



Features

- ✧ For IF SAW filter
- ✧ Ceramic Surface Mount Package
- ✧ Small size
- ✧ RoHS compliant (2002/95/EC), Pb-free

Specifications

Parameter		Unit	Minimum	Typical (single- ended)	Typical (balance)	Typical (single- balance)	Typical (balance -single)	Maximum
Center Frequency		MHz	-	140	140	140	140	-
Insertion Loss		dB	-	11.6	11.6	11.1	11.6	13.5
2 dB Bandwidth		MHz	40	44	44	44.1	44	-
Passband Variation(f0±20MHz)		dB	-	0.8	1.1	1	0.9	2
Group Delay Variation(f0±20MHz)		nsec	-	35	39	50	35	100
Absolute Delay		usec	-	0.27	0.27	0.27	0.27	0.5
Input/output return loss(f0±20MHz)		dB	-	4.7/5.4	6.7/6.4	3.8/5.8	4.6/6.8	-
Ultimate Rejection	10~70MHz	dB	-	48	70	68	60	-
	70~115MHz	dB	-	27	24	25	26	-
	165~200MHz	dB	-	9	8	8	9	-
	200~1000MHz	dB	-	53	43	55	50	-
Material Temperature coefficient		KHz/°C	-11.48					
Substrate Material		-	128LN					
Ambient Temperature		°C	25					
Operating Temperature Range		°C	-40	-			+85	
Storage Temperature Range		°C	-50	-			+125	
DC Voltage		V	0					
Input Power		dBm	-	-			25	
ESD Class		-	1A					
Package Size		SMD3.8*3.8						

Notes:

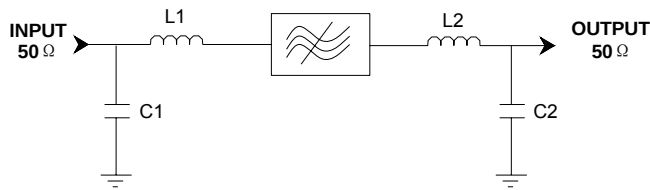
- All specifications are based on the test circuit shown;
- In production, all specifications are measured by Agilent Network analyzer and full 2 port calibration at room temperature;
- Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances;
- This is the optimum impedance in order to achieve the performance show.



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Rev. Date	2010-06-25		
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Matching Configuration(single-ended)



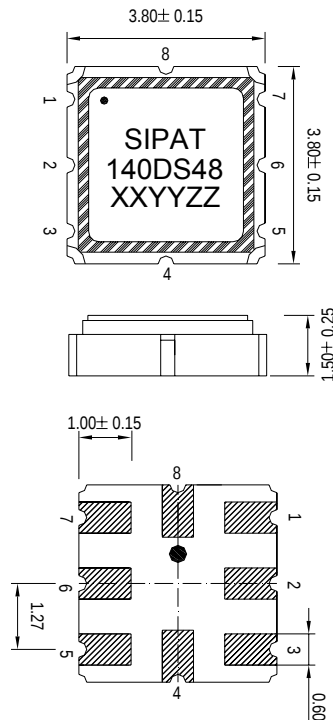
L1=82nH L2=100nH

C1=22pF C2=8.2pF

Source /Load Impedance=50 ohm

Notes - Component values may change depending
on board layout.

Package Dimension(single-ended)



Pad Configuration:

Input: 1
Output: 5
Ground: 2,3,4,6,7,8

Marking Configuration:

- 1) •: Pad Number 1 Index
- 2) SIPAT: Manufacturer Name
- 3) 140DS48: Part Number
- 4) XXYY: Date(Year/month)
- 5) ZZ: Identified Code

