



\* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band VIII Duplexer	Date	March 31, 2010
Part Number	FAR-D5NF-942M50-P1GZ	Version 1.1ef	

**Table 1. Electrical Specification**

Item			Condition (MHz)	Specification			Unit	Remarks
				Min	Typ	Max		
Tx to ANT	Insertion loss		880.4~914.6	-	2.2	3.0	dB  (*1)	
			882.4~912.6	-	1.9	2.5 (*2)		
	Pass band ripple		880.4~914.6	-	0.9	2.0	dB	
	VSWR	Tx	880.4~914.6	-	2.0	2.2	-	
		Ant		-	1.8	2.1	-	
	Input Power		880.4~914.6	+29dBm, Ta=+50°C 50000h, CW			-	
	Absolute attenuation		927.4~957.6	43(*2)	48	-	dB	
			1574~1577	40	43	-	dB	
			1760~1830	32	36	-	dB	
			2640~2745	21	26	-	dB	
ANT to Rx	Insertion loss		925.4~959.6	-	2.6	3.3	dB  (*1)	
			927.4~957.6	-	2.3	2.8 (*2)		
			925~960	-	2.7	3.5		
	Pass band ripple		925~960	-	0.9	2.0	dB	
	Amplitude balance		925~960	-1.1	-0.3/ +0.7	+1.1	dB	
	Phase balance		925~960	-11	-7/ +4	+11	deg	
	VSWR	Ant	925~960	-	1.6	2.0	-	
		Rx		-	1.9	2.2	-	
	Absolute attenuation		882.4~912.6	48(*2)	57	-	dB	
Tx to Rx	Isolation		882.4~912.6	54(*2)	58	-	dB	
			927.4~957.6	48(*2)	50	-	dB	
Terminating Impedance			Tx port	50			Ohm	Single-ended
			Rx port	100			Ohm	Differential
			Ant port	50			Ohm	Single-ended
Operating Temperature				-20 to +85			°C	
Device size (L typ. x W typ. x H max.)				2.5 x 2.0 x 0.65			mm	

(\*1) Specification of insertion loss excludes loss that comes from the test board. (Approximately 0.05dB)

(\*2) Integrated over +/-1.92MHz around the WCDMA channel center frequency



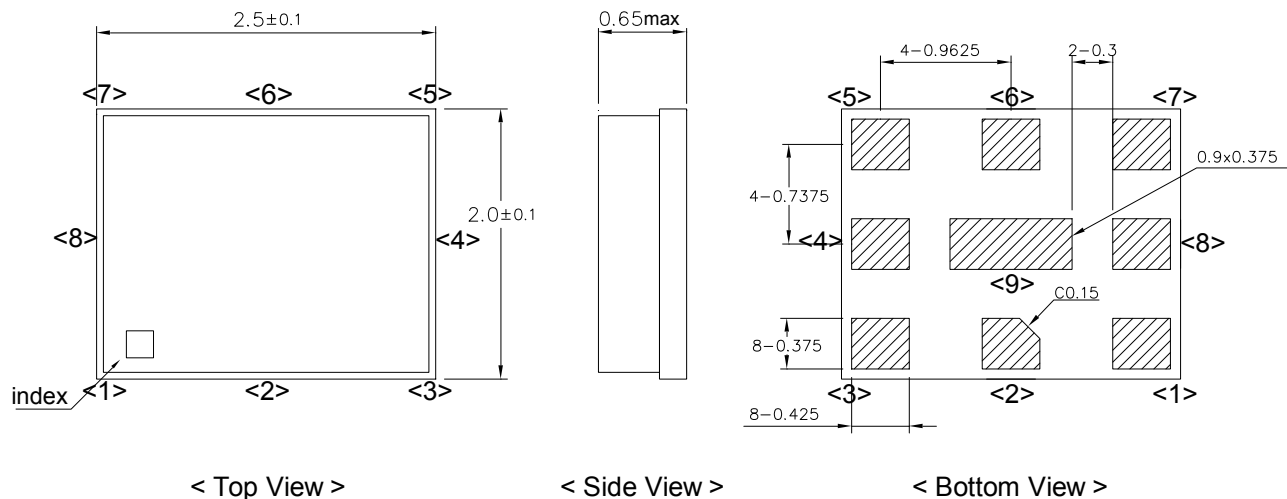
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## Dimensions



Unit: mm

## Pin Configuration

Pin No.	Pin name	Description
1	Rx	Receiver Pin (balanced)
2	GND	Ground Pin
3	Tx	Transmitter Pin
4	GND	Ground Pin
5	GND	Ground Pin
6	ANT	Antenna Pin
7	GND	Ground Pin
8	Rx	Receiver Pin (balanced)
9	GND	Ground Pin

