

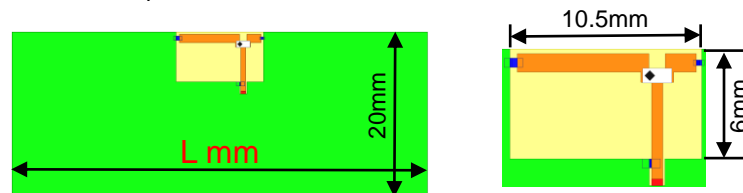
ANT161575DT-2000AM1



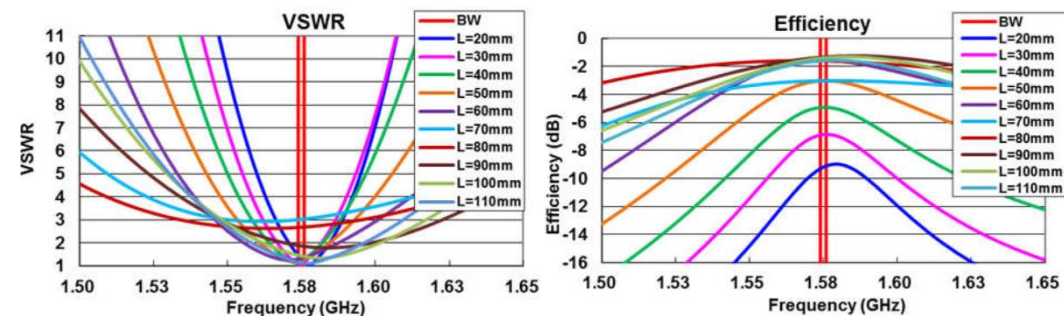
Dimensions (mm)		
L	W	T
1.60	0.80	0.40
±0.10	±0.10	Max.

EVALUATION BOARD

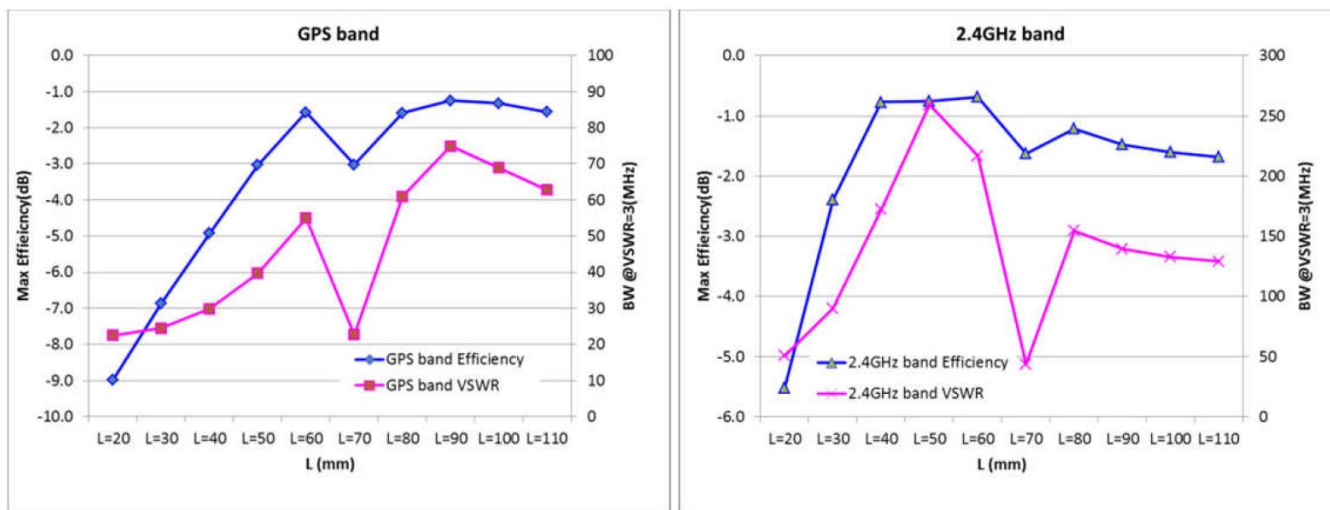
Antenna Location: Center
 Board size: L x 20 x 1 mm²
 Antenna keep out area: 10.5 x 6 mm²



