

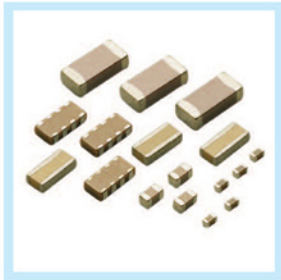
# RF Devices and Customer made Antenna

## Product catalog

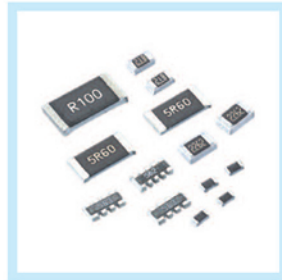
[www.passivecomponent.com](http://www.passivecomponent.com)



## Product Portfolio



**Multilayer Ceramic Capacitors (MLCC)**



**Chip-Resistor**



**Disc Capacitors**



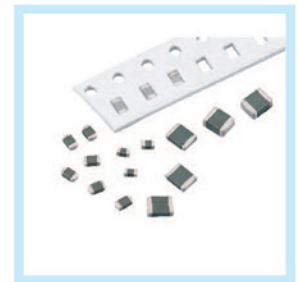
**RF Device and High Frequency Inductors**



**Antenna**



**Inductors**



**Varistors and SMD-Varistors**

## IEC-63 Nominal Resistance / Capacitance

<b>E1</b>	100																							
<b>E3</b>	100			220				470																
<b>E6</b>	100	150	220	330	470	680																		
<b>E12</b>	100	120	150	180	220	270	330	390	470	560	680	820												
<b>E24</b>	100	110	120	130	150	160	180	200	220	240	270	300	330	360	390	430	470	510	560	620	680	750	820	910
<b>E96</b>	100	102	121	124	147	150	178	182	215	221	261	267	316	324	383	392	464	475	562	576	681	698	825	845
	105	107	127	130	154	158	187	191	226	232	274	280	332	340	402	412	487	499	590	604	715	732	866	887
	110	113	133	137	162	165	196	200	237	243	287	294	348	357	422	432	511	523	619	634	750	768	909	931
	115	118	140	143	169	174	205	210	249	255	301	309	365	374	442	453	536	549	649	665	787	806	953	976

E6:  $\sqrt[6]{10} \approx 1.46$  E12:  $\sqrt[12]{10} \approx 1.21$

E1 series resistance: 1Ω, 10Ω, 100Ω, 1000Ω, 10000Ω, 100000Ω

# ORDERING CODE

## ■ CHIP ANTENNA

RF	ANT	321612	0	A	5	T
Type code	Product code	Dimension code	Unit of dimension	Application	Specification	Packing
RF/RG: device	ANT : Antenna FRA : Free Antenna ECA : SMD Antenna	Per 2 digits of Length, Width, Thickness 321612 = Length = 32 Width = 16 Thickness = 12	0 : 0.1 mm 1 : 1.0 mm	A : 2.4GHz ISM Band E : GPS 1.5GHz L : 2.4/5.2/5.8GHz Tri Band W : WiMAX	Code from 0~9 dependent on different electrical specification	T: 7" Reeled G: 13" Reeled

## ■ HIGH FREQUENCY MULTILAYER BAND PASS FILTER

RF	BPF	322515	0	A	4	T
Type code	Product code	Dimension code	Unit of dimension	Application	Specification	Packing
RF device	BPF : Band Pass Filter	Per 2 digits of Length, Width, Thickness 322515 = Length = 32 Width = 25 Thickness = 15	0 : 0.1 mm 1 : 1.0 mm	A : 2.4GHz ISM Band W : WiMAX K : ISM 5.2/5.8 Dual Band	Code from 0~9 dependent on different electrical specification	T: 7" Reeled G: 13" Reeled

## ■ HIGH FREQUENCY MULTILAYER BALANCED FILTER

RF	BPB	252009	0	A	7	T
Type code	Product code	Dimension code	Unit of dimension	Application	Specification	Packing
RF/RG: device	BPB : Balanced Type Band Pass Filter	Per 2 digits of Length, Width, Thickness 252009 = Length = 25 Width = 20 Thickness = 09	0 : 0.1 mm 1 : 1.0 mm	A : 2.4GHz ISM Band W : WiMAX	Code from 0~9 dependent on different electrical specification	T: 7" Reeled G: 13" Reeled

## ■ HIGH FREQUENCY MULTILAYER LOW PASS FILTER

RF	LPF	201211	0	A	0	T
Type code	Product code	Dimension code	Unit of dimension	Application	Specification	Packing
RF device	LPF : Low Pass Filter	Per 2 digits of Length, Width, Thickness 201211 = Length = 20 Width = 12 Thickness = 11	0 : 0.1 mm 1 : 1.0 mm	A : 2.4GHz ISM Band K : ISM 5.2/5.8 Dual Band	Code from 0~9 dependent on different electrical specification	T: 7" Reeled G: 13" Reeled

## ■ HIGH FREQUENCY MULTILAYER HIGH PASS FILTER

RF	HPF	252009	0	L	0	T
Type code	Product code	Dimension code	Unit of dimension	Application	Specification	Packing
RF device	HPF : High Pass Filter	Per 2 digits of Length, Width, Thickness 252009 = Length = 2.5 Width = 2.0 Thickness = 0.9	0 : 0.1 mm 1 : 1.0 mm	L : 2.4/4.9/5.2/5.8GHz Multiband Application	Code from 0~9 dependent on different electrical specification	T: 7" Reeled G: 13" Reeled

## ■ BALUN TRANSFORMERS

RF	BLN	201208	0	A	4	T
Type code	Product code	Dimension code	Unit of dimension	Application	Specification	Packing
RF/RG: device	BLN : BALUN	Per 2 digits of Length, Width, Thickness 201208 = Length = 20 Width = 12 Thickness = 08	0 : 0.1 mm 1 : 1.0 mm	A : 2.4GHz ISM Band K : ISM 5.2/5.8 Dual Band	Code from 0~9 dependent on different electrical specification	T: 7" Reeled G: 13" Reeled

