


Technical Data Sheet for UWB

Measurement result(2D)

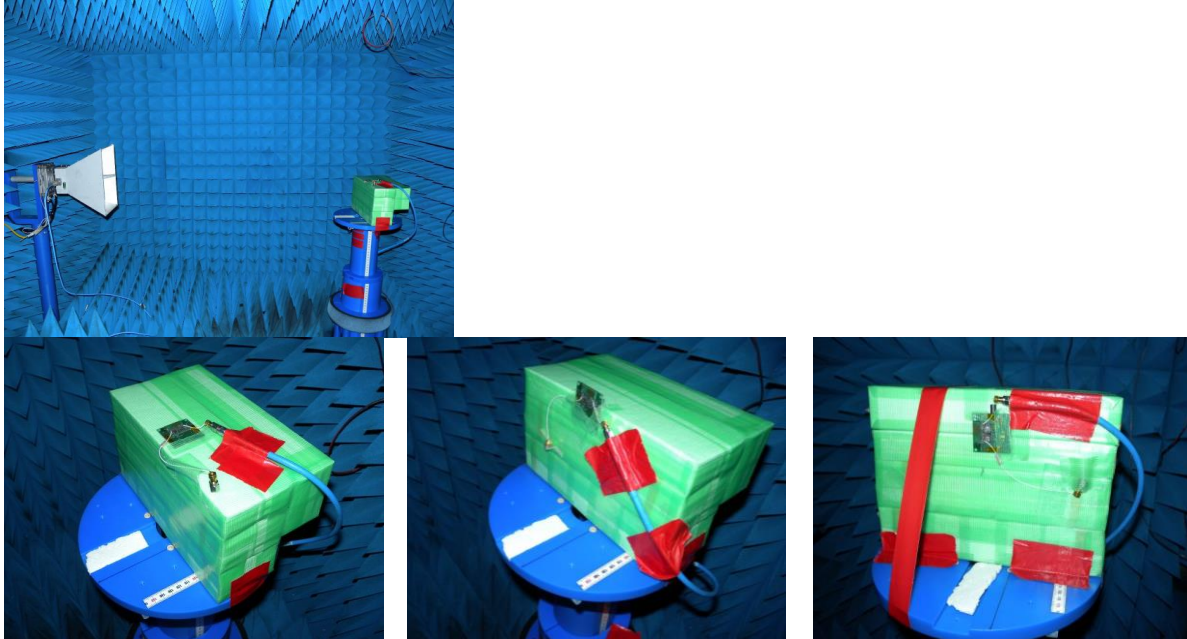
Kanazawa Murata Mfg. Co., Ltd
Antenna Technical Support Section