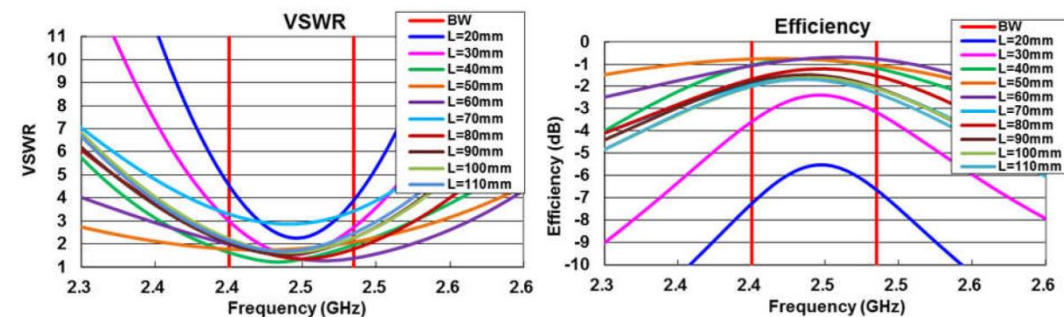
VSWR & EFFICIENCY (SIMULATION RESULTS)



MAX EFFICIENCY & BANDWIDTH (SIMULATION RESULTS)



		L=20	L=30	L=40	L=50	L=60	L=70	L=80	L=90	L=100	L=110
GPS band	Max Efficiency(dB)	-9.0	-6.9	-4.9	-3.0	-1.6	-3.0	-1.6	-1.2	-1.3	-1.6
	BW@VSWR=3(MHz)	22	24	30	40	55	23	61	75	69	63
2.4GHz band	Max Efficiency(dB)	-5.5	-2.4	-0.8	-0.8	-0.7	-1.6	-1.2	-1.5	-1.6	-1.7
	BW@VSWR=3(MHz)	51	90	172	259	217	44	154	139	133	129



Frequency(GHz)	VSWR			Efficiency(dB)			VSWR			Efficiency(dB)		
	1.574	1.575	1.576	1.574	1.575	1.576	2.4	2.442	2.485	2.4	2.442	2.485
L=20	1.5	1.3	1.2	-9.3	-9.2	-9.1	4.6	2.3	3.9	-7.3	-5.6	-6.6
L=30	1.1	1.1	1.2	-6.9	-6.9	-6.9	3.0	1.5	2.7	-3.6	-2.4	-3.2
L=40	1.2	1.2	1.3	-5.0	-4.9	-4.9	1.6	1.3	2.0	-1.0	-0.8	-1.2
L=50	1.2	1.3	1.3	-3.1	-3.0	-3.0	1.8	1.8	2.1	-0.8	-0.8	-1.0
L=60	1.3	1.3	1.4	-1.6	-1.6	-1.6	2.0	1.4	1.4	-1.1	-0.7	-0.8
L=70	3.0	3.0	3.0	-3.0	-3.0	-3.0	3.3	2.9	3.4	-1.9	-1.6	-2.1
L=80	2.7	2.7	2.7	-1.6	-1.6	-1.6	2.1	1.4	1.8	-1.7	-1.2	-1.5
L=90	1.9	1.9	1.8	-1.3	-1.3	-1.3	2.0	1.5	2.3	-1.8	-1.5	-2.1
L=100	1.5	1.4	1.4	-1.4	-1.4	-1.4	2.2	1.6	2.3	-2.0	-1.6	-2.1
L=110	1.2	1.1	1.1	-1.6	-1.6	-1.6	2.2	1.7	2.5	-2.0	-1.7	-2.3