## BALUN TRANSFORMERS

### ■ STRUCTURE AND PIN ASSOCIATED

STRUCTURE A						
	<p><b>STRUCTURE A-1</b></p> <p>GND NC Unbalanced</p> <p>Balanced NC Balanced</p>	<p><b>STRUCTURE A-2</b></p> <p>Balanced DC/GND Unbalanced</p> <p>Balanced GND NC</p>	<p><b>STRUCTURE A-3</b></p> <p>DC/GND NC Unbalanced</p> <p>Balanced NC Balanced</p>	<p><b>STRUCTURE A-4</b></p> <p>Balanced GND Unbalanced</p> <p>Balanced GND NC</p>	<p><b>STRUCTURE A-5</b></p> <p>Balanced GND Unbalanced</p> <p>Balanced GND GND</p>	
	STRUCTURE B					
		<p><b>STRUCTURE B-1</b></p> <p>GND Unbalanced</p> <p>Balanced Balanced</p>	<p><b>STRUCTURE B-2</b></p> <p>Balanced Unbalanced</p> <p>Balanced GND</p>			
		STRUCTURE C				
		<p><b>STRUCTURE C-1</b></p> <p>Unbalance Port_HB GND GND Unbalance Port_LB</p> <p>GND GND</p> <p>Balanced Port_HB Balanced Port_HB Unbalanced Port_LB Unbalanced Port_LB</p>	<p><b>STRUCTURE C-2</b></p> <p>Unbalance Port_LB GND GND Unbalance Port_HB</p> <p>GND GND</p> <p>Balanced Port_LB Balanced Port_LB Unbalanced Port_HB Unbalanced Port_HB</p>			
STRUCTURE D		STRUCTURE E		STRUCTURE F		
			<p>GND DC Unbalance</p> <p>Balanced GND/NC Balanced</p>	<p>Balanced Balance</p> <p>GND Unbalance</p>	<p>Balanced GND Balanced</p> <p>Unbalanced</p>	

## ■ STRUCTURE AND DIMENSION

Unit: mm

Structure/Dimension	L	W	T	A	B	C	D	E	F	G	H
A	1.60±0.10	0.85±0.10	0.70±0.10	0.20±0.10	0.20±0.10	0.30±0.10	0.50±0.05	0.50±0.05	-	-	-
	1.60±0.15	0.80±0.10	0.50±0.10	0.175±0.15	0.25±0.15	0.25±0.15	0.50±0.15	0.20±0.15	-	-	-
			0.85±0.10	0.40 max.	0.175±0.15	0.25±0.15	0.25±0.15	0.50±0.15	0.20±0.15	-	-
		0.85±0.15	0.60±0.10	0.175±0.15	0.25±0.15	0.25±0.15	0.50±0.15	0.20±0.15	-	-	-
			0.70±0.10	0.175±0.15	0.25±0.15	0.25±0.15	0.50±0.15	-	-	-	-
	2.00±0.15	1.25±0.15	0.80±0.10	0.20±0.20	0.30±0.20	0.35±0.20	0.65±0.20	-	-	-	-
			0.85±0.10	0.20±0.20	0.30±0.20	0.35±0.20	0.65±0.20	-	-	-	-
			0.80±0.10	0.20±0.15	0.30±0.20	0.35±0.20	0.65±0.20	-	-	-	-
0.95±0.10			0.20±0.20	0.30±0.20	0.35±0.20	0.65±0.20	-	-	-	-	
B	1.00±0.10	0.50±0.10	0.37±0.10	0.10±0.10	0.30±0.10	0.20±0.10	0.50±0.10	0.125±0.10	-	-	-
	1.00±0.10	0.50±0.10	0.40±0.10	0.10±0.10	0.30±0.10	0.20±0.10	0.50±0.10	0.125±0.10	-	-	-
C	2.00±0.10	1.25±0.15	0.90±0.10	0.125±0.10	0.25±0.10	0.25±0.10	0.50±0.10	0.475±0.10	0.30±0.10	0.20±0.15	0.20±0.15
D	1.60±0.15	0.80±0.15	0.50±0.10	0.175±0.10	0.25±0.10	0.25±0.10	0.50±0.10	0.25±0.10	-	-	-
E	0.65±0.10	0.50±0.10	0.40±0.10	0.20±0.05	0.20±0.05	0.025±0.025	0.10±0.05	0.25±0.05	0.025±0.025	-	-
F	1.00±0.10	0.50±0.10	0.5 max.	0.35±0.10	0.30±0.10	0.15±0.10	0.15±0.10	0.30±0.10	-	-	-

## ■ ELECTRICAL SPECIFICATION

### ISM Band 2.4GHz APPLICATION

Part Number	Frequency Range (MHz)	Impedance(Ω)		Return Loss (dB)Min.	Insertion Loss (dB)	Amplitude Difference (dB)Max.	Phase Difference	Size(mm)	Structure
		Unbalance	Balance						
RFBLN1005040A3T	2400~2500	50	Conjugate match to AR6003 chipset	10	1.4	2.0	180± 10	1.00x0.50x0.40	B-1
RFBLN1005040A6T	2400~2500	50	50	10	0.8	2.0	180± 10	1.00x0.50x0.40	B-2
RFBLN1608050AAT	2400~2500	50	Conjugate match to AR6003 chipset	10	1.2	2.0	180± 10	1.60x0.80x0.50	D
RFBLN1608060AM1T59	2400~2500	50	200	10	1.2	2.0	180± 10	1.60x0.80x0.65	A-3
RFBLN1608050AM8T62	2400~2500	50	50	10	1.2	2.0	180± 10	1.60x0.80x0.50	A-2
RFBLN1608050AM0T63	2400~2500	50	50	10	1.0	1.0	180± 10	1.60x0.80x0.55	A-2
RFBLN1608050AM6T30	2400~2500	50	35	10	1.0	1.0	180± 10	1.60x0.80x0.55	A-2
RFBLN1608060AC6T40	2400~2500	50	Conjugate match to TI CC26XX Chipset	10	1.6(25℃) 1.8(-40~+85℃)	2.3	180± 18	1.60x0.80x0.60	A-5
RGBLN1608070A1T	2400~2500	50	100	10	1.5	2.0	180± 15	1.60x0.85x0.70	A-1
RFBLN1608070A3T	2400~2500	50	100	10	1.0	2.0	180± 10	1.60x0.85x0.70	A-1
RFBLN1608070A4T	2400~2500	50	100	10	1.0	2.0	180± 10	1.60x0.80x0.70	A-1
RGBLN1608070A5T	2400~2500	50	100	10	1.2	2.0	180± 10	1.60x0.80x0.70	A-2
RGBLN2012080A5T	2400~2500	50	50	12	1.0	1.0	180± 10	2.00x1.25x0.85	A-2
RFBLN2012080A7T	2400~2500	50	100	10	1.0	2.0	180± 10	2.00x1.25x0.80	A-2
RGBLN2012090A0T	2400~2500	50	50	10	1.2	2.0	180± 10	2.00x1.25x0.95	A-2
RFBLN2012090A1T	2400~2500	50	100	10	1.0	2.0	180± 10	2.00x1.25x0.95	A-2