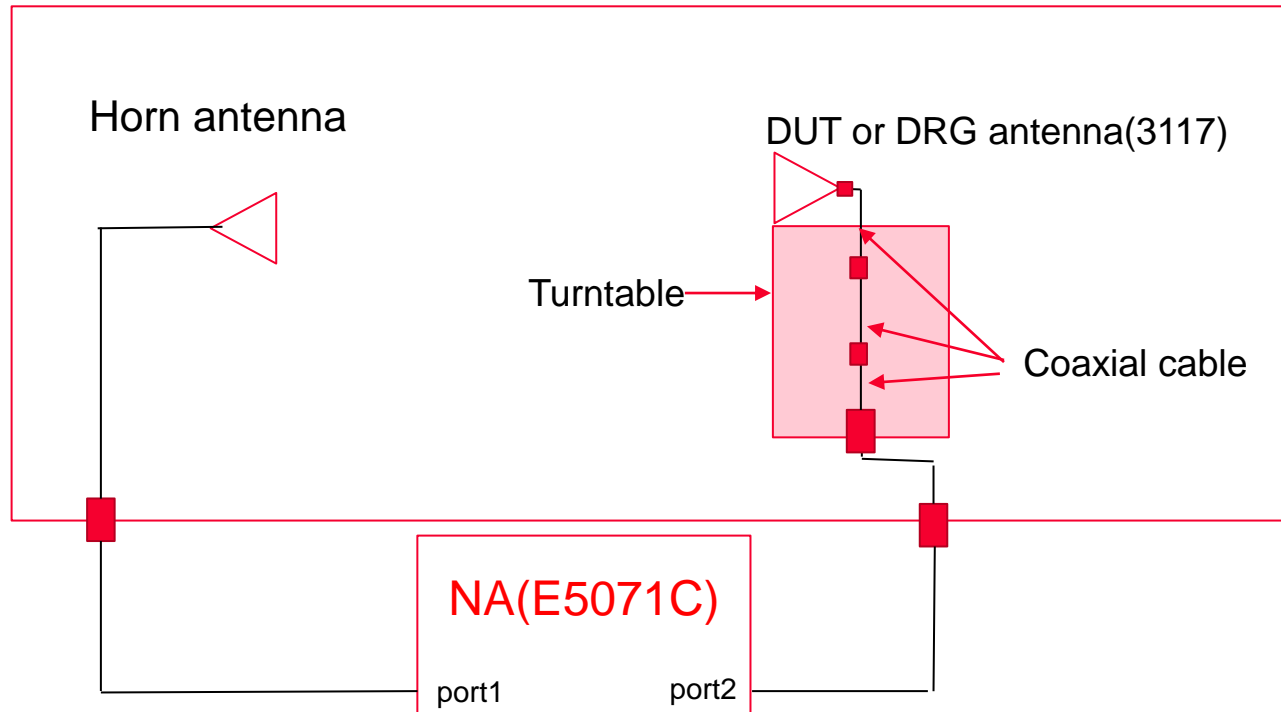
A>Test method for antenna gain measurement

Model Name	Type2DK_UWB_ANT	
Frequency Range	6240.0~8236.8MHz	
Antenna type	$\lambda/4$ Monopole Antenna	
Antenna gain(dBi)	Ch5: 1.6	Ch9: 4.0
Exterior photo	 A photograph of a green printed circuit board (PCB) antenna module. The module features a central square antenna element and various electronic components. Two gold-colored wires are connected to the board, one extending to the left and one to the right. A white cable is connected to the left wire. The entire assembly is set against a blue textured background.	

Test method for antenna gain measurement

Test method	Standard antenna method (comparative method) * Comparing a measured antenna to a standard antenna with a known gain factor	
Equipment used for antenna gain measurement	Model name	DRG antenna Model : 3117
	Serial number	00041538
	Calibration date	November 7, 2022
Antenna gain measurement date	December 13, 2022	
Measurement person	Harumi Matsuoka	
Setup photo		

Details of the measurement method



- (1) Set DRG antenna in DUT position to get S_{21} of both H/V polarization
- (2) Gain calibration data of S_{21} and DRG antenna are compared to determine correction value
- (3) Place Type 2 DK on DUT and check gain using correction value in (2)

Content



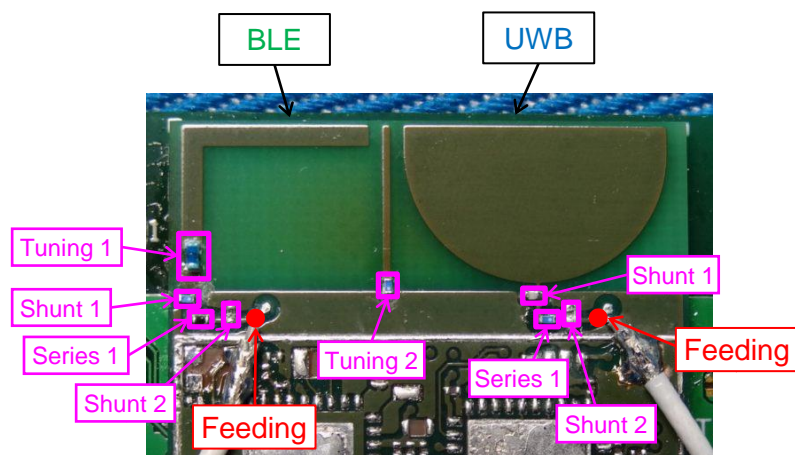
1. Appearance
2. Measurement condition
3. Measurement result