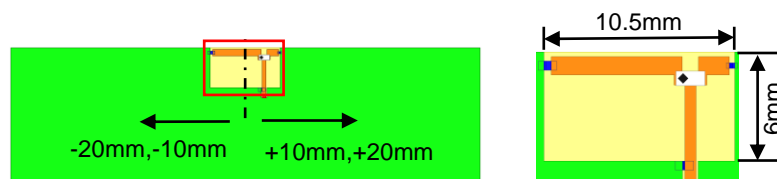
ANT161575DT-2000AM1



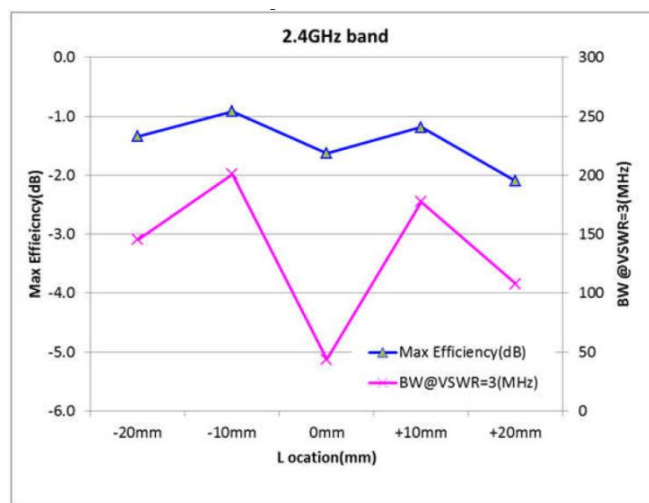
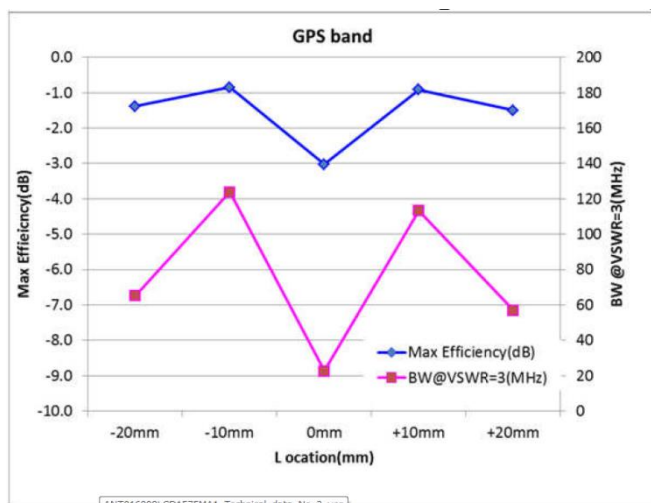
Dimensions (mm)		
L	W	T
1.60	0.80	0.40
±0.10	±0.10	Max.

EVALUATION BOARD

Antenna Location: Center
 Board size: 70 x 20 x 1 mm²
 Antenna keep out area: 10.5 x 6 mm²

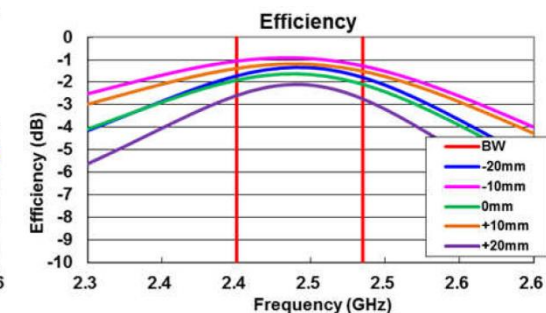
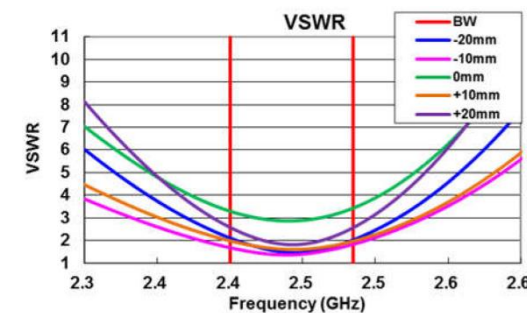
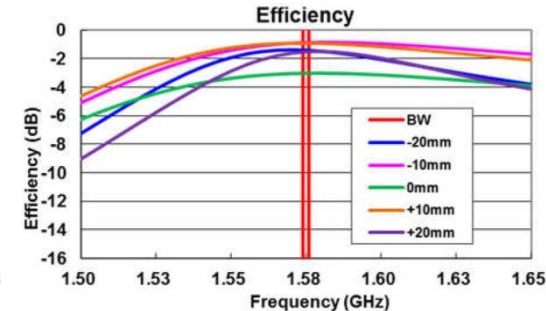
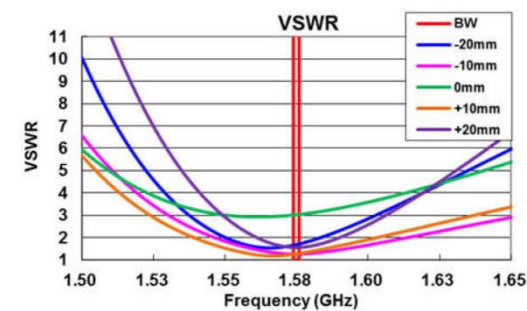


MAX EFFICIENCY & BANDWIDTH (SIMULATION RESULTS)



		-20mm	-10mm	0mm	+10mm	+20mm
GPS band	Max Efficiency(dB)	-1.4	-0.9	-3.0	-0.9	-1.5
	BW@VSWR=3(MHz)	65	124	23	113	57
2.4GHz band	Max Efficiency(dB)	-1.3	-0.9	-1.6	-1.2	-2.1
	BW@VSWR=3(MHz)	145	201	44	177	108

VSWR & EFFICIENCY (SIMULATION RESULTS)



