

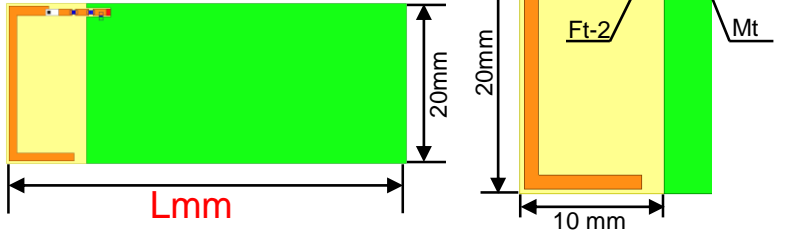
## ANT160920ST-1204A1



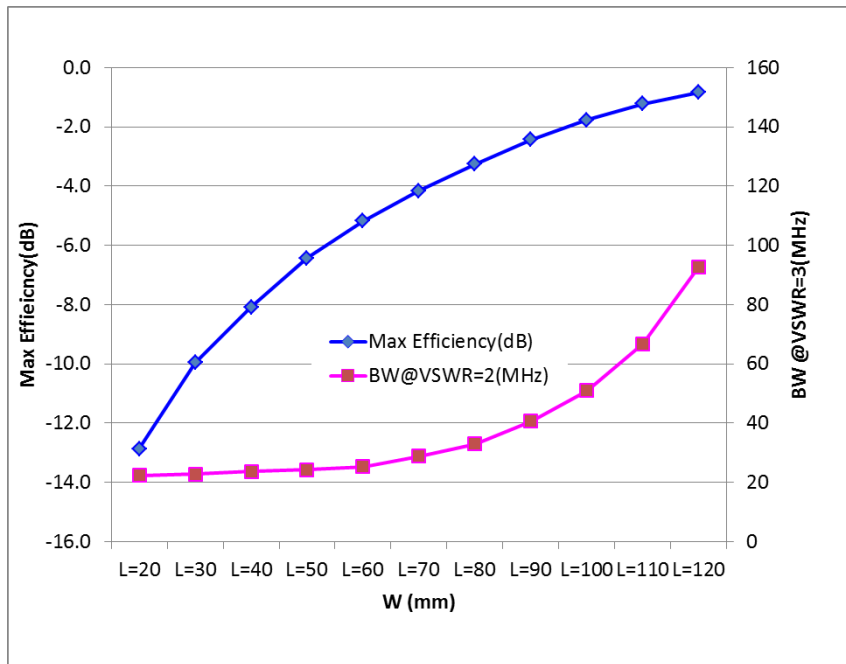
Dimensions (mm)		
L	W	T
1.60	0.80	0.40
±0.10	±0.10	Max.

## EVALUATION BOARD

Antenna Location: PCB End  
 Board size: L x 20 x 1 mm<sup>2</sup>  
 Antenna keep out area: 20 x 10 mm<sup>2</sup>



## MAX EFFICIENCY & BANDWIDTH (SIMULATION RESULTS)

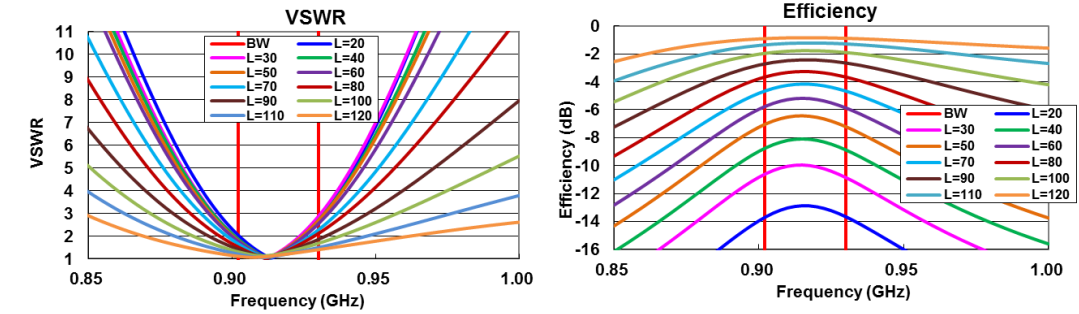


		L=20	L=30	L=40	L=50	L=60	L=70	L=80	L=90	L=100	L=110	L=120
920MHz band	Max Efficiency(dB)	-12.9	-10.0	-8.1	-6.4	-5.2	-4.2	-3.3	-2.4	-1.8	-1.2	-0.8
	BW@VSWR=2(MHz)	22	23	24	24	25	29	33	41	51	67	93