Package: SMD3.8*3.8

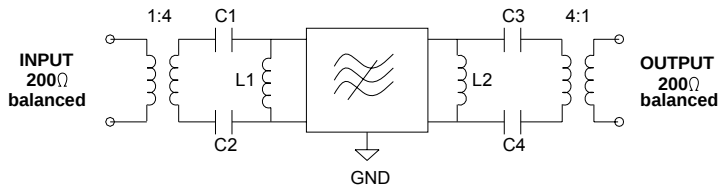
Unit: mm



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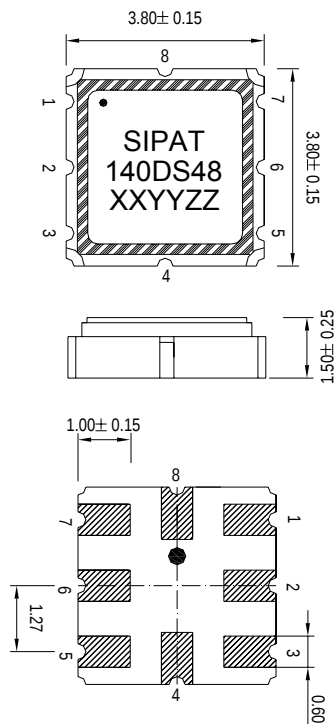
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Matching Configuration(balance)



L1=82nH L2=56nH
C1=C2=C3=C4=33pF
Source /Load Impedance=200 ohm
Notes - Component values may change depending
on board layout.

Package Dimension(balance)



Pad Configuration:

Input: 1,2
Output: 5,6
Ground: 3,4,7,8

Marking Configuration:

- 1) •: Pad Number 1 Index
- 2) SIPAT: Manufacturer Name
- 3) 140DS48: Part Number
- 4) XXYY: Date(Year/month)
- 5) ZZ: Identified Code

Package: SMD3.8*3.8

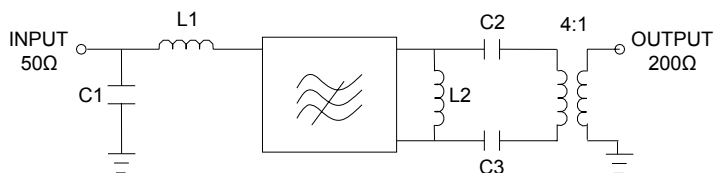
Unit: mm



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Matching Configuration(single-balance)



L1=100nH L2=68nH

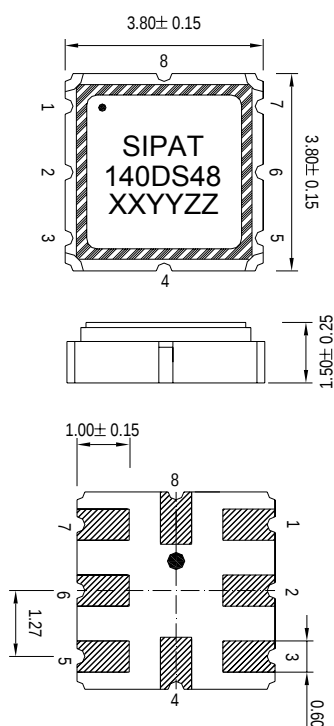
C1=22pF C2=C3=36pF

Source Impedance=50 ohm

Load Impedance=200 ohm

Notes - Component values may change depending
on board layout.

Package Dimension(single-balance)



Pad Configuration:

Input: 1
Output: 5,6
Ground: 2,3,4,7,8

Marking Configuration:

- 1) •: Pad Number 1 Index
- 2) SIPAT: Manufacturer Name
- 3) 140DS48: Part Number
- 4) XXYY: Date(Year/month)
- 5) ZZ: Identified Code

Package: SMD3.8*3.8

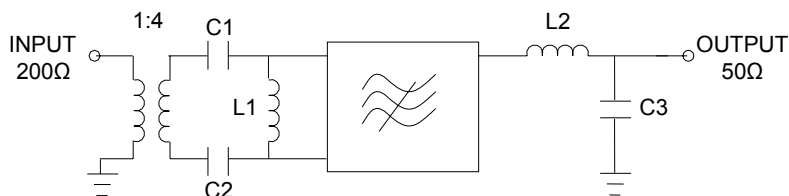
Unit: mm



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Matching Configuration(balance-single)



L1=100nH L2=(68+10)nH

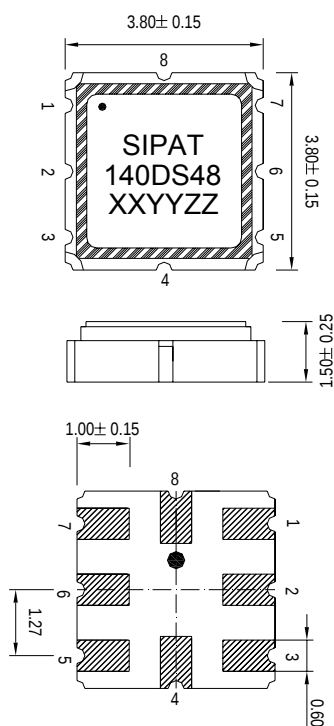
C1=C2=36pF C3=27pF

Source Impedance=200 ohm

Load Impedance=50 ohm

Notes - Component values may change depending
on board layout.