Frequency(GHz)	1.574	1.575	1.576	1.574	1.575	1.576	2.4	2.442	2.485	2.4	2.442	2.485
-20mm	1.7	1.7	1.7	-1.4	-1.4	-1.4	2.1	1.5	2.0	-1.7	-1.3	-1.8
-10mm	1.3	1.3	1.3	-0.9	-0.9	-0.9	1.7	1.4	1.8	-1.1	-0.9	-1.3
0mm	3.0	3.0	3.0	-3.0	-3.0	-3.0	3.3	2.9	3.4	-1.9	-1.6	-2.1
+10mm	1.3	1.3	1.3	-0.9	-0.9	-0.9	2.0	1.6	2.0	-1.4	-1.2	-1.5
+20mm	1.6	1.6	1.6	-1.5	-1.5	-1.5	2.6	1.8	2.6	-2.6	-2.1	-2.7

ANT161575DT-2000AM1

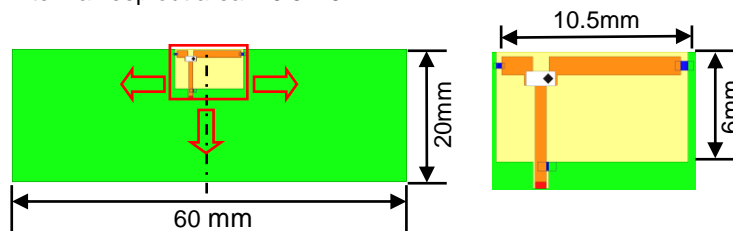


Dimensions (mm)

L	W	T
1.60	0.80	0.40
±0.10	±0.10	Max.

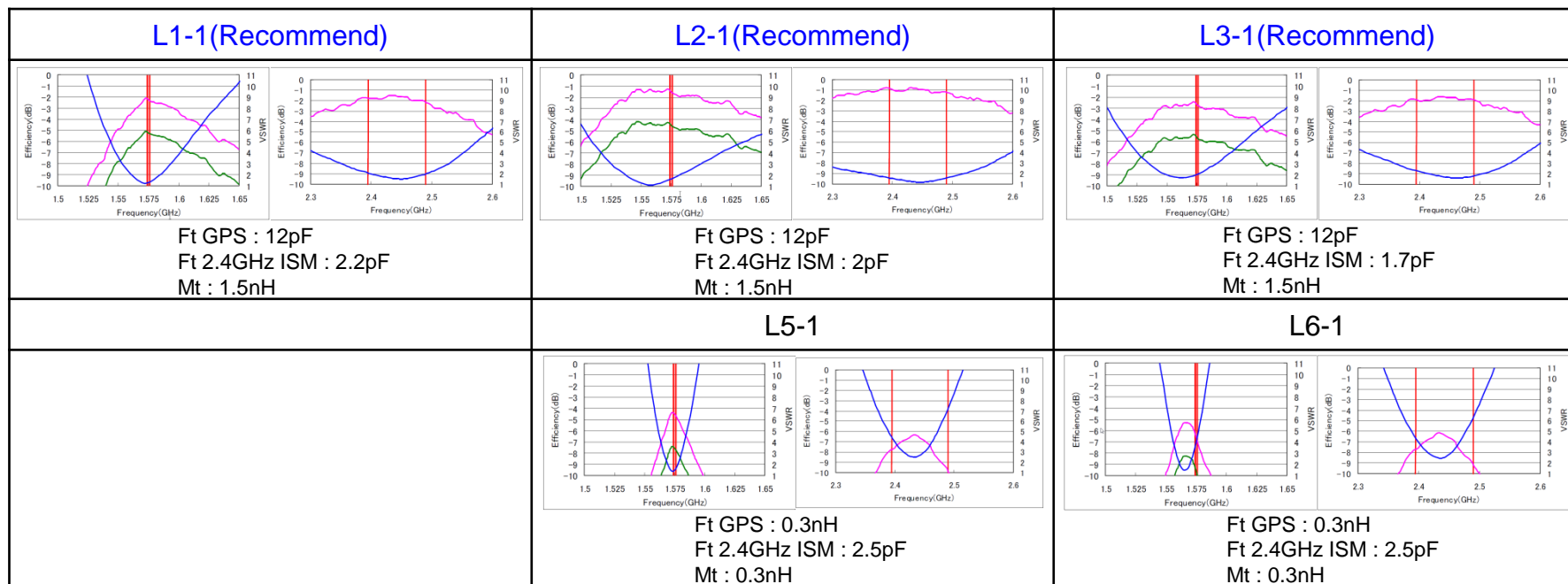
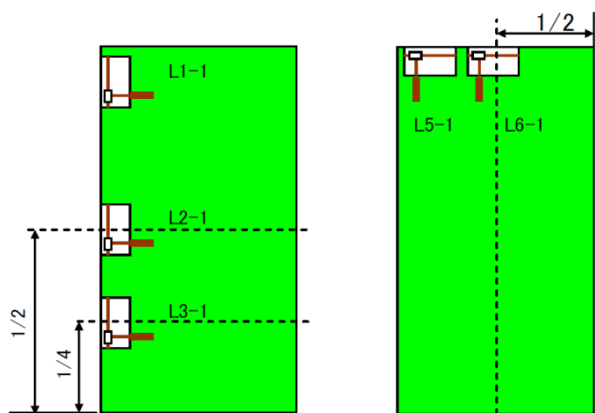
EVALUATION BOARD