## TUNING COMPONENTS

L(mm)	20	30	40	50	60	70	80	90	100	110	120
MC(nH)	4.3	4.3	4.3	4.3	4.3	4.7	5.1	6.2	7.5	9.1	12
Ft-1(nH)	16	12	11	9.1	7.5	6.8	5.6	4.3	3.3	2	1
Ft-2(nH)	1.2	1.5	0.4	0.9	1.3	0.8	0.9	0.7	0.8	1	1

## VSWR & EFFICIENCY (SIMULATION RESULTS)



Frequency(GHz)	VSWR			Efficiency(dB)		
	0.902	0.916	0.93	0.902	0.916	0.93
L=20	2.1	1.2	2.7	-13.7	-12.9	-13.7
L=30	1.9	1.3	2.9	-10.6	-10.0	-10.9
L=40	1.9	1.2	2.7	-8.8	-8.1	-8.9
L=50	1.8	1.2	2.7	-7.1	-6.5	-7.2
L=60	1.8	1.2	2.5	-5.8	-5.2	-5.9
L=70	1.7	1.2	2.3	-4.7	-4.2	-4.7
L=80	1.5	1.2	2.1	-3.7	-3.3	-3.6
L=90	1.4	1.2	1.9	-2.7	-2.4	-2.6
L=100	1.3	1.2	1.7	-2.0	-1.8	-1.9
L=110	1.2	1.1	1.5	-1.4	-1.2	-1.3
L=120	1.1	1.2	1.4	-0.9	-0.8	-0.9

## ANT160920ST-1204A1

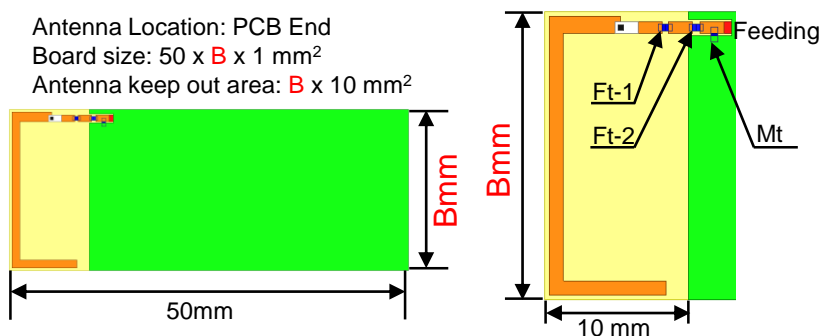


Dimensions (mm)

L	W	T
1.60	0.80	0.40
±0.10	±0.10	Max.

## EVALUATION BOARD

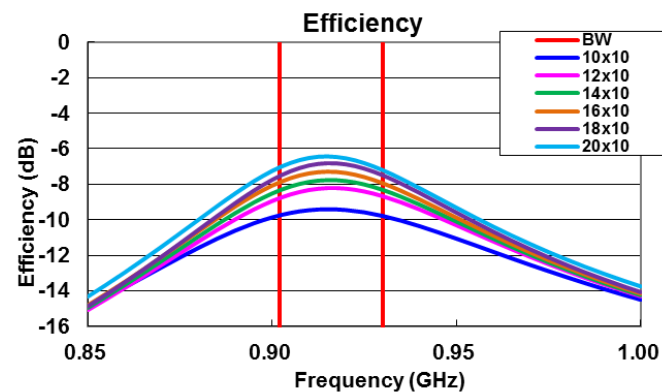
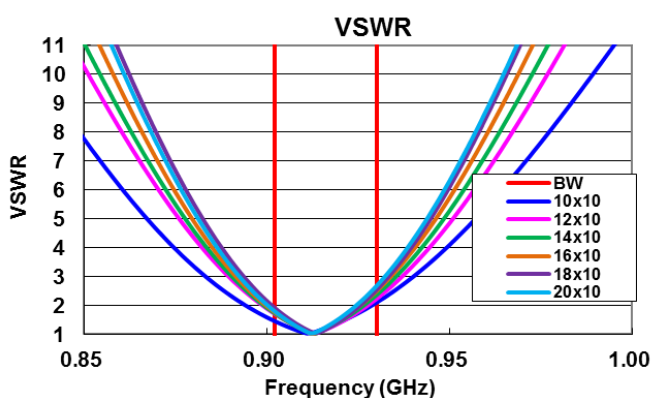
Antenna Location: PCB End  
 Board size: 50 x B x 1 mm<sup>2</sup>  
 Antenna keep out area: B x 10 mm<sup>2</sup>