Package Dimension(balance-single)



Pad Configuration:

Input: 1,2

Output: 5

Ground: 3,4,6,7,8

Marking Configuration:

1) •: Pad Number 1 Index

2) SIPAT: Manufacturer Name

3) 140DS48: Part Number

4) XXYY: Date(Year/month)

5) ZZ: Identified Code

Package: SMD3.8*3.8

Unit: mm



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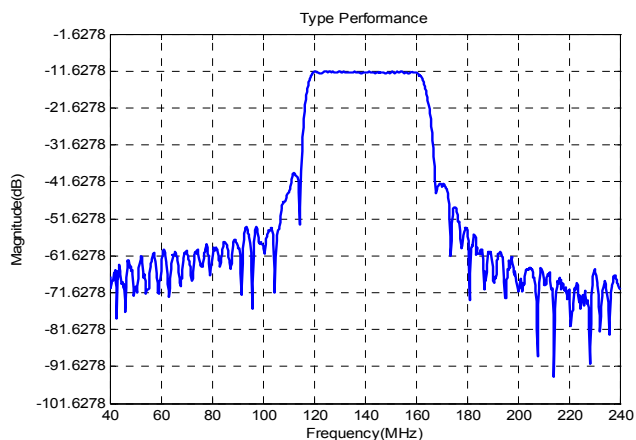
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Typical Performance(single-ended)

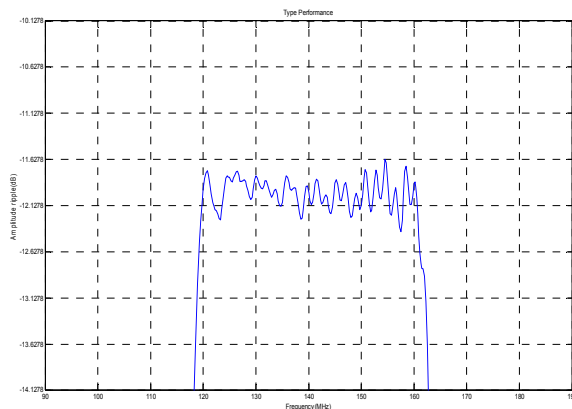
Frequency Respond



Horizontal: 20MHz/Div

Vertical: 10dB/Div

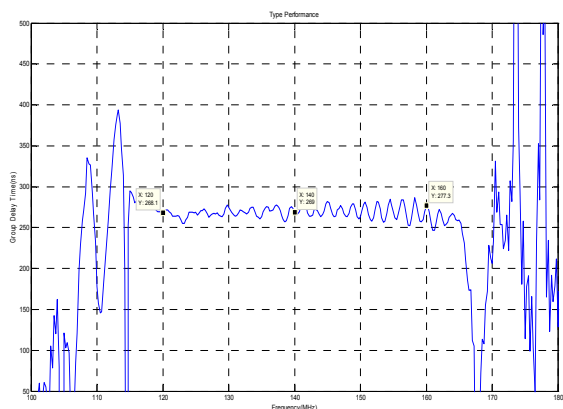
Passband Respond



Horizontal: 10MHz/Div

Vertical: 0.5dB/Div

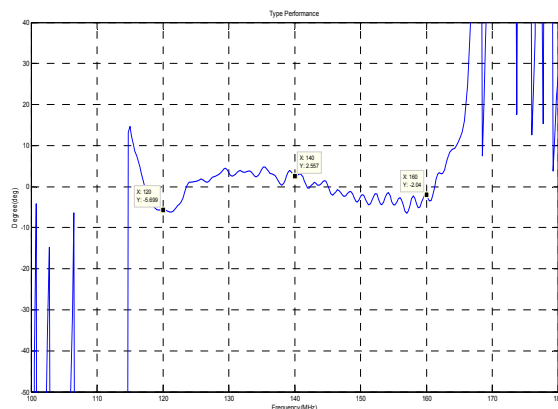
Group Delay Variation(f0±20MHz)



