SK3080DC

MSL 3 Device

Band 8, SAW Duplexer Filter
Unbalanced / 8pin / 1612
Rev 2.0

- ❒Electrical Characteristics
- ❒Package Dimensions
- ❒Testing Environment
- ❒Frequency Characteristics

❒ Electrical Characteristics

Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	℃	-30	-	+85
Storage Temperature Range	℃	-30	-	+85
Maximum Input Power: 5000h+50deg.C	dBm	-	-	29
Source Impedance (single ended)	Ω	-	50	-
Load Impedance (Single ended)	Ω	-	50	-
Length x Width	mm	-	1.6 x 1.2	-
Height	mm	-	-	0.55

Electrical Specification

TX to ANT Parameters Description		Characteristics			Unit	Remark
		Min.	Typ.	Max.		
Center Frequency			897.5		MHz	
Insertion Loss	880 – 915 MHz		1.9	2.5	dB	
Ripple Deviation	880 – 915 MHz		0.4	0.9	dB	
VSWR(Input/Output)	880 – 915 MHz		1.6	1.9		
Attenuation	10 – 862 MHz	24	30		dB	
	925 – 960 MHz	52	58		dB	RX
	1559 – 1606 MHz	25	28		dB	
	1680 – 1830 MHz	23	27		dB	2f
	1805 – 1990 MHz	22	26		dB	
	2110 – 2200 MHz	21	25		dB	
	2400 – 2500 MHz	20	23		dB	ISM 2.4G
	3300 – 4200 MHz	10	14		dB	n77

Typical value at 25±2deg.C

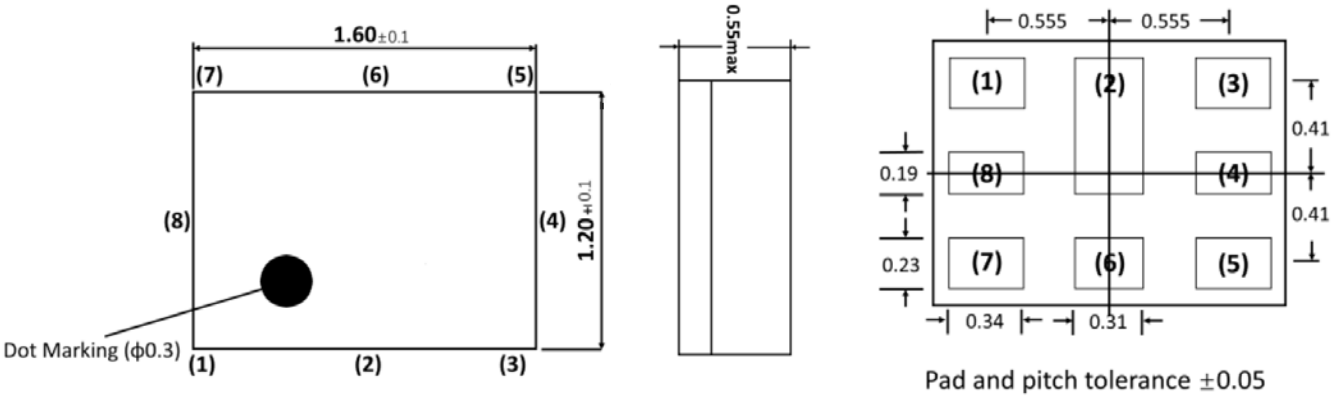
ANT to RX Parameters Description		Characteristics			Unit	Remark
		Min.	Typ.	Max.		
Center Frequency			942.5		MHz	
Insertion Loss	925 – 960 MHz		2.1	2.6	dB	
Ripple Deviation	925 – 960 MHz		0.6	1.1	dB	
VSWR(Input/Output)	925 – 960 MHz		1.8	2.1		
Attenuation	10 – 880 MHz	40	45		dB	
	880 – 915 MHz	45	50		dB	TX
	1710 – 1785 MHz	38	43		dB	B3 TX
	1850 – 1910 MHz	50	55		dB	B2 TX
	1920 – 1980 MHz	53	58		dB	B1 TX
	2300 – 2690 MHz	40	45		dB	
	2401 – 2483 MHz	43	47		dB	ISM 2.4G
	4900 – 5950 MHz	47	51		dB	ISM 5G