## TUNING COMPONENTS

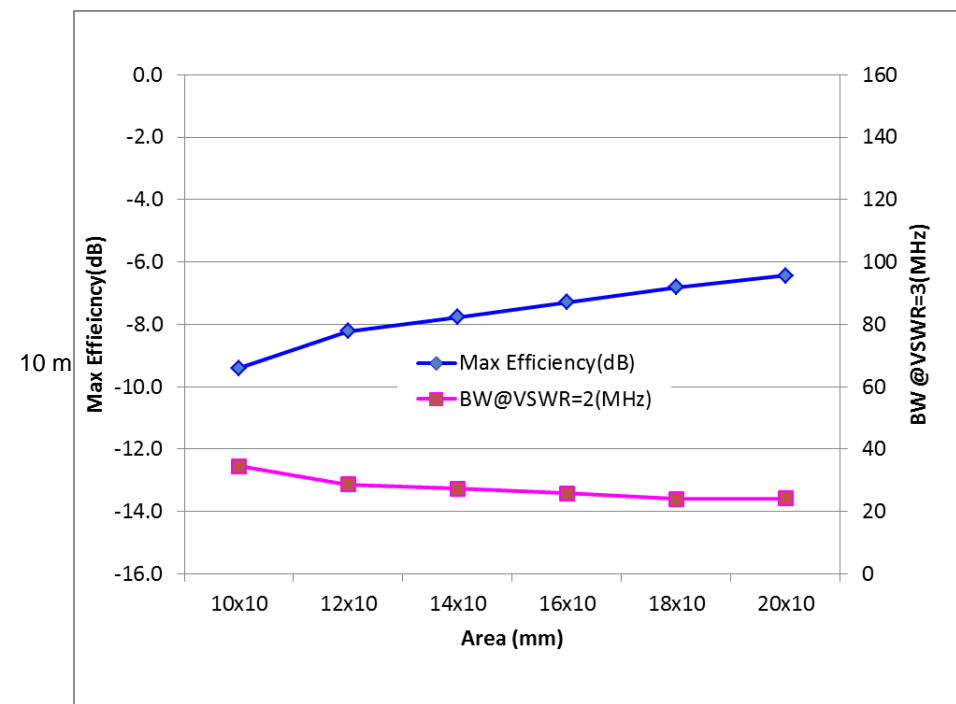
L(mm)	50					
B(mm)	10	12	14	16	18	20
Mt(nH)	6.8	5.6	5.1	4.7	4.3	4.3
Ft-1(nH)	30	24	20	16	12	9.1
Ft-2(nH)	1	1.5	1	1	1.3	0.9

## VSWR & EFFICIENCY (SIMULATION RESULTS)



Frequency(GHz)	VSWR			Efficiency(dB)		
	0.902	0.916	0.93	0.902	0.916	0.93
10x10	1.5	1.2	2.1	-9.8	-9.4	-9.8
12x10	1.7	1.2	2.2	-8.8	-8.2	-8.7
14x10	1.7	1.2	2.4	-8.4	-7.8	-8.3
16x10	1.8	1.2	2.5	-7.9	-7.3	-7.9
18x10	1.9	1.2	2.5	-7.6	-6.8	-7.5
20x10	1.8	1.2	2.7	-7.1	-6.5	-7.2

## MAX EFFICIENCY & BANDWIDTH (SIMULATION RESULTS)



		10x10	12x10	14x10	16x10	18x10	20x10
920MHz band	Max Efficiency(dB)	-9.4	-8.2	-7.8	-7.3	-6.8	-6.4
	BW@VSWR=2(MHz)	34	29	27	26	24	24

## ANT160920ST-1204A1

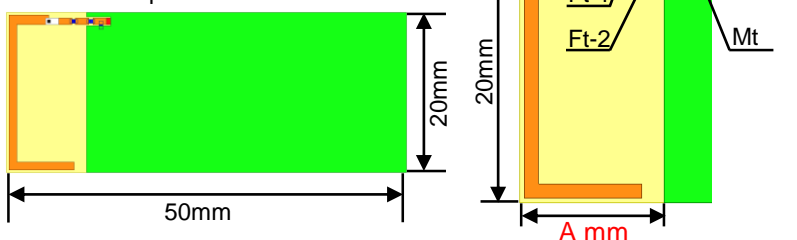


Dimensions (mm)

L	W	T
1.60	0.80	0.40
±0.10	±0.10	Max.