**Figure 1. Dimensions and Pin assignment**



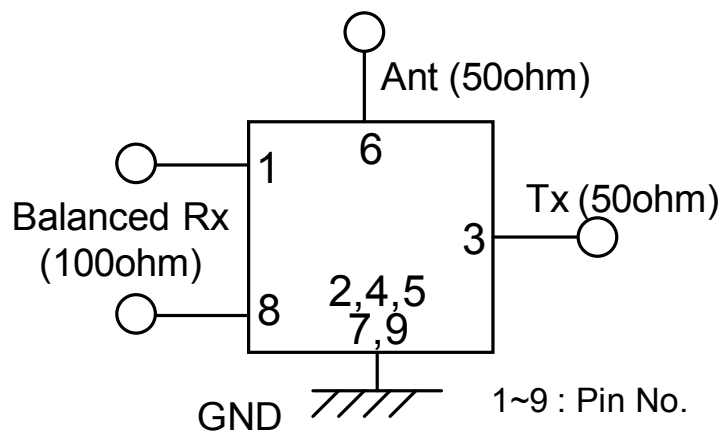
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## Evaluation Circuit



## Recommended foot print pattern

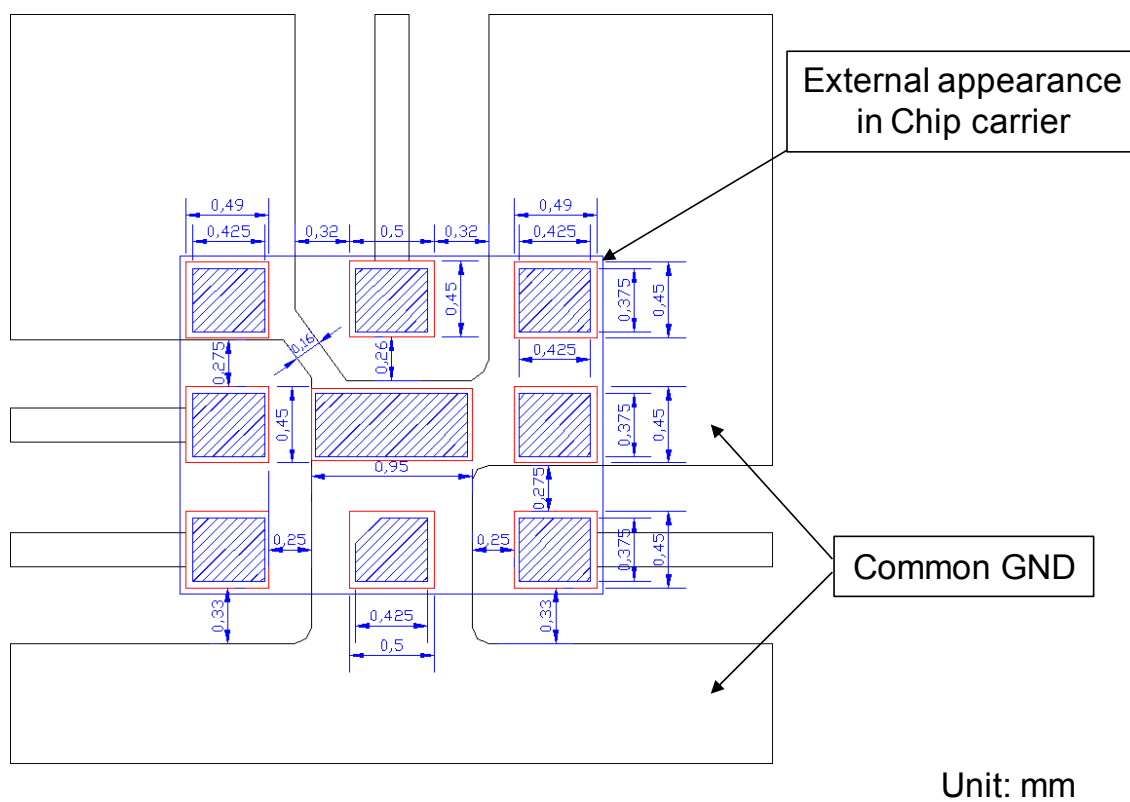


Figure 2. Recommended foot print pattern



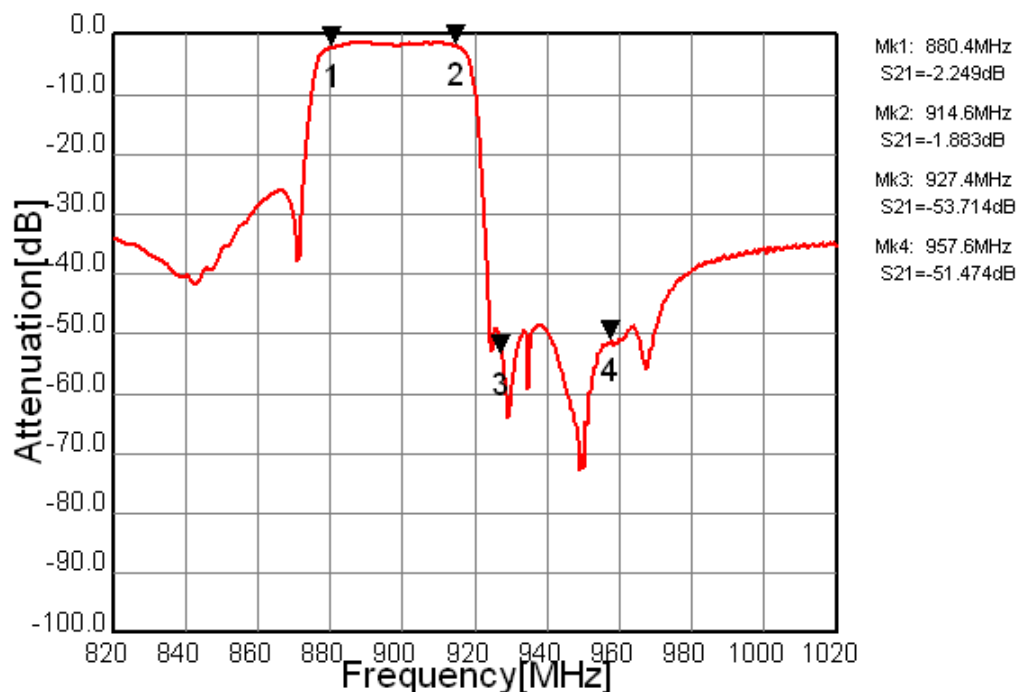
\* Pb Free Part