Horizontal: 10MHz/Div

Vertical: 50ns/Div

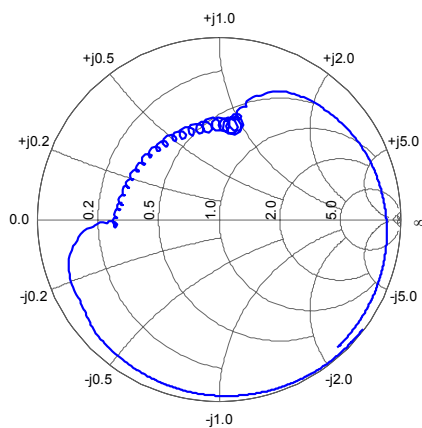
Phase Linearity(f0±20MHz)



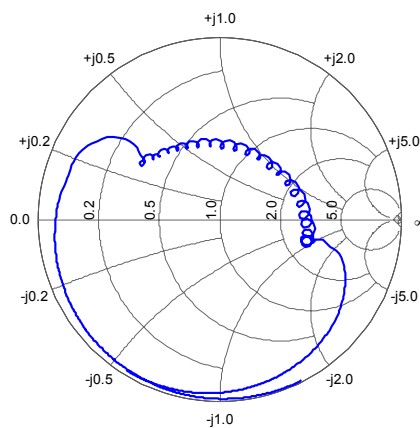
Horizontal: 10MHz/Div

Vertical: 10deg/Div

Smith Chart S11



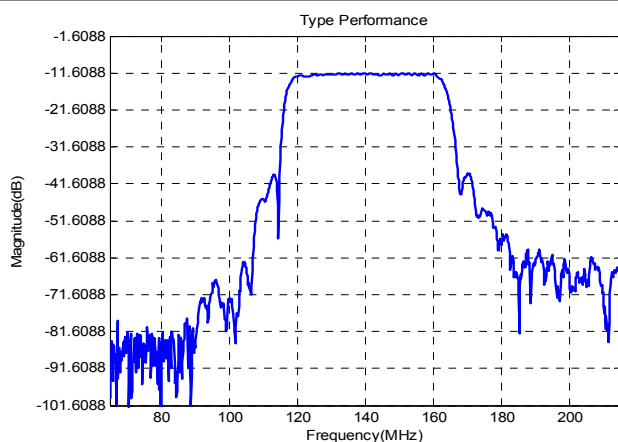
Smith Chart S22





Typical Performance(balance)