## EVALUATION BOARD

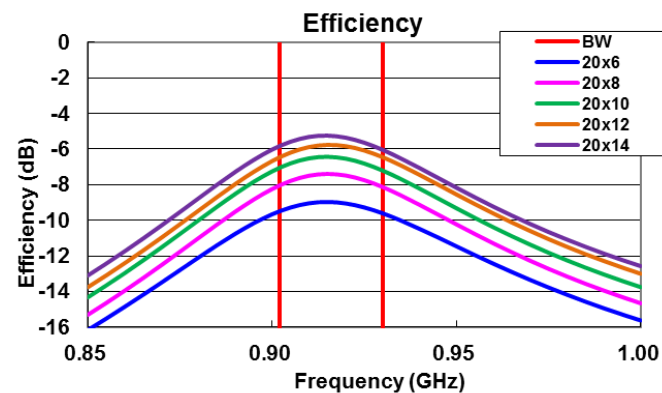
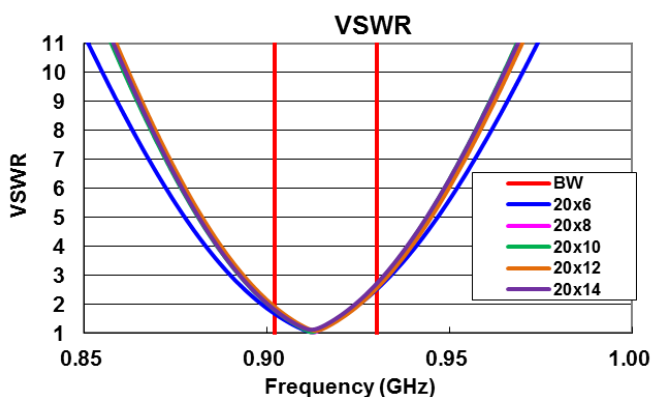
Antenna Location: PCB End  
 Board size: 50 x 20 x 1 mm<sup>2</sup>  
 Antenna keep out area: 20 x A mm<sup>2</sup>



## TUNING COMPONENTS

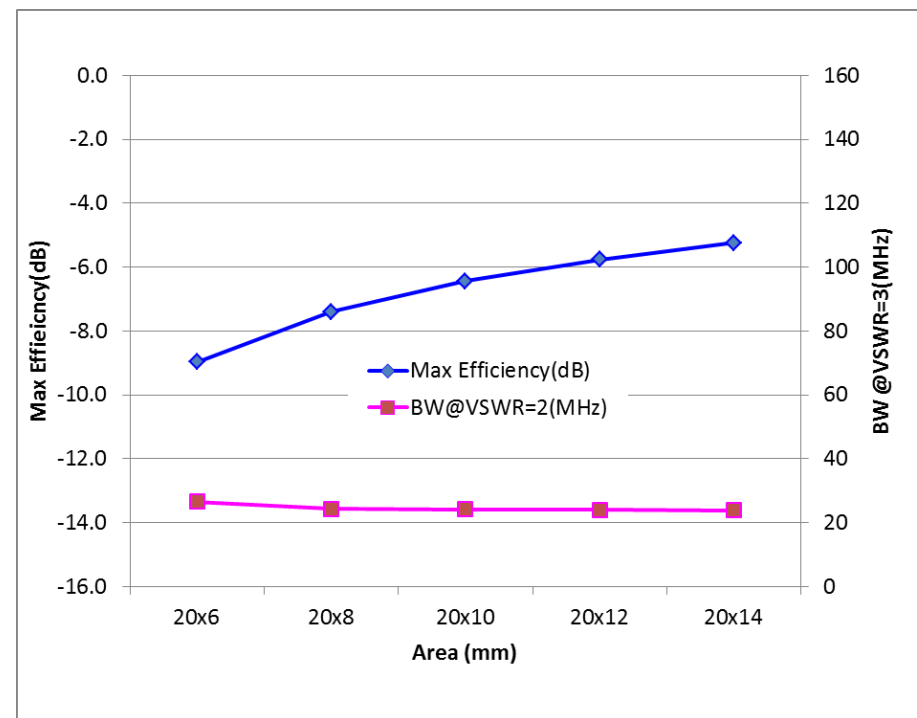
L(mm)	50				
A(mm)	6	8	10	12	14
Mt(nH)	4.7	4.3	4.3	4.3	4.3
Ft-1(nH)	13	12	9.1	12	12
Ft-2(nH)	1.5	0.8	0.9	0.3	0.7

## VSWR & EFFICIENCY (SIMULATION RESULTS)



Frequency(GHz)	VSWR			Efficiency(dB)		
	0.902	0.916	0.93	0.902	0.916	0.93
20x6	1.7	1.3	2.5	-9.5	-9.0	-9.6
20x8	1.8	1.2	2.6	-8.1	-7.4	-8.1
20x10	1.8	1.2	2.7	-7.1	-6.5	-7.2
20x12	1.9	1.2	2.5	-6.5	-5.8	-6.5
20x14	1.8	1.3	2.7	-5.9	-5.3	-6.0

## MAX EFFICIENCY & BANDWIDTH (SIMULATION RESULTS)



		20x6	20x8	20x10	20x12	20x14
920MHz band	Max Efficiency(dB)	-9.0	-7.4	-6.4	-5.8	-5.2
	BW@VSWR=2(MHz)	27	24	24	24	24