Typical value at 25±2deg.C

TX to RX Parameters Description		Characteristics			Unit	Remark
		Min.	Typ.	Max.		
Isolation	880 – 915 MHz	51	55		dB	
	925 – 960 MHz	52	56		dB	

Typical value at 25±2deg.C

❒ Package Dimensions

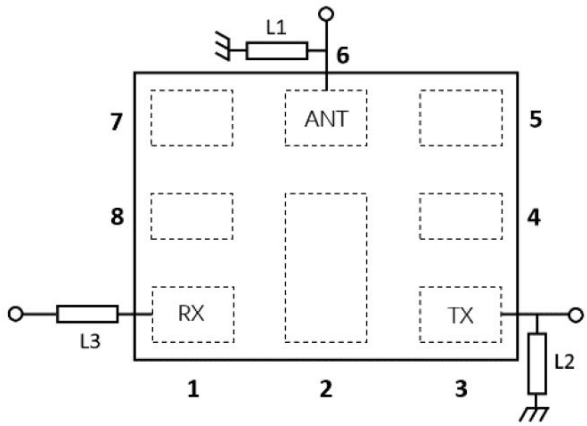


Unit: mm

Top View **Front View** **Bottom View**

Pin Description	
2,4,5,7,8	Ground
6	Ant
3	Tx
1	Rx

❒ Testing Environment

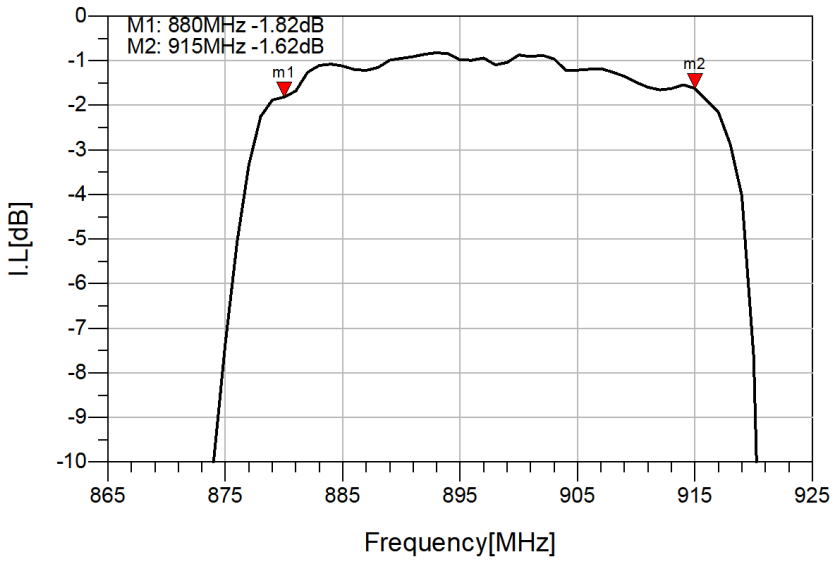


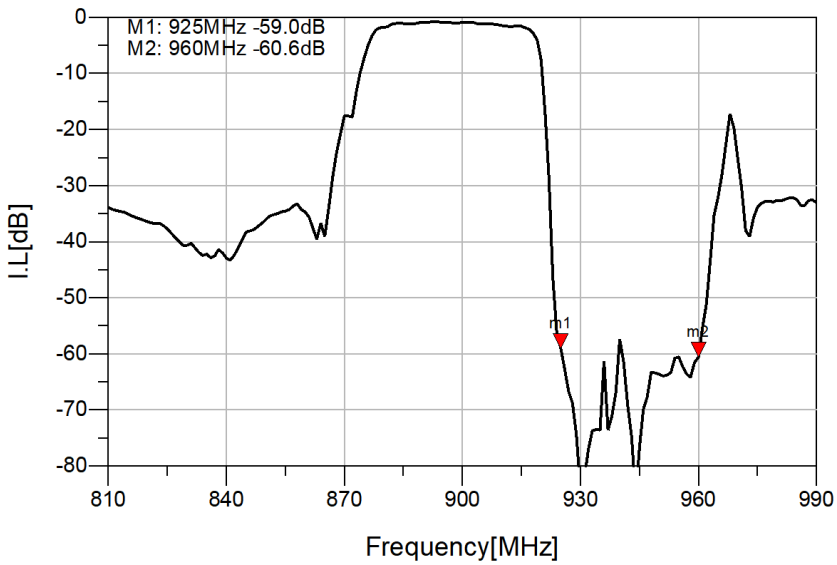
Source & Load Impedance: 50 Ω

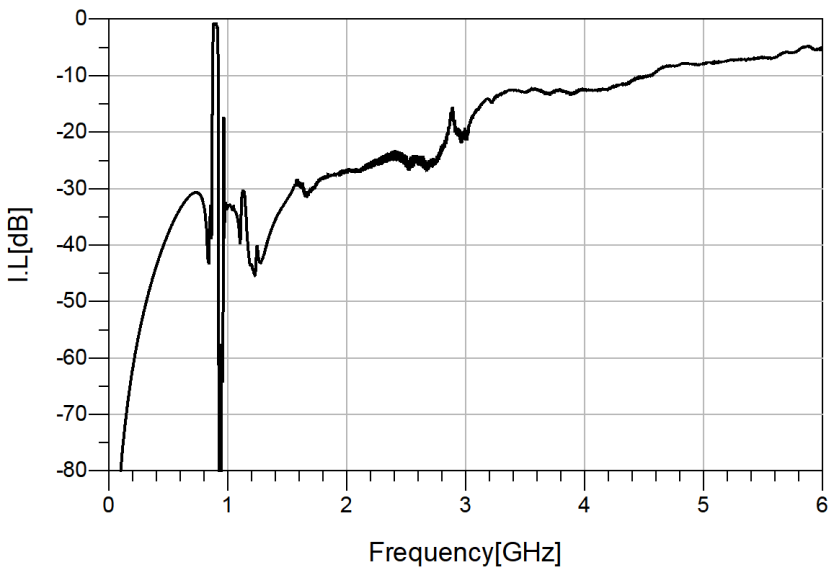
PORT	MATCHING
ANT	L1： 7.5nH (Ideal inductor)
TX	L2： 12nH (Ideal inductor)
RX	L3： 2.8nH (Ideal inductor)