Antenna Location: Center
 Board size: 60 x 20 x 1 mm²
 Antenna keep out area: 10.5 x 6 mm²

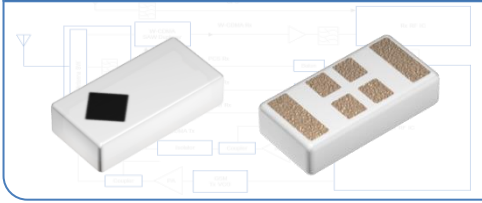


MEASUREMENT RESULTS

Antenna Locations



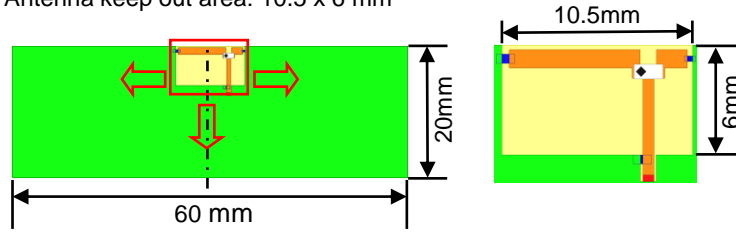
ANT161575DT-2000AM1



Dimensions (mm)		
L	W	T
1.60	0.80	0.40
±0.10	±0.10	Max.

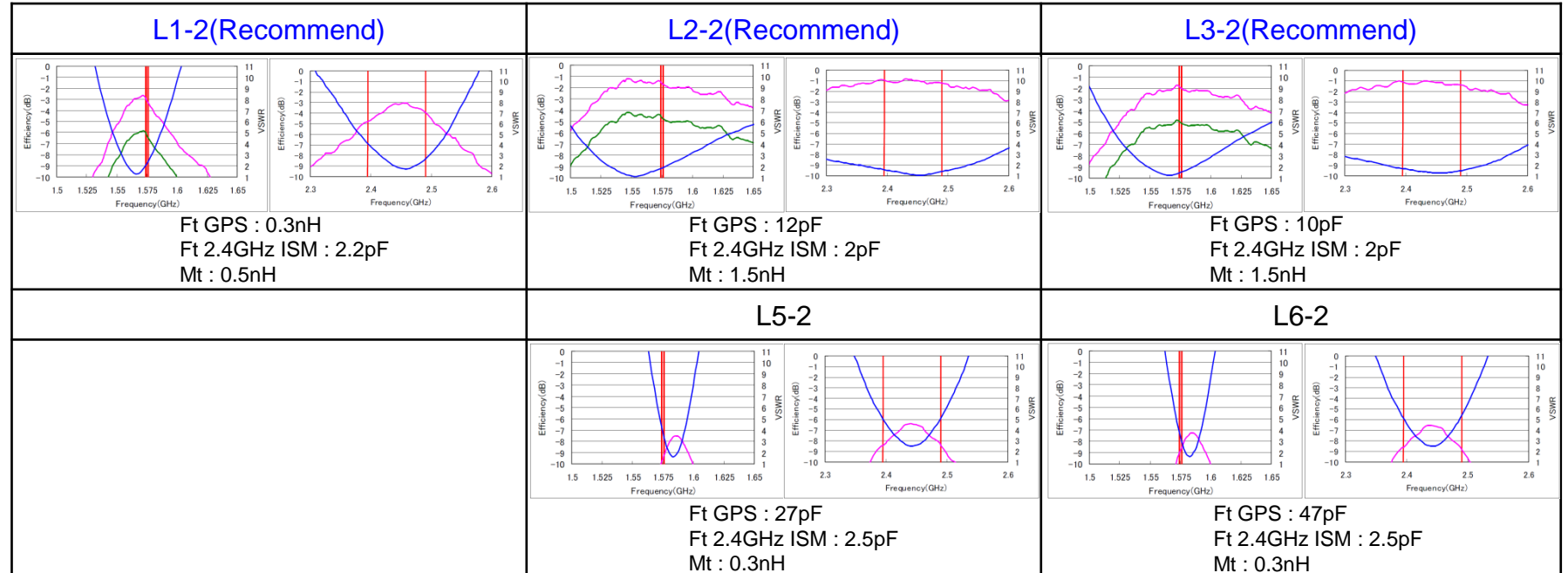
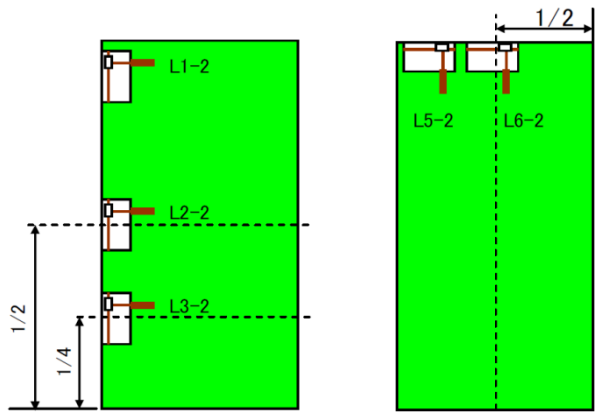
EVALUATION BOARD