2. Measurement condition

Condition	Memo	Antenna	Tuning 1	Tuning 2	Matching circuit		
					Shunt 1	Series 1	Shunt 2
Condition 1	Optimized matching	BLE	2.9nH	8.2nH	2.4nH	0ohm	None
		UWB			0.1pF	0.6nH	None

Size:1005 LQW15AN

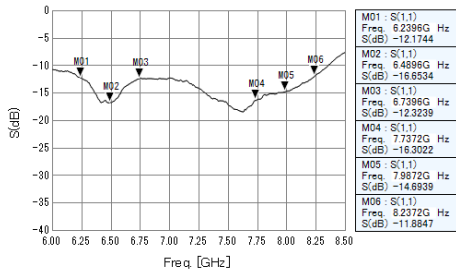
Size:0603 LQP03 / GRM03 / Resistor



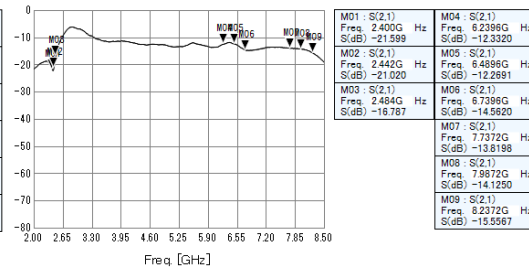
3. Measurement result

Condition 1: Optimized matching(UWB)

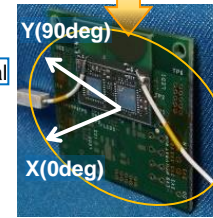
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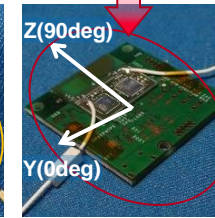
<Isolation>



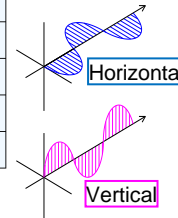
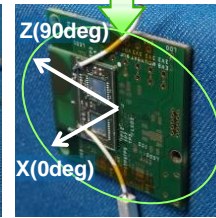
XY plane View



YZ plane View



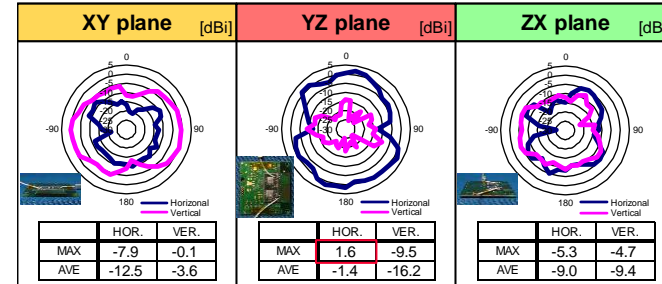
ZX plane View



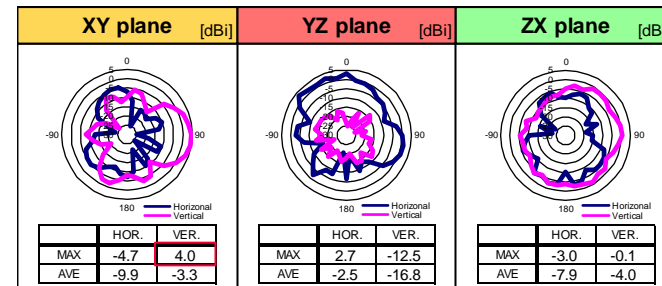
<Efficiency>

	CH.5			CH.9		
Frequency [MHz]	6239.6	6489.6	6739.6	7737.2	7987.2	8237.2
Efficiency [dB]	-1.3	-1.9	-2.7	-1.5	-1.6	-1.5

<Directivity>



@6489.6MHz



@7987.2MHz