❒ Frequency Characteristics

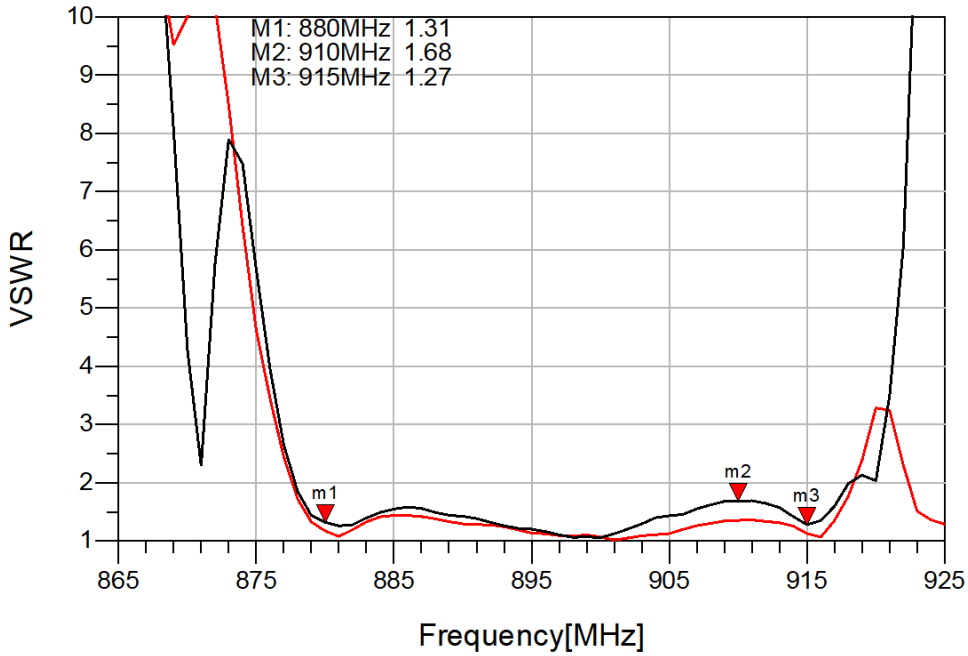
TX to ANT



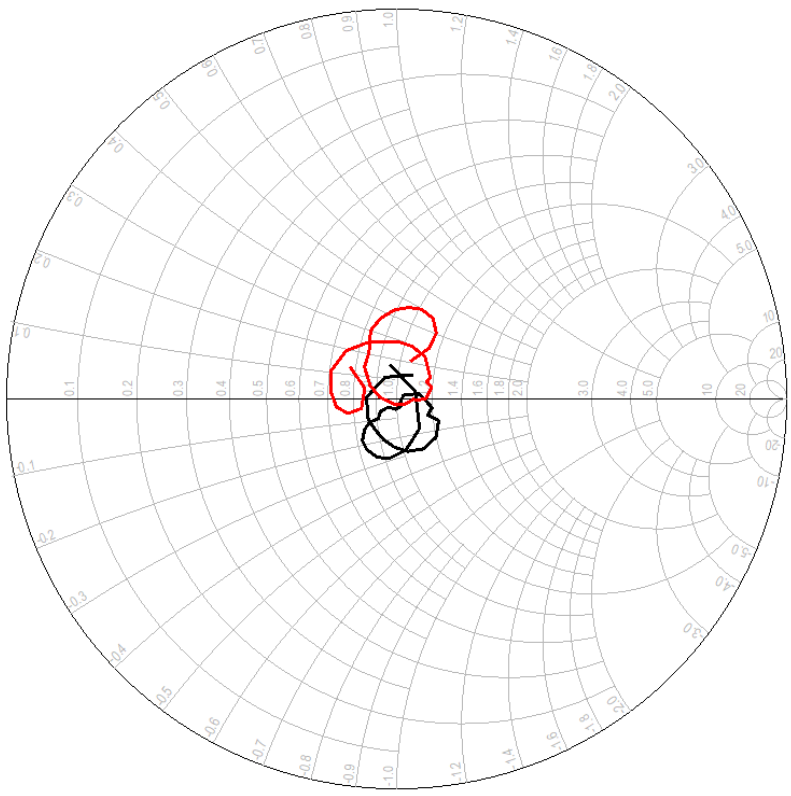




VSWR