### ISM Band 2.4GHz APPLICATION

Part Number	Frequency Range (MHz)	Impedance(Ω)		Return Loss (dB)Min	Insertion Loss (dB)	Amplitude Difference (dB)Max.	Phase Difference	Size (mm)	Structure
		Unbalance	Balance						
RFBLN1005040K1T	4900~5950	50	50	10	1.2	2.0	180± 10	1.00x0.50x0.40	B-2
RFBLN2012090K0T	4900~5900	50	50	10	1.1	2.0	180± 10	2.00x1.25x0.95	A-4
RFBLN2012090K1T	4900~5900	50	100	10	1.2	2.0	180± 10	2.00x1.25x0.95	A-4

### LTE Band APPLICATION

Part Number	Frequency Range (MHz)	Impedance(Ω)		Return Loss (dB)Min	Insertion Loss (dB)	Amplitude Difference (dB)Max.	Phase Difference	Size (mm)	Structure
		Unbalance	Balance						
RFBLN16080G9D2T	699~960	50	100	10	1.05(25℃) 1.15(-40~+85℃)	2.5	180± 15	1.60x0.80x0.70	A-4
RFBLN1005040YM1T69	703~803	50	100	10	0.80	2.0	180± 12	1.00x0.50x0.40	F

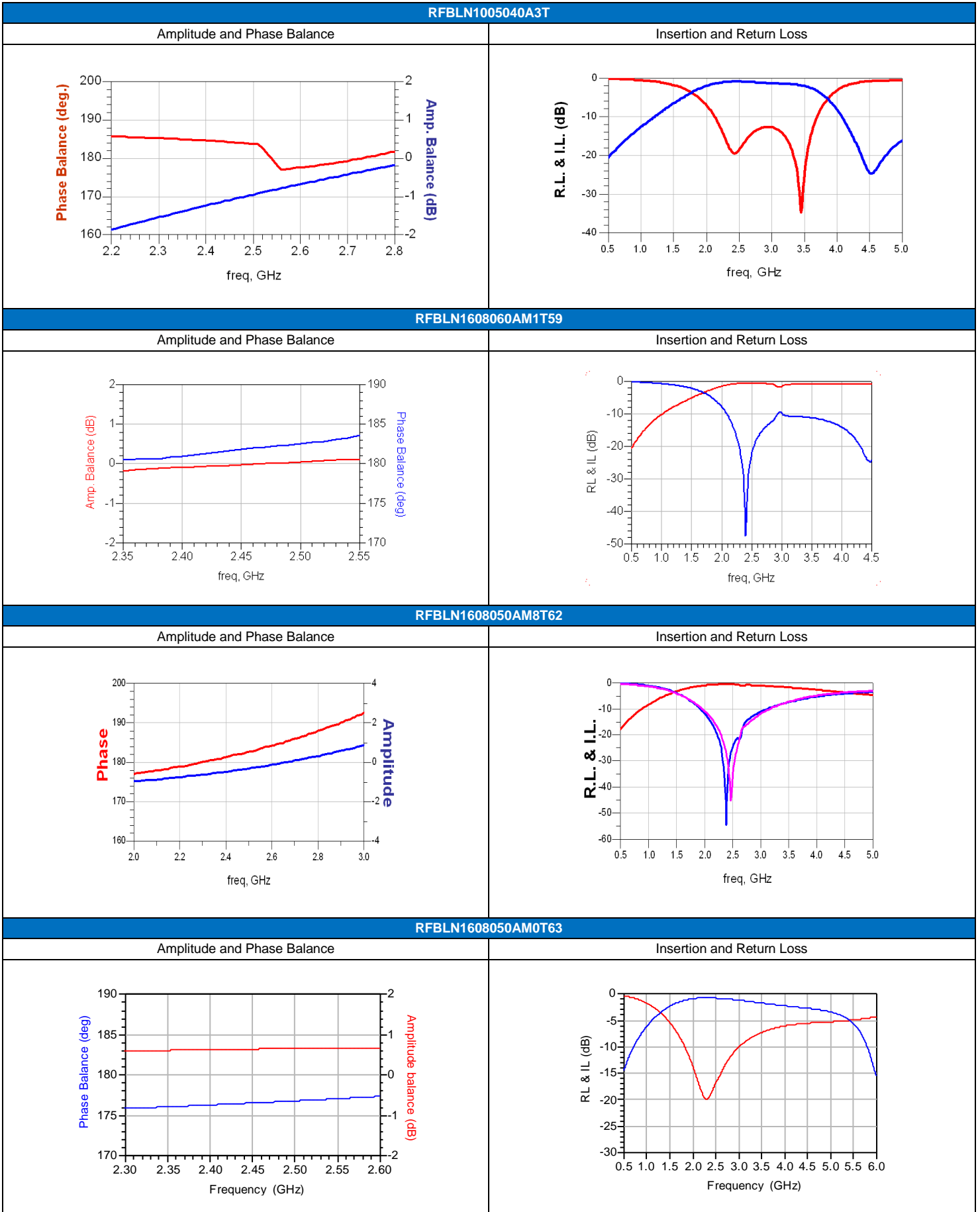
## LTE Band APPLICATION

Part Number	Frequency Range (MHz)	Impedance(Ω)		Return Loss (dB)Min	Insertion Loss (dB)	Amplitude Difference (dB)Max.	Phase Difference	Size (mm)	Structure
		Unbalance	Balance						
RFBLN0605040Y1T	717~821	50	100	15	0.55(25°C) 0.65(-40~+85°C)	2.0	180± 10	0.65x0.50x0.40	E
RFBLN0605040YM9T16	729~821	50	100	10	0.55(25°C) 0.65(-40~+85°C)	2.0	180± 10	0.65x0.50x0.40	E
RFBLN0605040Y09FNH	729~869	50	100	15	0.55(25°C) 0.65(-40~+85°C)	2.5	180± 10	0.65x0.50x0.40	E
RFBLN06050G9D0T	729~960	50	100	15	0.85(25°C) 0.95(-40~+85°C)	4.8	180± 10	0.65x0.50x0.40	E
RFBLN16080G9D3T	824~894	50	50	10	1.2	1.0	180± 10	1.60x0.80x0.60	A-2
RFBLN20120G9D0T	824~894	50	100	10	1.2	1.0	180± 10	2.00x1.25x0.90	A-2
RFBLN1608070F48Q1C	673~2700	50	100	10	1.7(25°C) 2.0(-40~+85°C)	1.5	180± 17	1.60x0.80x0.70	A-4
RFBLN2012090E0T	1500~3000	50	100	10	1.0	2.0	180± 10	2.00x1.25x0.90	A-4
RFBLN20121G8D1T	1700~2000	50	100	10	1.0	2.0	180± 10	2.00x1.25x0.95	A-2
RFBLN06051G8DM1T69	1805~1990	50	100	10	0.60(25°C) 0.65(-40~+85°C)	1.8	180± 10	0.65x0.50x0.40	E
RFBLN10051G9D1T	1805~1990	50	100	10	0.60(25°C) 0.70(-40~+85°C)	2.2	180± 12	1.00x0.50x0.40	B-2
