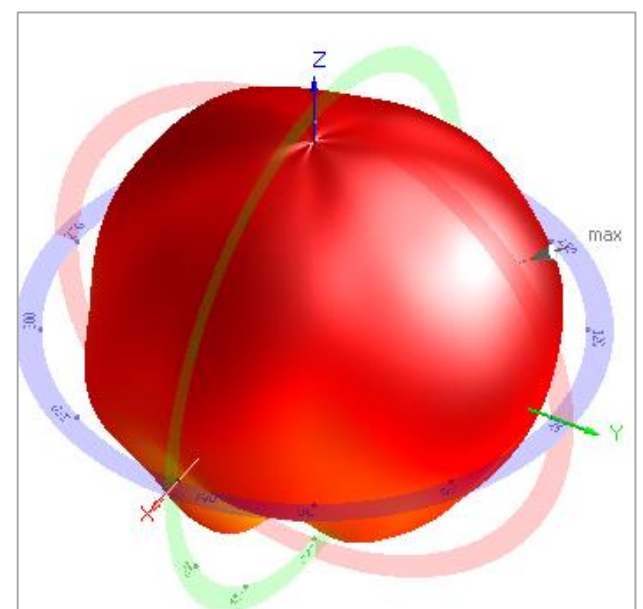
XY plane @2442 MHz



ZX plane @2442 MHz



YZ plane @2442 MHz

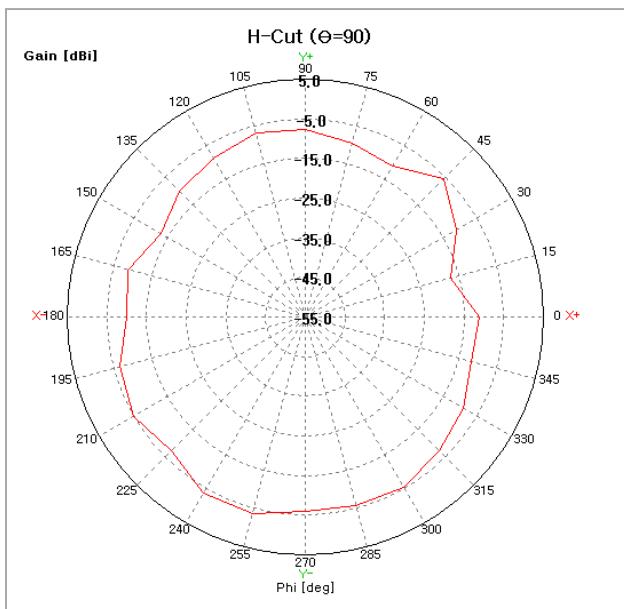
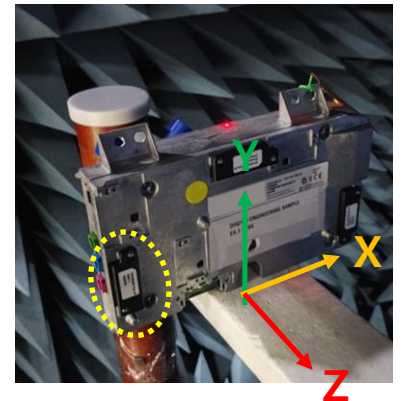


3D radiation pattern @2442 MHz

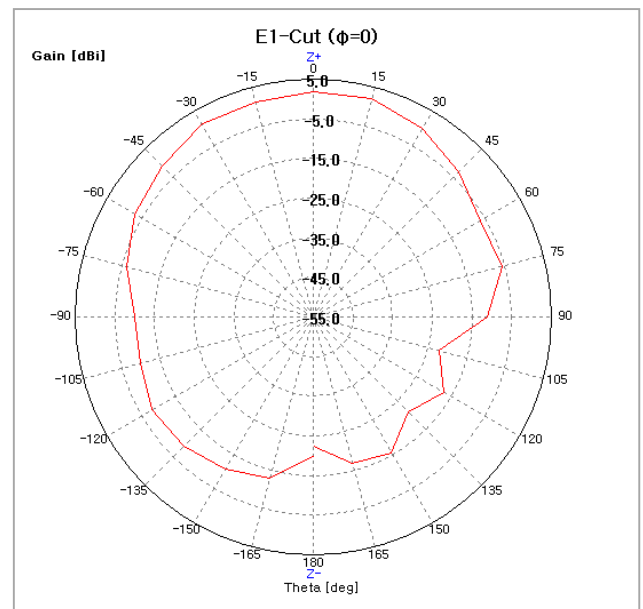
- Antenna gain table on the SET

Frequency [MHz]	Efficiency [%]	Avg. Gain [dBi]	Peak Gain [dBi]
5150	23.6	-6.3	1.8
5500	27.6	-5.6	1.9
5850	25.6	-5.9	2.1