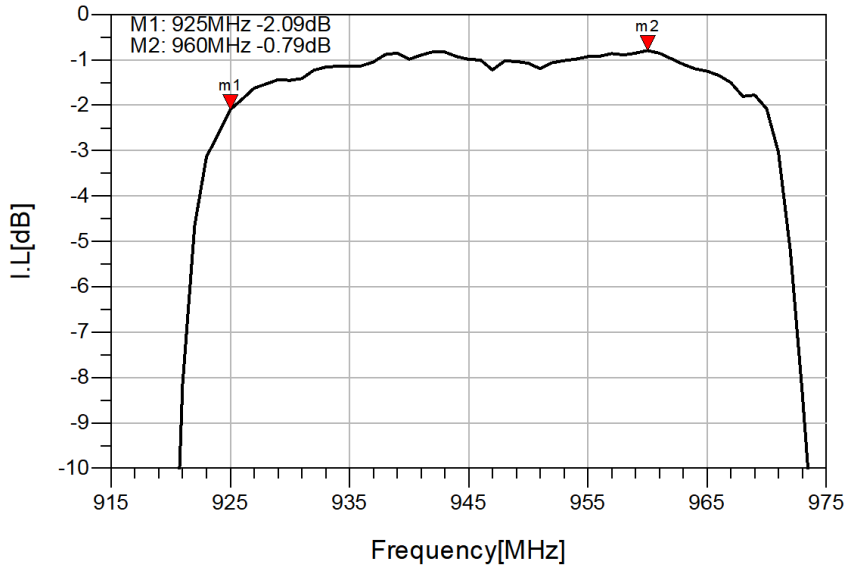


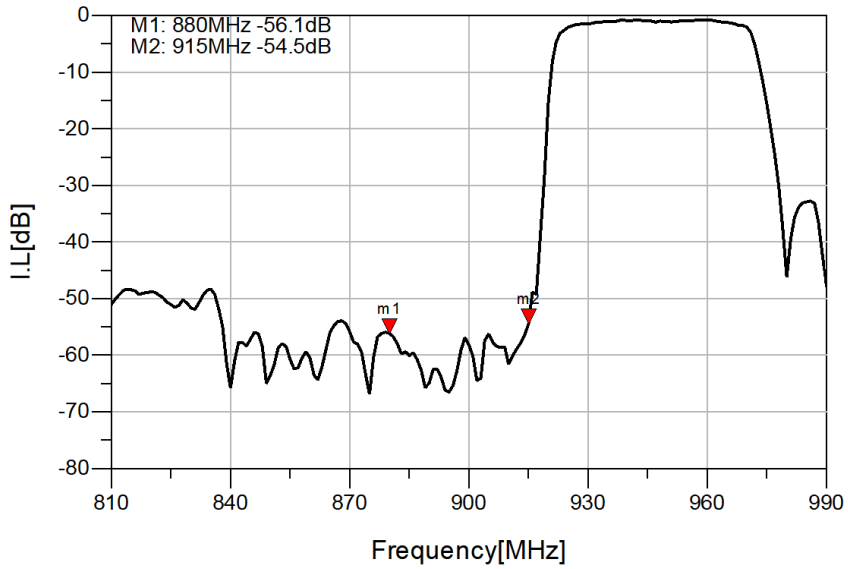
Smith Chart

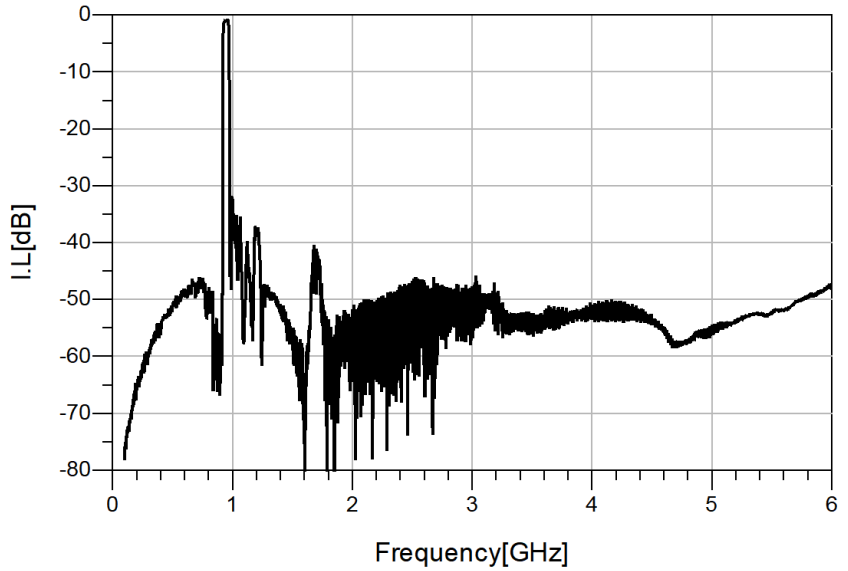


freq (880.0MHz to 915.0MHz)