RFBLN10051G9D0T	1805~2020	50	100	10	0.65(25°C) 0.75(-40~+85°C)	2.0	180± 10	1.00x0.50x0.40	B-2
RFBLN10051G8D1T	1805~2170	50	100	10	0.65(25°C) 0.70(-40~+85°C)	3.0	180± 15	1.00x0.50x0.40	E
RFBLN1005040F1T	1805~2170	50	100	10	0.70(25°C) 0.80(-40~+85°C)	1.2	180± 15	1.00x0.50x0.40	F
RFBLN2012090F0T	1920~1980 2110~2170	50	50	10	1.0	2.0	180± 10	2.00x1.25x0.95	A-2
RFBLN0605040E0T	2000~2500	50	100	10	0.60(25°C) 0.70(-40~+85°C)	3.5	180± 10	0.65x0.50x0.40	E
RFBLN06052G5WM9T16	2300~2690	50	100	10	0.55(25°C) 0.65(-40~+85°C)	2.5	180± 10	0.65x0.50x0.40	E
RFBLN10052G5WM9T16	2300~2690	50	100	10	0.55(25°C) 0.65(-40~+85°C)	2.5	180± 10	1.00x0.50x0.40	B-1
RFBLN10052G5W37N2T	2300~2690	50	100	10	0.65(25°C) 0.75(-40~+85°C)	2.5	180± 10	1.00x0.50x0.40	B-2
RFBLN16082G5W0T	2300~2700	50	100	10	1.1	2.0	180± 10	1.60x0.80x0.70	A-2
RFBLN16082G5W38Q1C	2300~2700	50	100	10	0.55(25°C) 0.65(-40~+85°C)	1.0	180± 10	1.60x0.80x0.40	A-4
RFBLN16082G5W4T	2300~2700	50	50	10	1.2	2.0	180± 10	1.60x0.80x0.50	A-2

## GSM 850/ GSM 900/ DCS1800/ PCS1900 APPLICATION

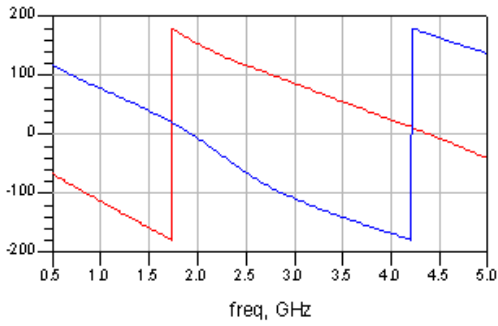
Part Number	Frequency Range (MHz)	Unbalance	Balance	Return Loss (dB)Min	Insertion Loss (dB)	Amplitude Difference (dB)Max	Attenuation (dB min.)	Phase Difference	Size(mm)	Structure
RFBLN2012090BM5T25	869~960	50	200	10	1.1	2.0	10(1738~1920MHz) 20(2400~2500MHz) 20(2607~2880MHz)	180± 10	2.00x1.25x0.95	C-1
	1805~2025	50	200	10	1.8	2.0	15(2400~2500MHz) 20(3610~3980MHz) 20(5415~5970MHz)	180± 15		
RFBLN2012090BS0T53	869~960	50	200	10	1.1(25°C) 1.3(-40~+85°C)	2.0	10(1738~1920MHz) 20(2400~2500MHz) 20(2607~2880MHz)	180± 15	2.00x1.25x0.95	C-1
	1805~1990	50	200	10	1.6(25°C) 1.8(-40~+85°C)	2.0	15(2400~2500MHz) 15(3610~3980MHz) 20(5415~5970MHz)	180± 15		
RFBLN2012090BS0T50	869~960	50	200	10	1.1(25°C) 1.3(-40~+85°C)	2.0	10(1738~1920MHz) 20(2400~2500MHz) 20(2607~2880MHz)	180± 15	2.00x1.25x0.95	C-2
	1805~2025	50	200	10	1.8(25°C) 2.0(-40~+85°C)	2.0	15(2400~2500MHz) 15(3610~3980MHz) 20(5415~5970MHz)	180± 15		