Antenna Location: Center
 Board size: 60 x 20 x 1 mm²
 Antenna keep out area: 10.5 x 6 mm²



MEASUREMENT RESULTS

Antenna Locations



ANT161575DT-2000AM1

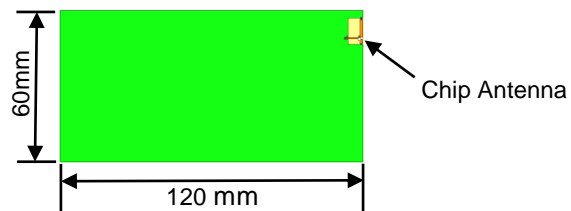


Dimensions (mm)

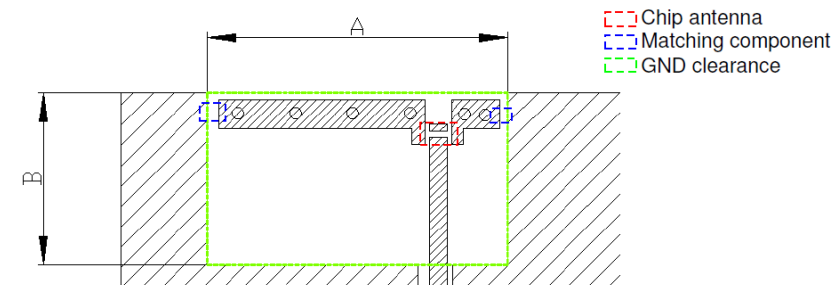
L	W	T
1.60	0.80	0.40
±0.10	±0.10	Max.

EVALUATION BOARD

Antenna Location: Corner
 Board size: 120 x 60 x 1 mm²
 Antenna keep out area: A x B mm²

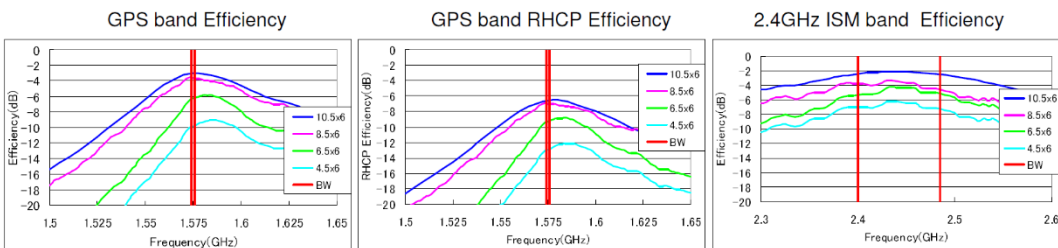
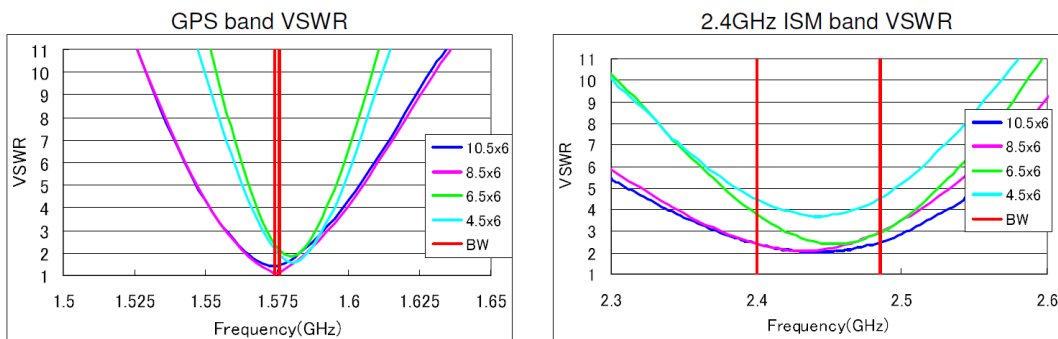


