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Technical Data Sheet for Type2FY

Measurement result

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Antenna Technical Support Section



Summary

<Content>

An antenna performance of EVB for Type2FY was measured.

Condition	Comment	[dB]			[dBi]		
		Total efficiency (Ave.)			Peak gain (Max.)		
		2GHz band	5GHz band	6GHz band	2GHz band	5GHz band	6GHz band
1	Optimized matching circuit	-0.5	-1.2	-2.3	2.8	3.4	2.1

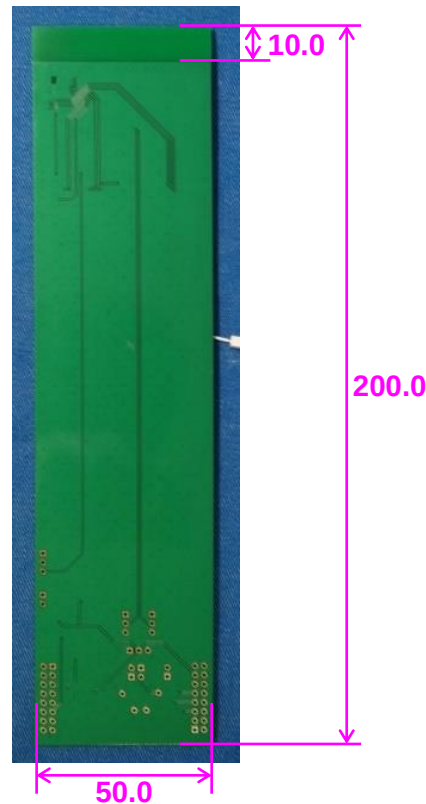
<Comment>

It is confirmed that peak gain is 2.8dBi for 2GHz band, 3.4dBi for 5GHz band and 2.1dBi for 6GHz band.

1. Appearance
2. Measurement condition
3. Measurement direction
4. Measurement result

1. Appearance

<DUT>



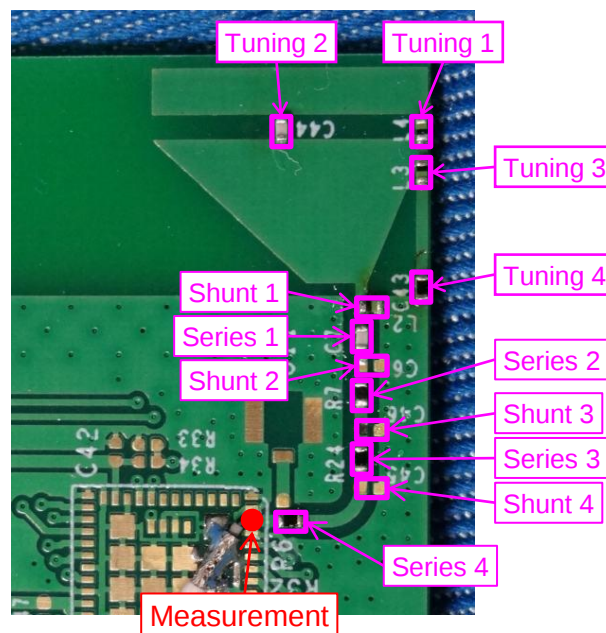
UNIT : mm

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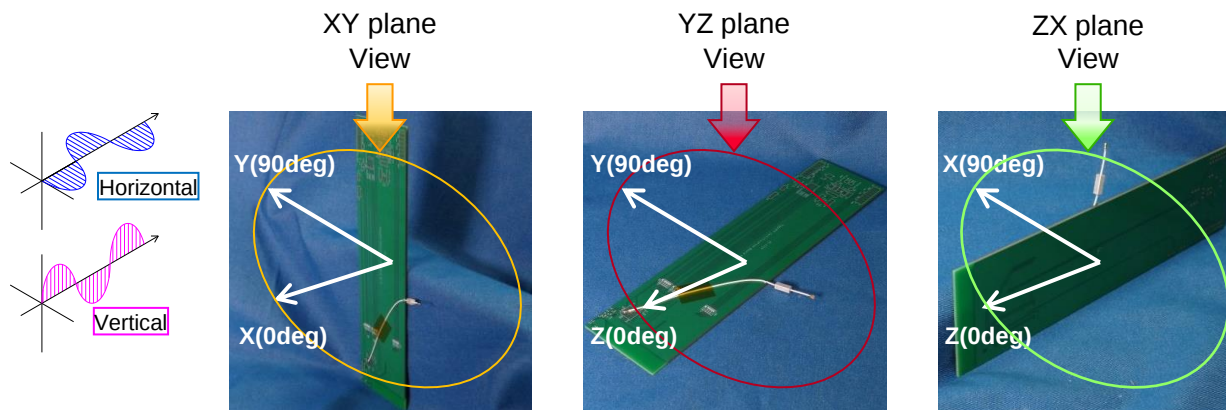
2. Measurement condition