## ■ TYPICAL ELECTRICAL CHARACTERISTICS

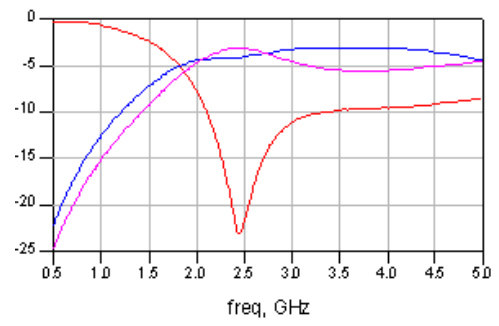


RFBLN2012080A7T

Amplitude and Phase Balance

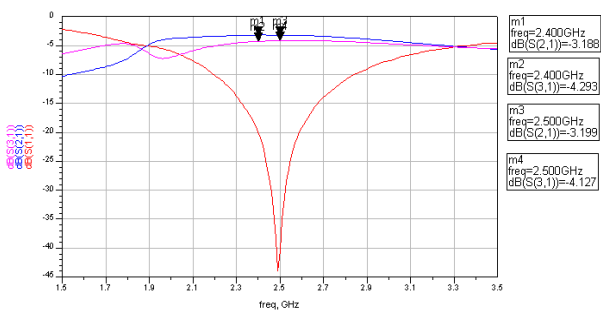


Insertion and Return Loss

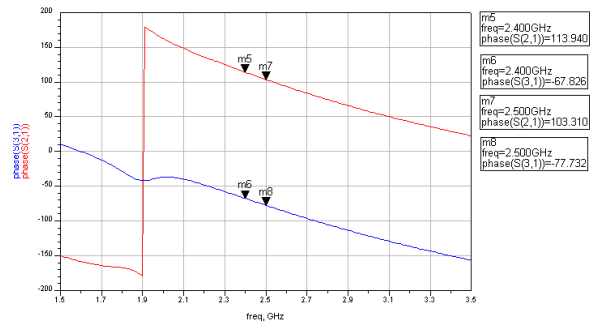


RGBLN2012090A0T

Amplitude and Phase Balance

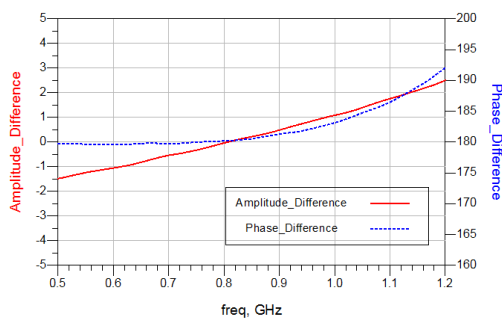


Insertion and Return Loss

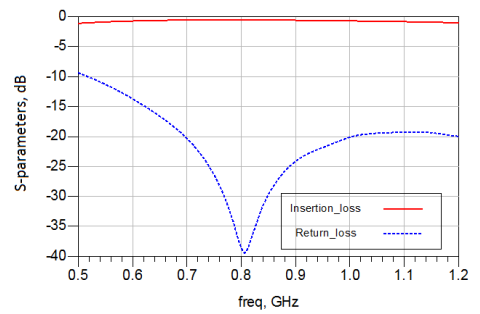


RFBLN16080G9D2T

Amplitude and Phase Balance

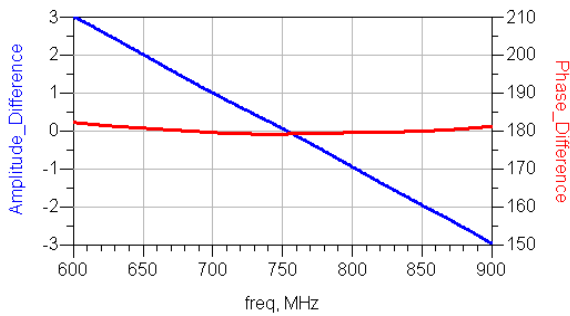


Insertion and Return Loss

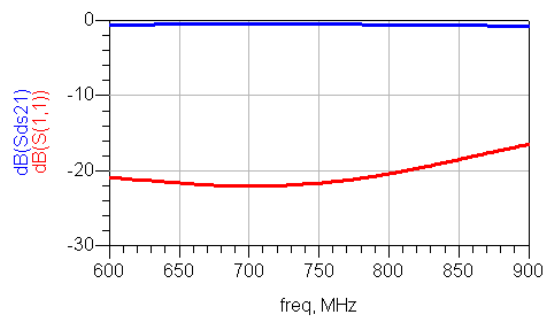


RFBLN1005040YM1T69

Amplitude and Phase Balance

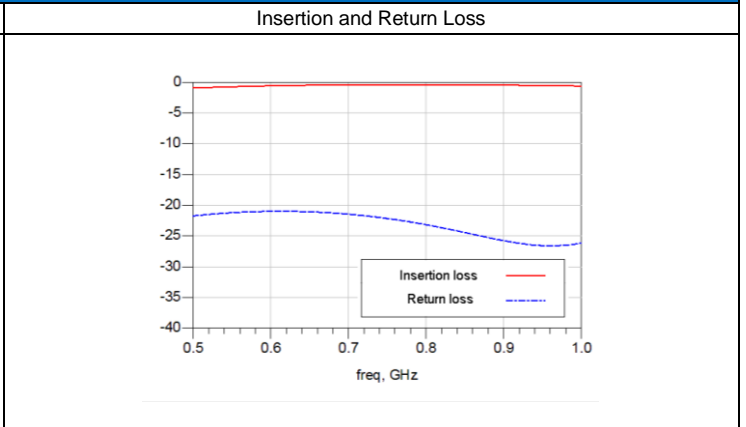
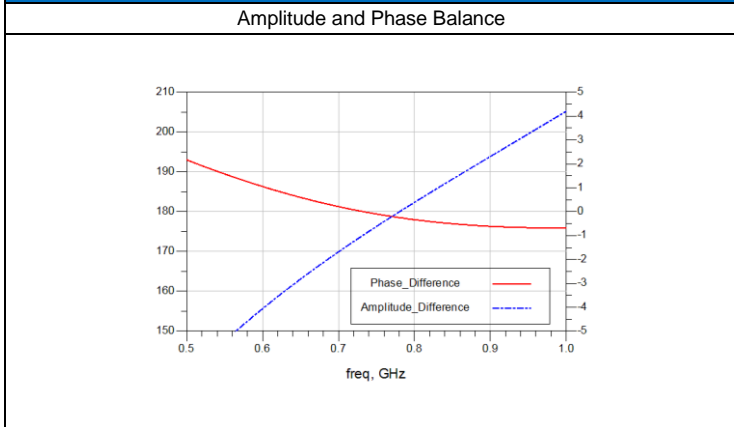