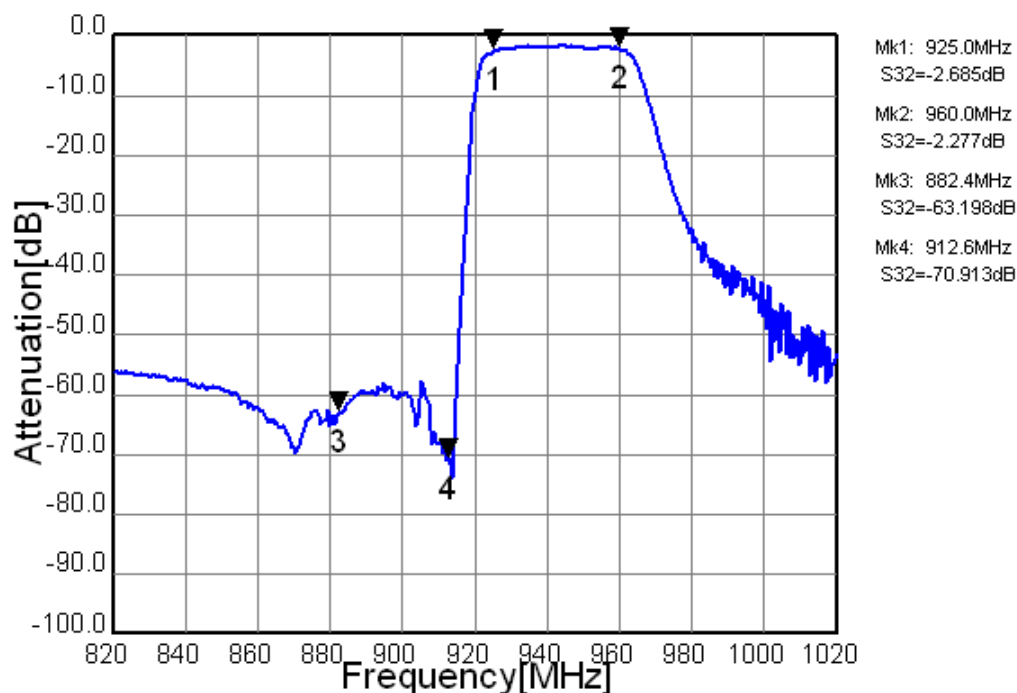
MSL1

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System	Band VIII Duplexer	Date	March 31, 2010
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## Tx to Ant



## Ant to Rx



**Figure 3-1. Electrical Characteristics**

These data **include** loss that comes from the test board. (Approximately 0.05dB)