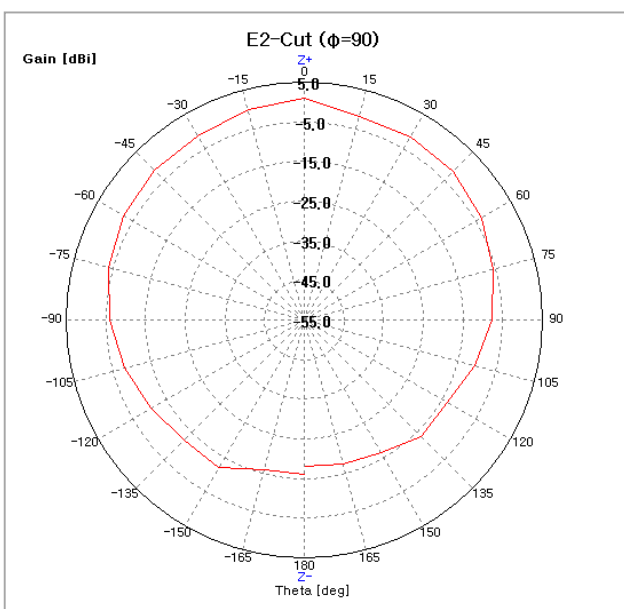
Measured SET @3D chamber



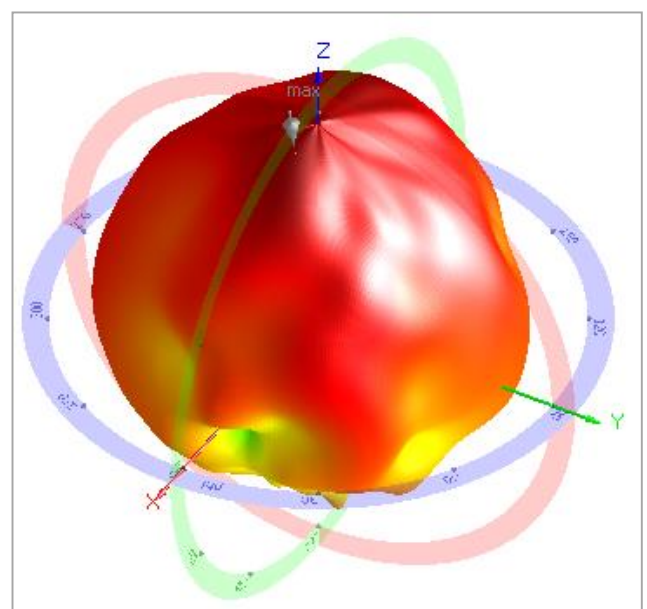
XY plane @5500 MHz



ZX plane @5500 MHz



YZ plane @5500 MHz

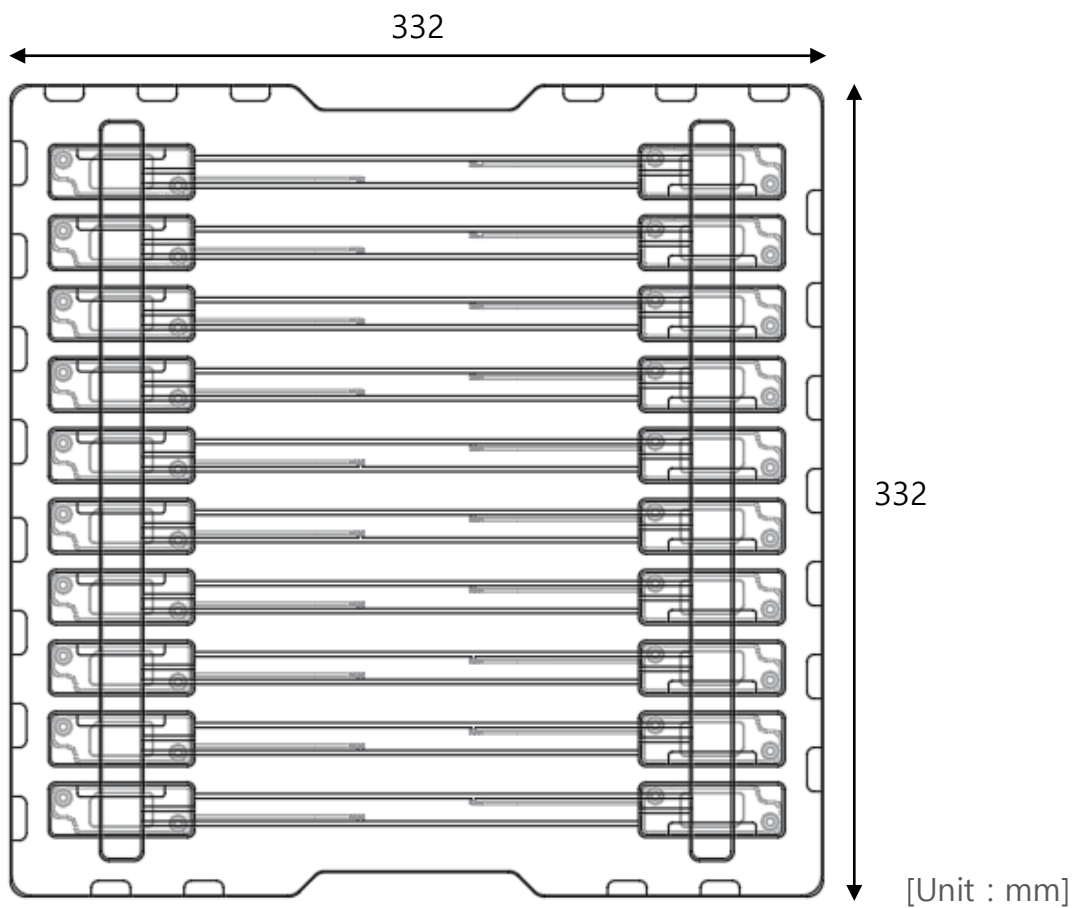


3D radiation pattern @5500 MHz

3. Packaging

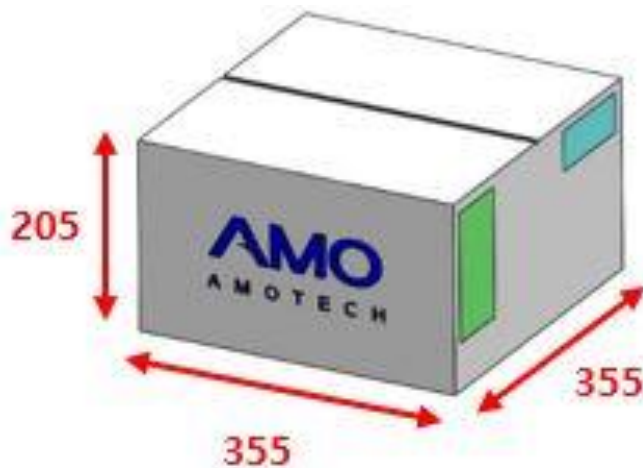
3.1 Tray Packing

- Tray size : 332 x 332 mm
- Material : PET
- Quantity : 20 pcs/tray



3.2 Carton box

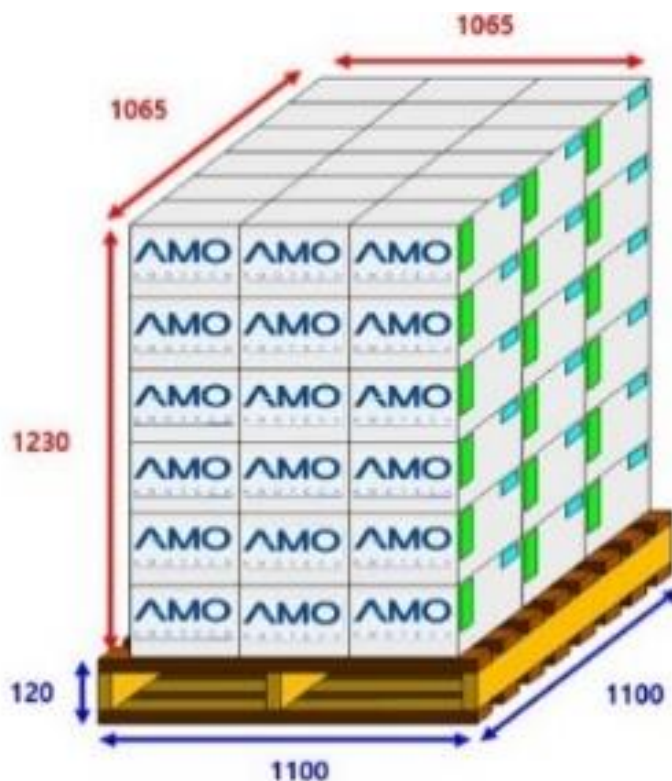
- Box size : 355 x 355 x 205 mm
- Quantity : 340 pcs/box



[Unit : mm]

3.3 Pallet

- Pallet size : 1,100 x 1,100 x 120 mm
- Quantity : 18,360 pcs/pallet



[Unit : mm]

4. Reliability Test Conditions

No 、	Item	Test Condition	Test Requirements
1	High temperature storage	1. Temperature : +85 °C 2. Time : 504 hours	1. No visual damage 2. Within electric spec (VSWR)
2	Low temperature storage	1. Temperature : -40 °C 2. Time : 24 hours	1. No visual damage 2. Within electric spec (VSWR)
3	Temperature cycling	1. Step 1 : +85 °C, 20 min Step 2 : -40 °C, 20 min 2. Number of cycle : 200	1. No visual damage 2. Within electric spec (VSWR)
4	Humidity	1. Step 1 : -10 °C, 24 hours Step 2 : +65 °C, 24 hours 2. Humidity : 93 %RH 3. Number of cycle : 10	1. No visual damage 2. Within electric spec (VSWR)
5	Free fall (=drop)	1. Drop height : 1 m 2. Impact surface : concrete 3. Test cycle : for each of 3 DUTs one drop in both direction of each dimensional axis (1st DUT : ±X, 2nd DUT : ±Y, 3rd DUT : ±Z)	1. No visual damage 2. Within electric spec (VSWR)
6	Vibration	1. Step : 5-55-5 Hz 1octave/min 2. Amplitude = 1.5 mm 3. Acceleration = 2 g 4. Hold time = 2 hours 5. Direction : Z direction (up & Down)	1. No visual damage 2. Within electric spec (VSWR)