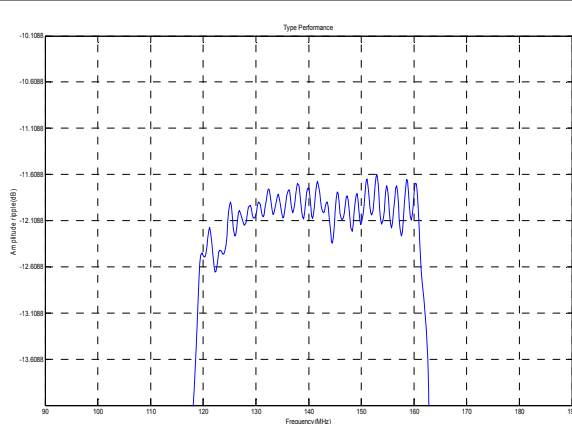
Frequency Respond



Horizontal: 20MHz/Div

Vertical: 10dB/Div

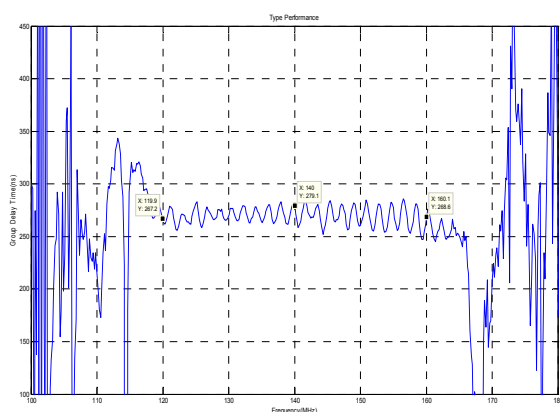
Passband Respond



Horizontal: 10MHz/Div

Vertical: 0.5dB/Div

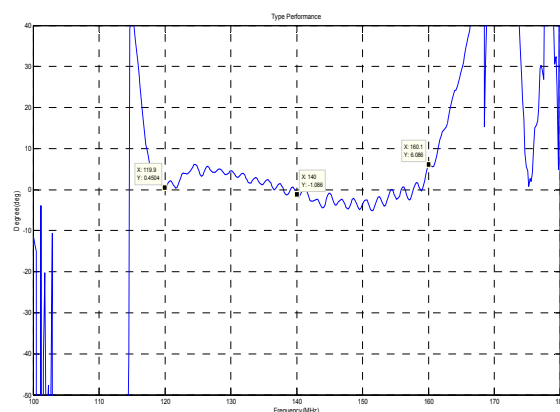
Group Delay Variation(f0±20MHz)



Horizontal: 10MHz/Div

Vertical: 50ns/Div

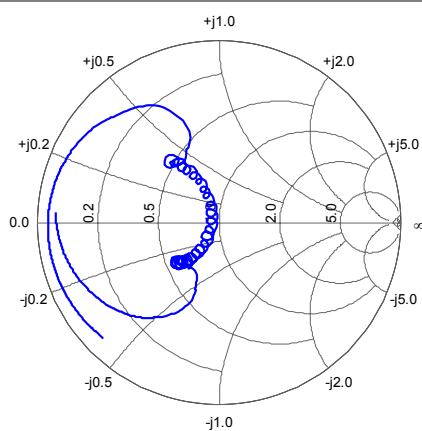
Phase Linearity(f0±20MHz)



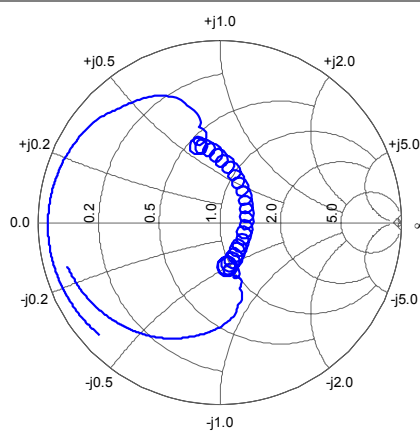
Horizontal: 10MHz/Div

Vertical: 10deg/Div

Smith Chart S11



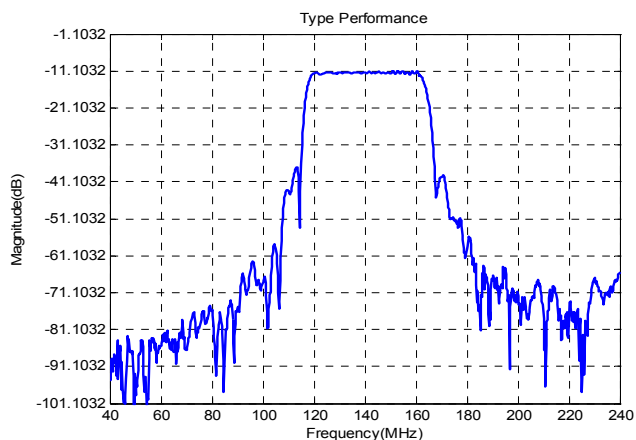
Smith Chart S22





Typical Performance(single-balance)