Condition	Memo	Tuning 1	Tuning 2	Tuning 3	Tuning 4	Matching circuit							
						Shunt 1	Series 1	Shunt 2	Series 2	Shunt 3	Series 3	Shunt 4	Series 4
Condition 1	Optimized matching circuit	1.2nH	0.1pF	2.0nH	0ohm	5.1nH	1.5pF	None	0ohm	None	0ohm	None	0ohm

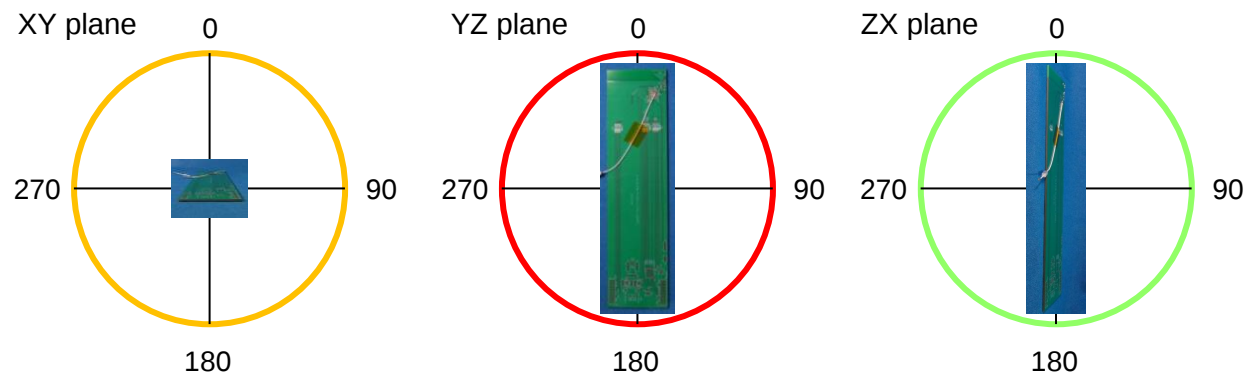
Size:1005 LQG15HS / GJM15 / Resistor



3. Measurement direction



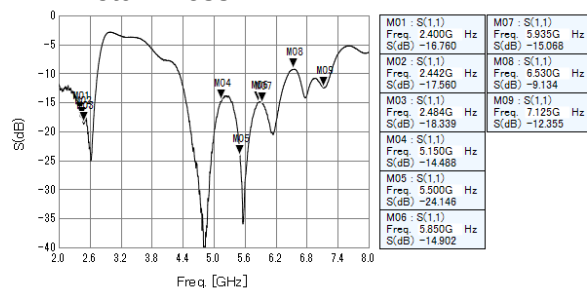
2D Directional indication



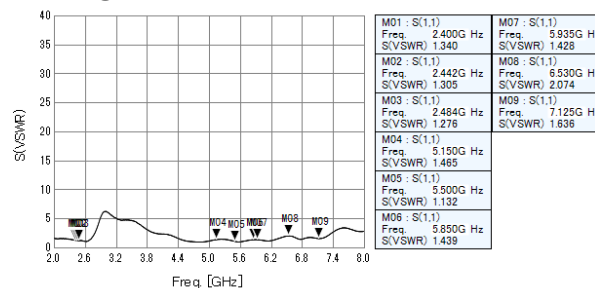
4. Measurement result

Condition 1: Optimized matching circuit (2GHz,5GHz)

<Return Loss>



<V.S.W.R.>



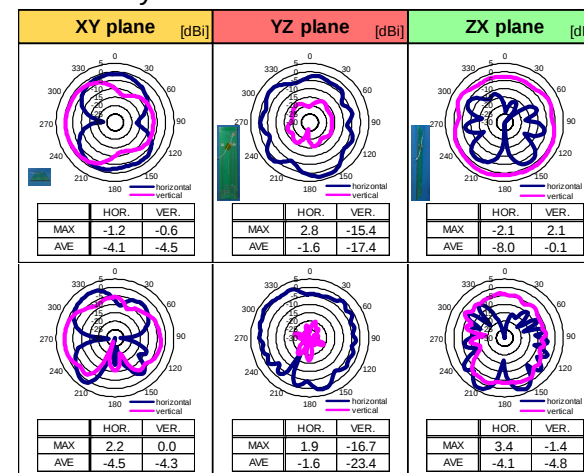
<Efficiency>

LINEAR POLARIZATION		XY-plane		YZ-plane		ZX-plane		Total Efficiency
		hor.	ver.	hor.	ver.	hor.	ver.	
2400 MHz	MAX.	-0.7	-0.5	2.8	-17.0	-2.0	2.0	-0.5
	AVE.	-3.9	-4.3	-1.7	-19.4	-8.1	-0.4	
2442 MHz	MAX.	-1.2	-0.6	2.8	-15.4	-2.1	2.1	-0.5
	AVE.	-4.1	-4.5	-1.6	-17.4	-8.0	-0.1	
2484 MHz	MAX.	-1.4	0.1	2.5	-12.7	-2.0	2.0	-0.5
	AVE.	-4.2	-4.0	-1.5	-15.0	-7.6	-0.2	