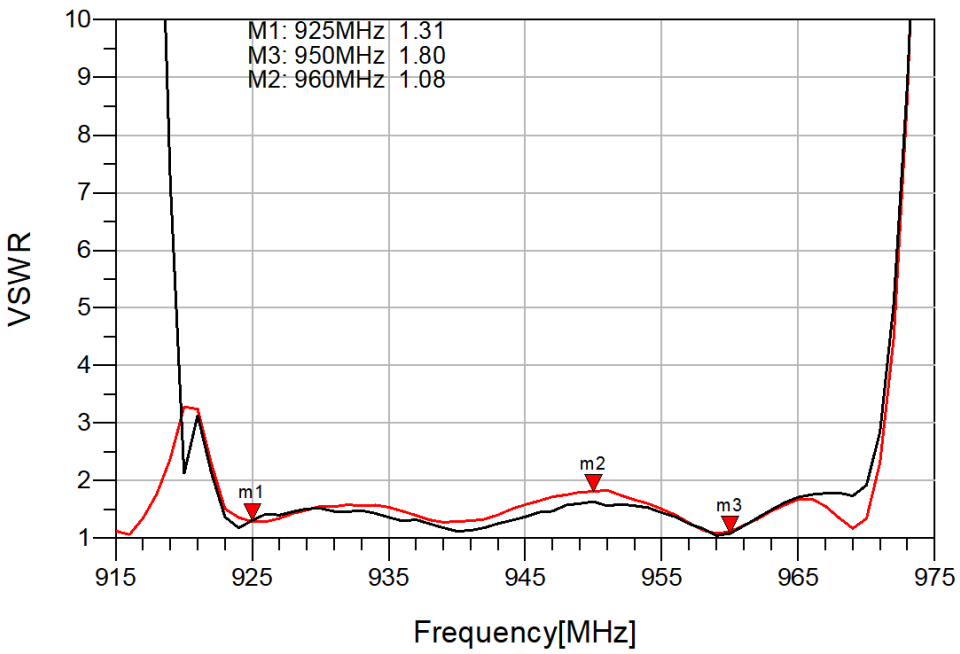
ANT to RX


M1: 925MHz -2.09dB
M2: 960MHz -0.79dB
m1
m2
I.L[dB]
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
915
925
935
945
955
965
975
Frequency[MHz]

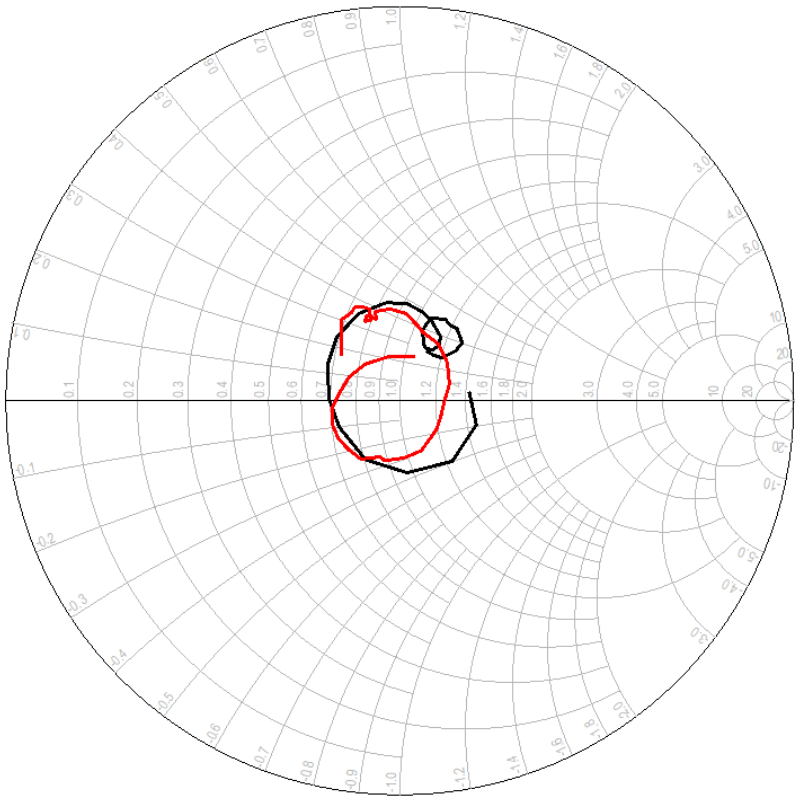

M1: 880MHz -56.1dB
M2: 915MHz -54.5dB
m1
m2
I.L[dB]
0
-10
-20
-30
-40
-50
-60
-70
-80
810
840
870
900
930
960
990
Frequency[MHz]


I.L[dB]
0
-10
-20
-30
-40
-50
-60
-70
-80
0
1
2
3
4
5
6
Frequency[GHz]