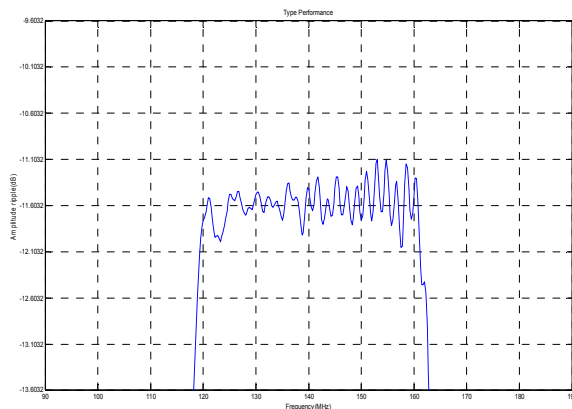
Frequency Respond



Horizontal: 20MHz/Div

Vertical: 10dB/Div

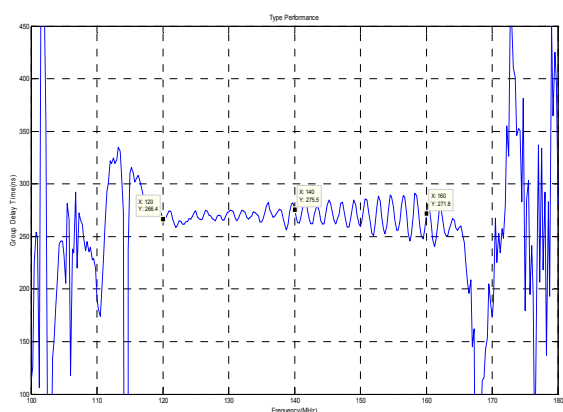
Passband Respond



Horizontal: 10MHz/Div

Vertical: 0.5dB/Div

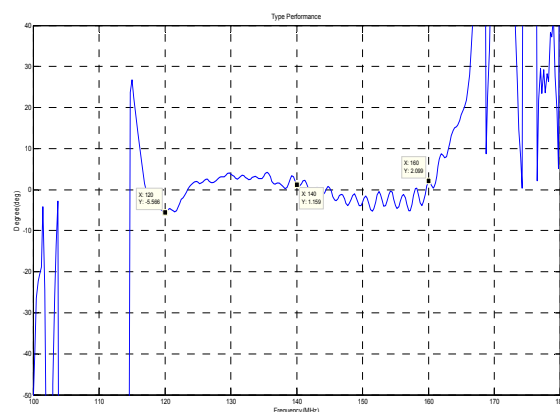
Group Delay Variation(f0±20MHz)



Horizontal: 10MHz/Div

Vertical: 50ns/Div

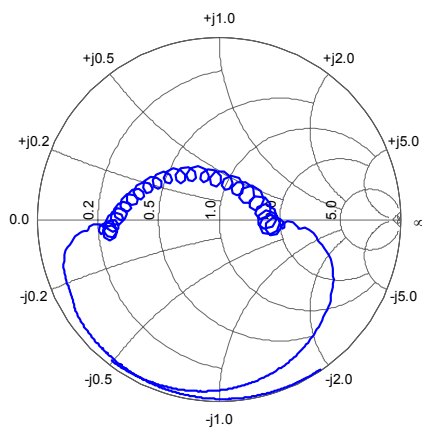
Phase Linearity(f0±20MHz)



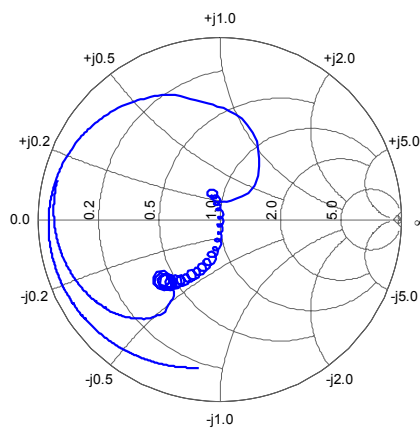
Horizontal: 10MHz/Div

Vertical: 10deg/Div

Smith Chart S11



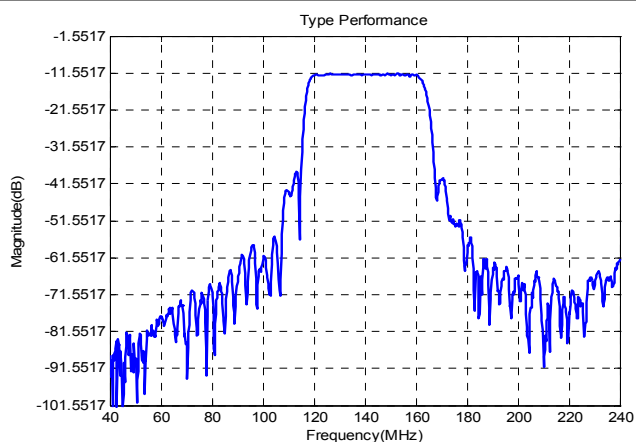
Smith Chart S22





Typical Performance(balance-single)