Insertion and Return Loss

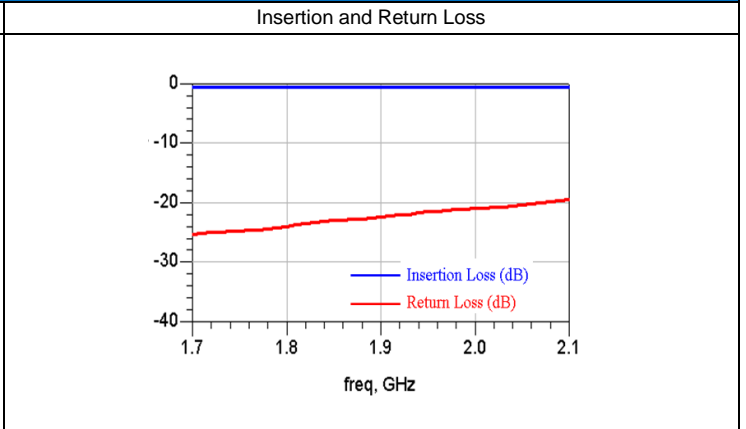
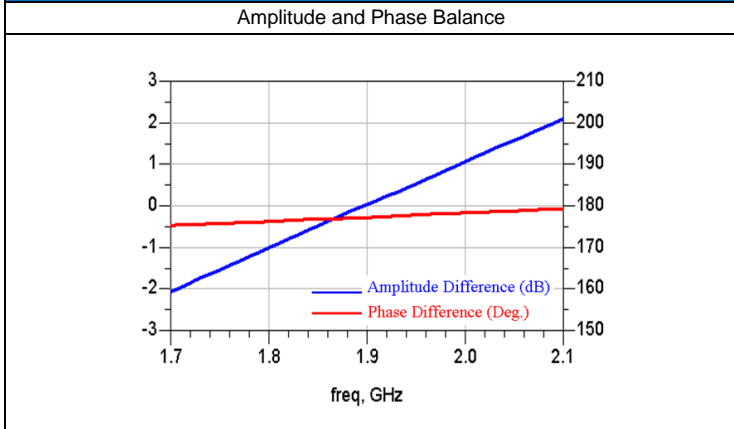




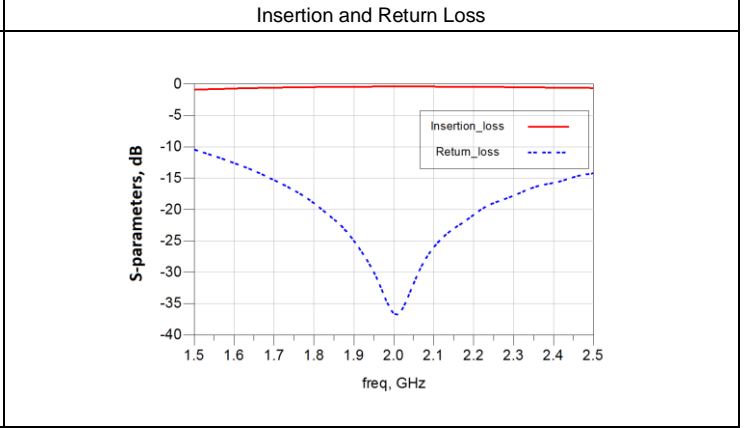
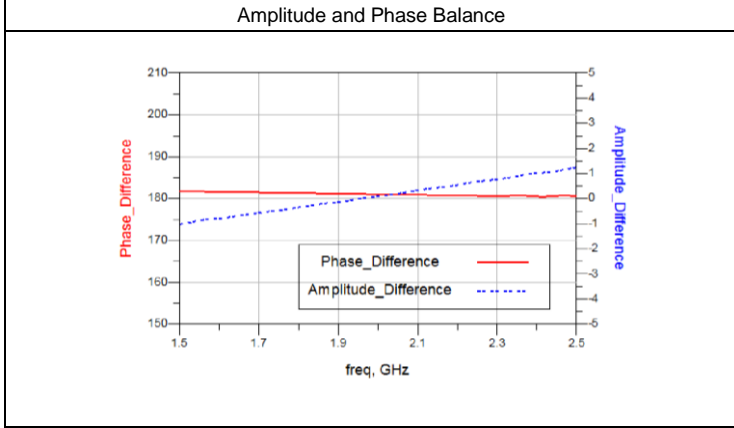
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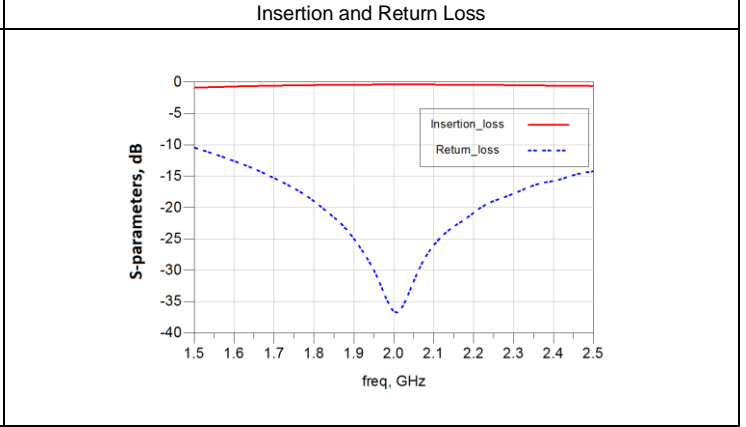
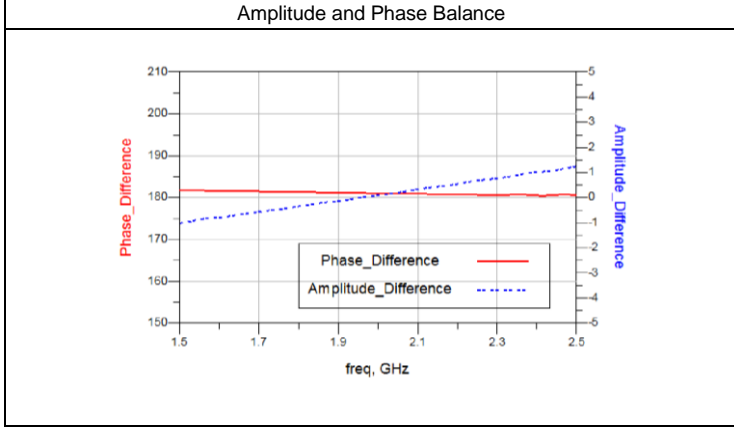
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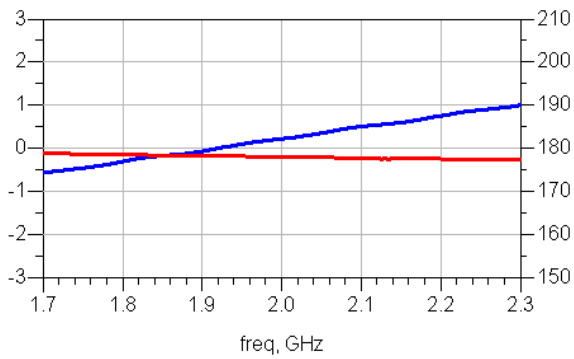