LINEAR POLARIZATION		XY-plane		YZ-plane		ZX-plane		Total Efficiency
		hor.	ver.	hor.	ver.	hor.	ver.	
5150 MHz	MAX.	3.0	-0.2	2.5	-15.7	3.1	0.6	-0.8
	AVE.	-3.9	-4.4	-1.6	-22.9	-3.8	-3.6	
5500 MHz	MAX.	2.2	0.0	1.9	-16.7	3.4	-1.4	-0.9
	AVE.	-4.5	-4.3	-1.6	-23.4	-4.1	-4.8	
5850 MHz	MAX.	1.7	-2.0	0.4	-15.1	3.1	-3.7	-2.0
	AVE.	-4.7	-6.2	-3.1	-22.7	-4.5	-6.5	

*Red color shows peak gain

<Directivity>

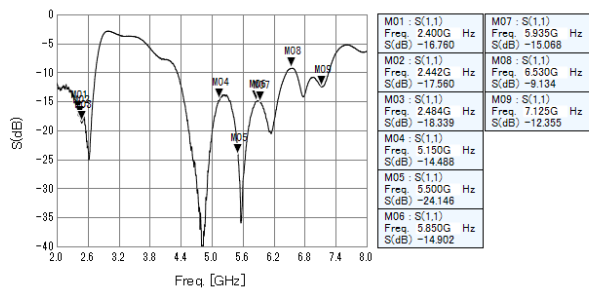


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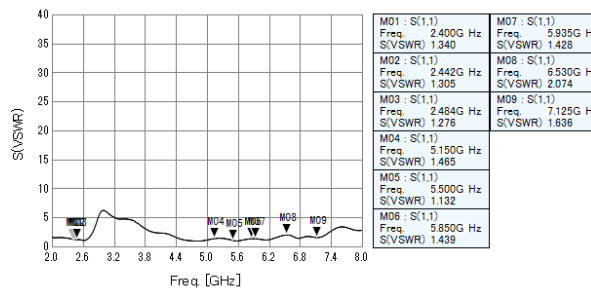
4. Measurement result

Condition 1: Optimized matching circuit (6GHz)

<Return Loss>



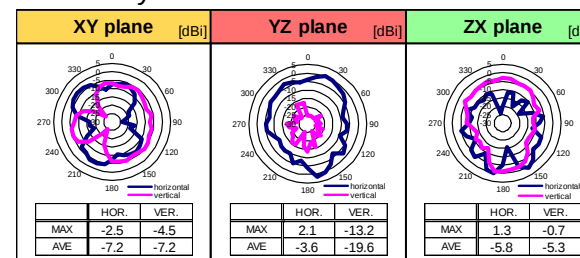
<V.S.W.R.>



<Efficiency>

LINEAR POLARIZATION		XY-plane		YZ-plane		ZX-plane		Total Efficiency
		hor.	ver.	hor.	ver.	hor.	ver.	
5935 MHz	MAX.	0.8	-0.4	0.5	-11.0	1.9	-3.9	-1.7
	AVE.	-4.2	-5.1	-2.5	-18.2	-5.0	-6.1	
6530 MHz	MAX.	-2.5	-4.5	2.1	-13.2	1.3	-0.7	-1.5
	AVE.	-7.2	-7.2	-3.6	-19.6	-5.8	-5.3	
7125 MHz	MAX.	-2.4	0.7	1.3	-12.1	-2.4	-7.1	-4.3
	AVE.	-7.4	-5.6	-4.4	-19.0	-8.8	-12.0	

<Directivity>



@6530MHz



4. Measurement result

<Measurement condition>

Condition	Memo
Condition 1	Optimized matching circuit

<Measurement result>

Total efficiency											[dB]			[%]	
	Frequency [MHz]									Average	Average	Average	Average	Average	Average
Condition	2400	2442	2484	5150	5500	5850	5935	6530	7125	2GHz band	5GHz band	6GHz band	2GHz band	5GHz band	6GHz band
Condition 1	-0.5	-0.5	-0.5	-0.8	-0.9	-2.0	-1.7	-1.5	-4.3	-0.5	-1.2	-2.3	89.0	76.0	59.0

Peak gain										[dBi]		
	Frequency [MHz]									Max.	Max.	
Condition	2400	2442	2484	5150	5500	5850	5935	6530	7125	2GHz band	5GHz band	6GHz band
Condition 1	2.8	2.8	2.5	3.1	3.4	3.1	1.9	2.1	1.3	2.8	3.4	2.1