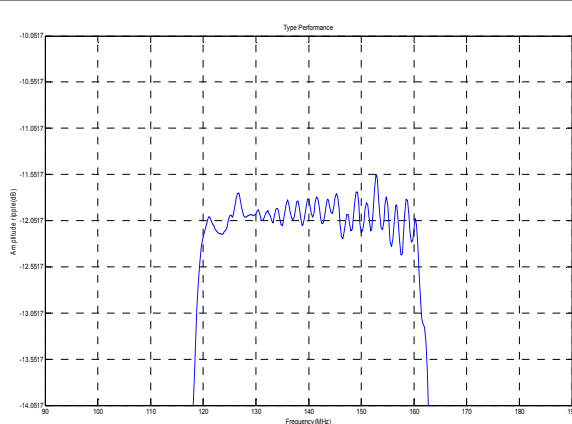
Frequency Respond



Horizontal: 20MHz/Div

Vertical: 10dB/Div

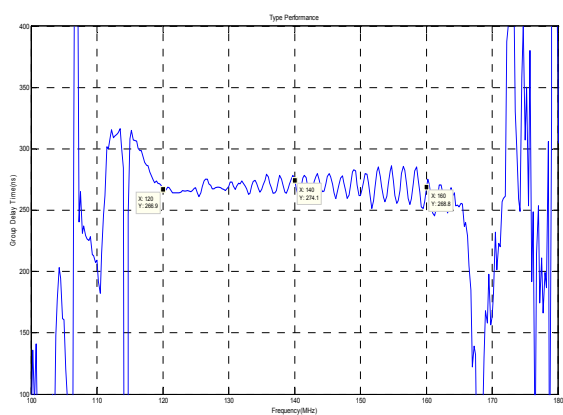
Passband Respond



Horizontal: 10MHz/Div

Vertical: 0.5dB/Div

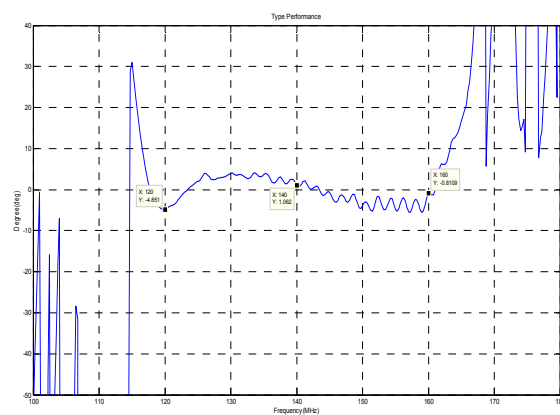
Group Delay Variation(f0±20MHz)



Horizontal: 10MHz/Div

Vertical: 50ns/Div

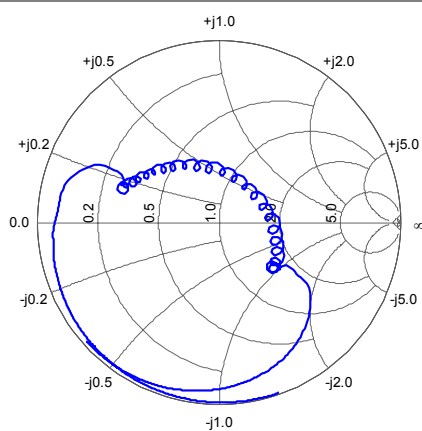
Phase Linearity(f0±20MHz)



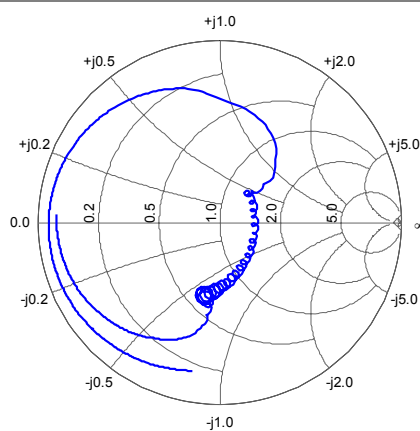
Horizontal: 10MHz/Div

Vertical: 10deg/Div

Smith Chart S11



Smith Chart S22



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