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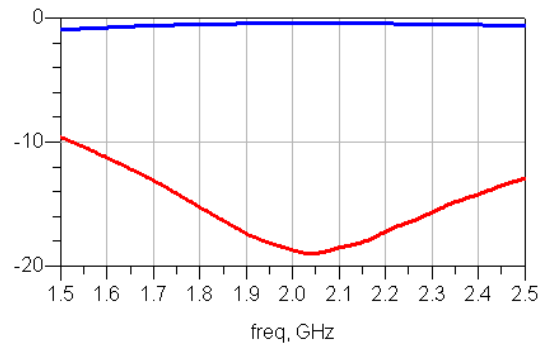


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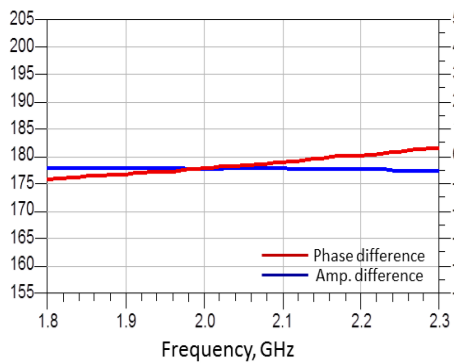


Insertion and Return Loss

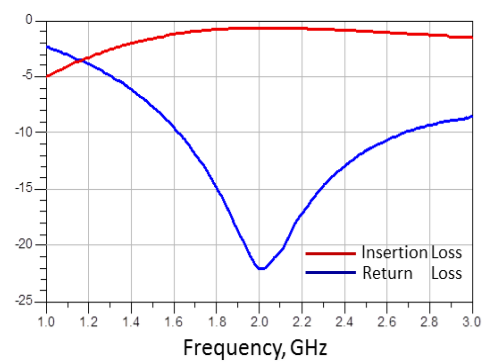


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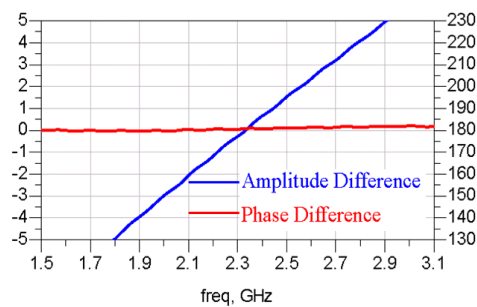


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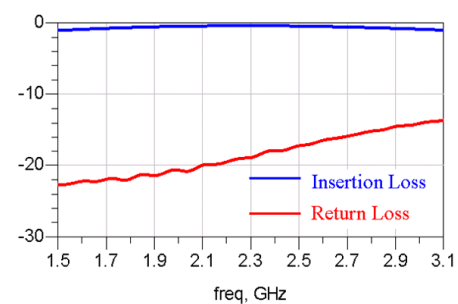


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Amplitude and Phase Balance

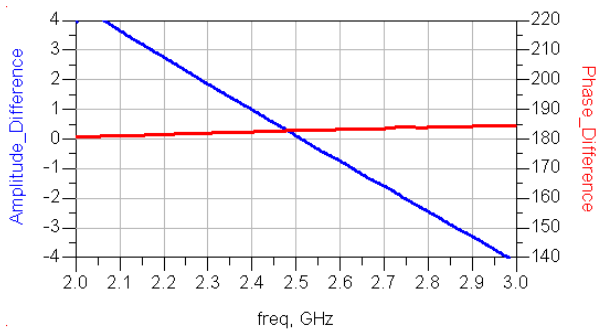


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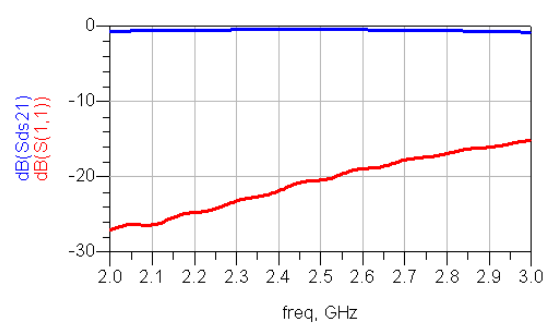


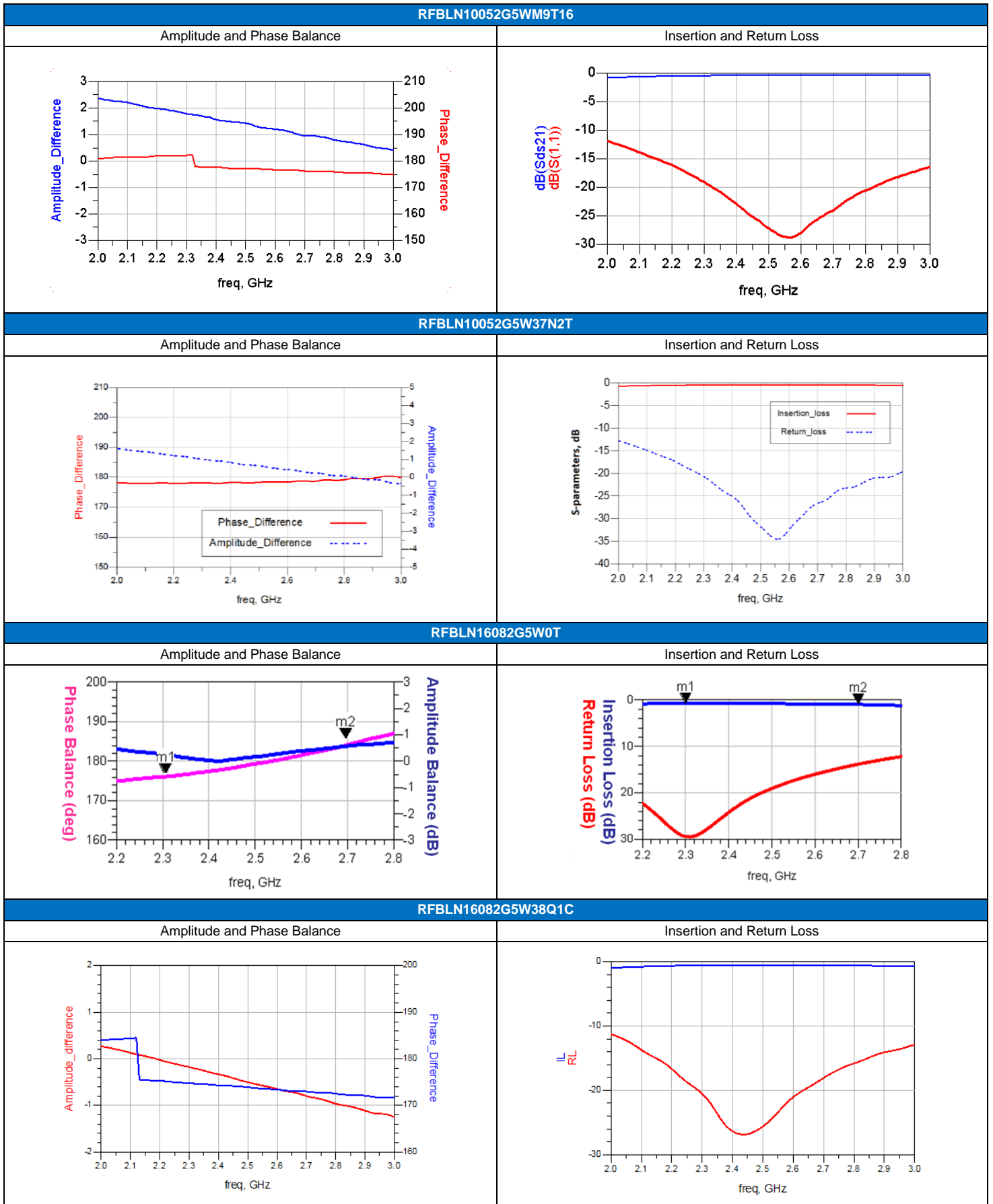
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Amplitude and Phase Balance