VSWR

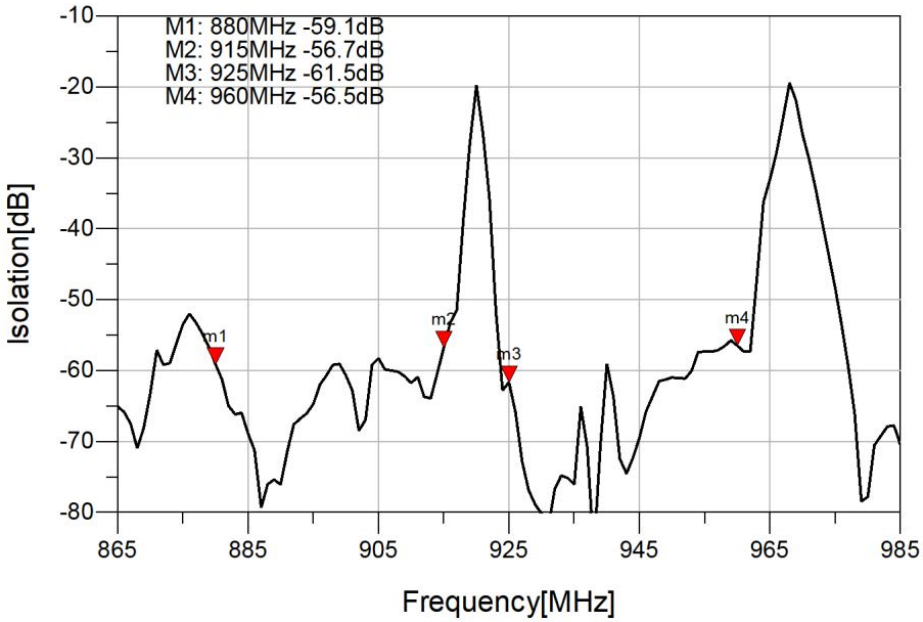


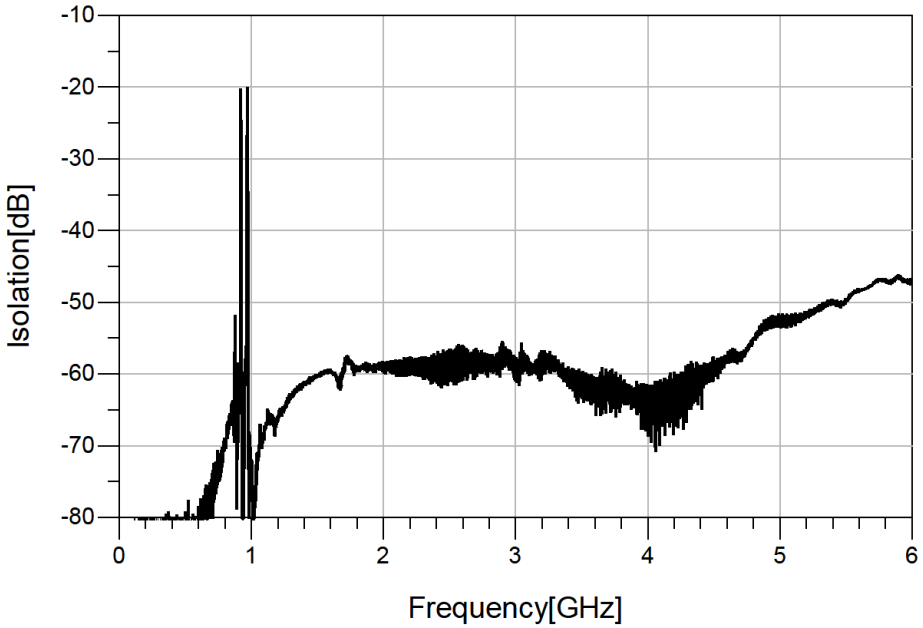
Smith Chart



freq (925.0MHz to 960.0MHz)

TX to RX


M1: 880MHz -59.1dB
M2: 915MHz -56.7dB
M3: 925MHz -61.5dB
M4: 960MHz -56.5dB
m1
m2
m3
m4
Isolation[dB]
-10
-20
-30
-40
-50
-60
-70
-80
865
885
905
925
945
965
985
Frequency[MHz]


Isolation[dB]
-10
-20
-30
-40
-50
-60
-70
-80
0
1
2
3
4
5
6
Frequency[GHz]