KEEP-OUT AREA

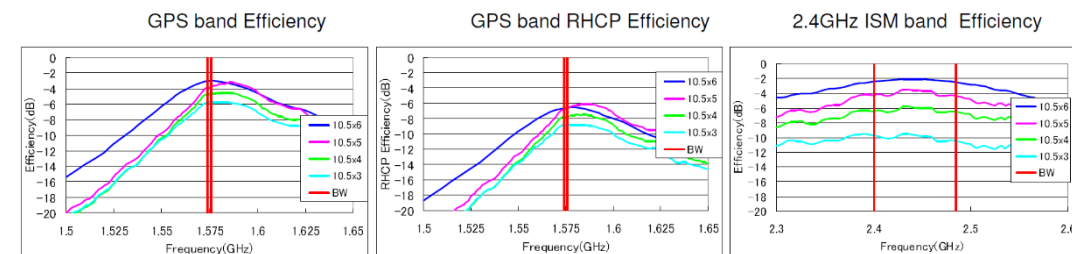
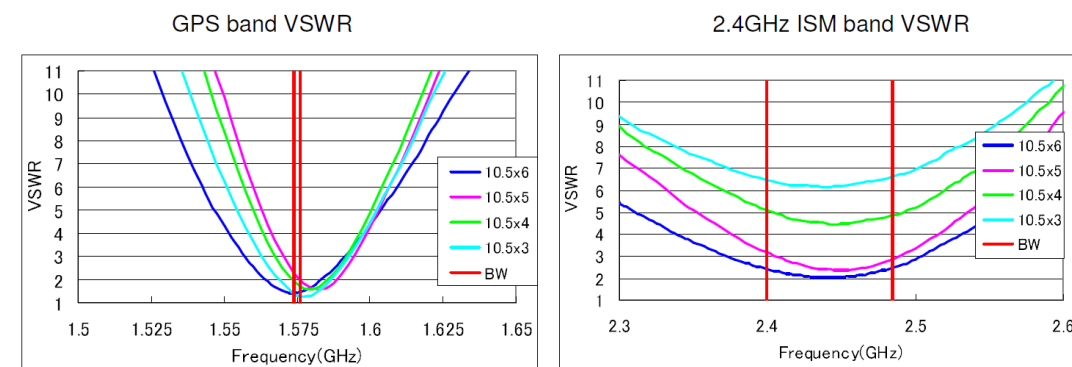


MEASUREMENT RESULTS

■ A direction : 10.5, 8.5, 6.5 and 4.5mm(B = 6mm)



■ B direction : 6, 5, 4 and 3 mm(A = 10.5mm)



ANT161575DT-2000AM1

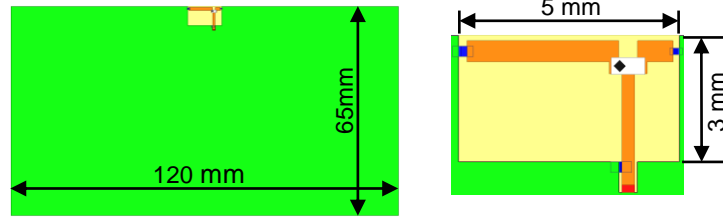


Dimensions (mm)

L	W	T
1.60	0.80	0.40
±0.10	±0.10	Max.

EVALUATION BOARD

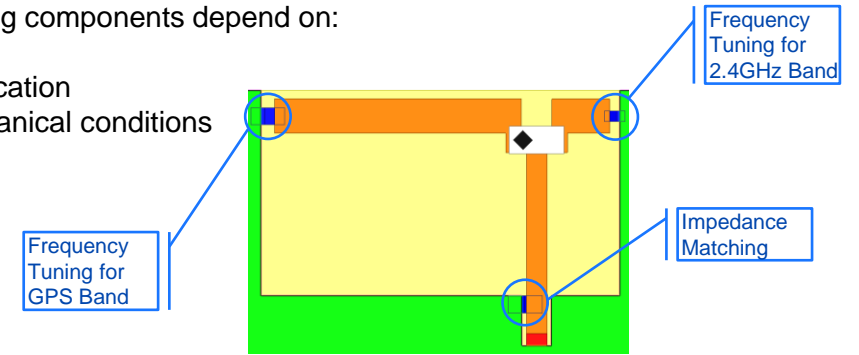
Antenna Location: Center
 Board size: 120 x 65 x 1 mm²
 Antenna keep out area: 5 x 3 mm²