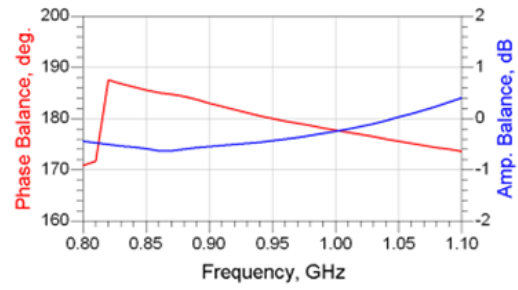
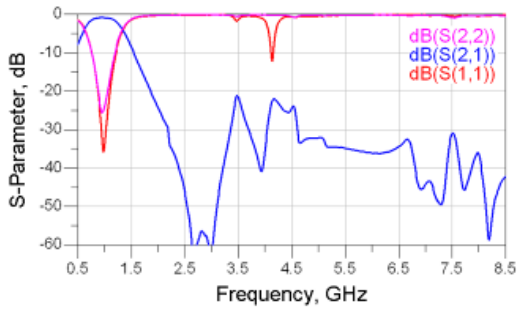
Insertion and Return Loss



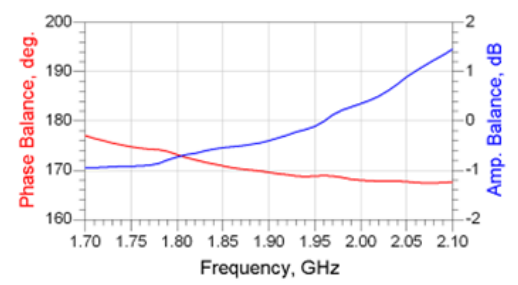
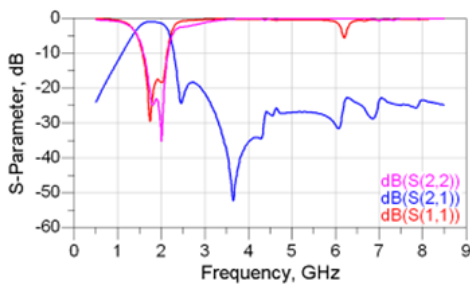


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### Low Band

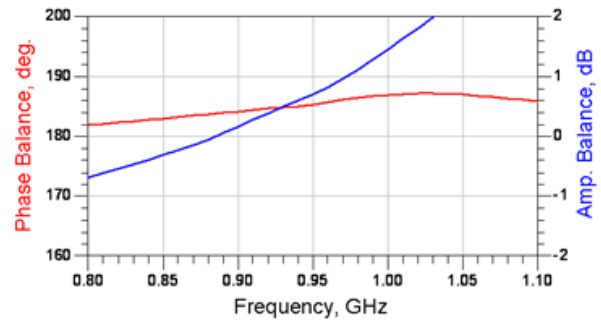
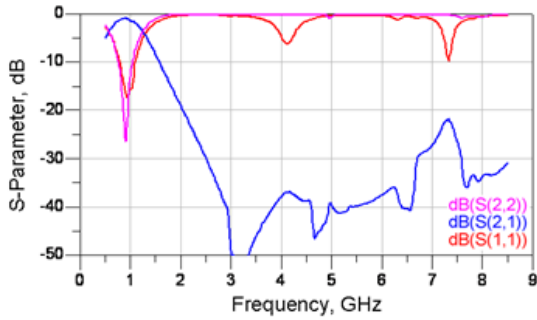


### High Band

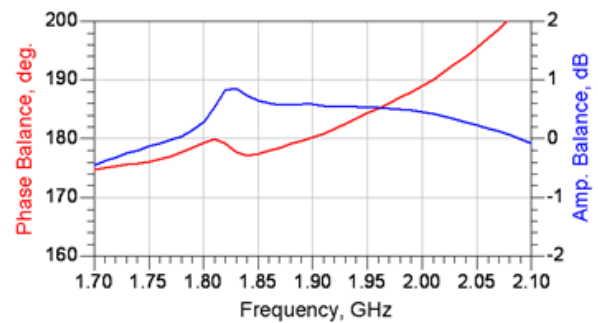
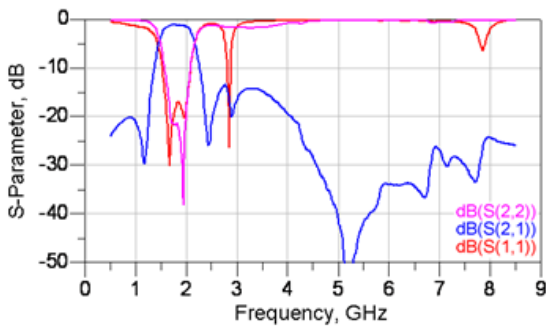


## RFBLN2012090BS0T53

### Low Band



### High Band



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