TECHNICAL REMARKS

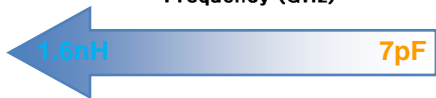
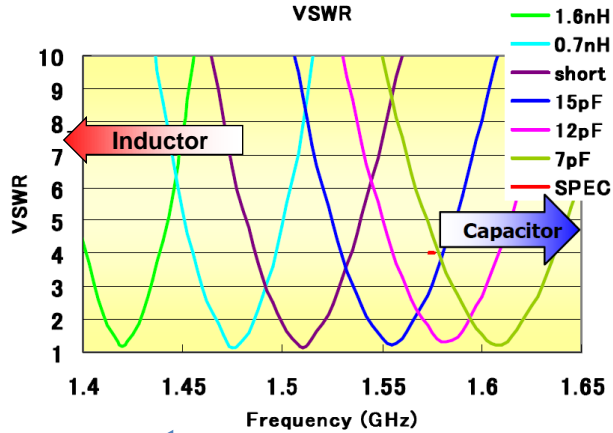
Value of tuning components depend on:

- PCB Size
- Antenna Location
- Other mechanical conditions

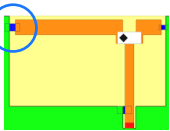


FREQUENCY TUNING (MEASUREMENT RESULTS)

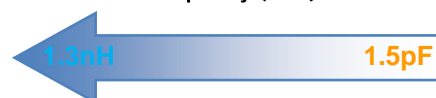
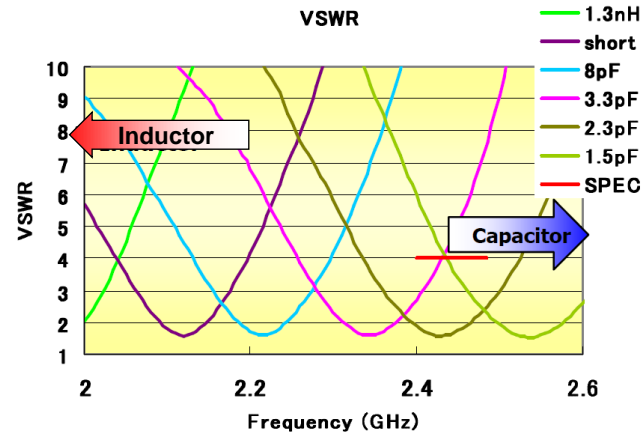
GPS Band



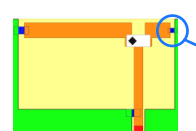
Frequency Tuning for GPS Band



2.4GHz Band

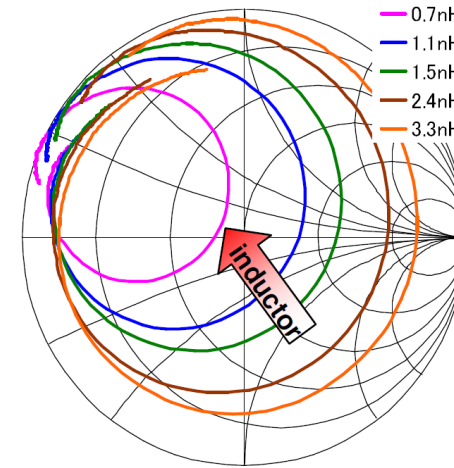


Frequency Tuning for 2.4GHz Band

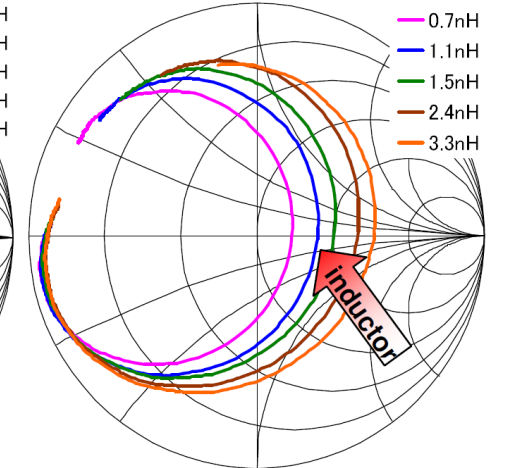


IMPEDANCE MATCHING (SIMULATION RESULTS)

GPS Band



2.4GHz Band



Impedance Matching