**TAIYO YUDEN**



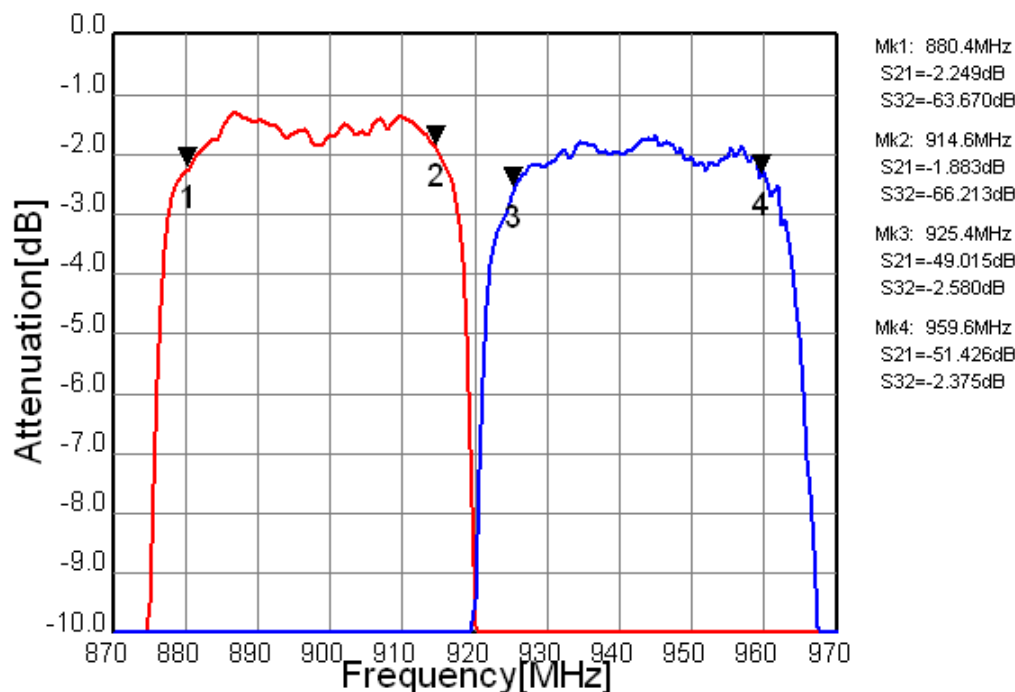
\* Pb Free Part



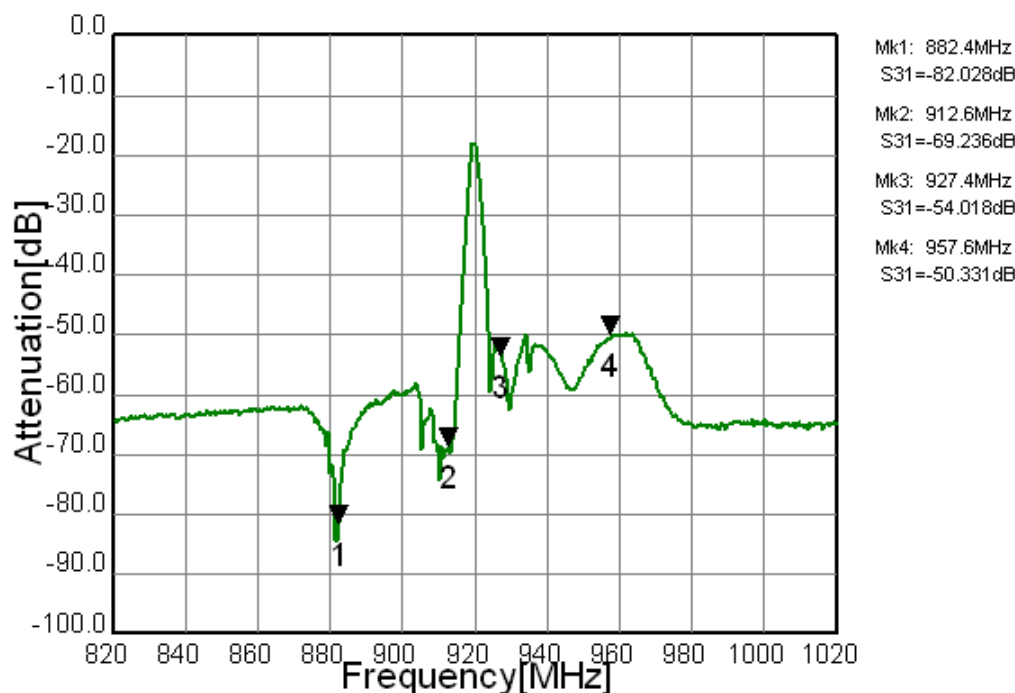
MSL1

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## Tx to Ant, Ant to Rx



## Tx to Rx Isolation



**Figure 3-2. Electrical Characteristics**

These data **include** loss that comes from the test board. (Approximately 0.05dB)

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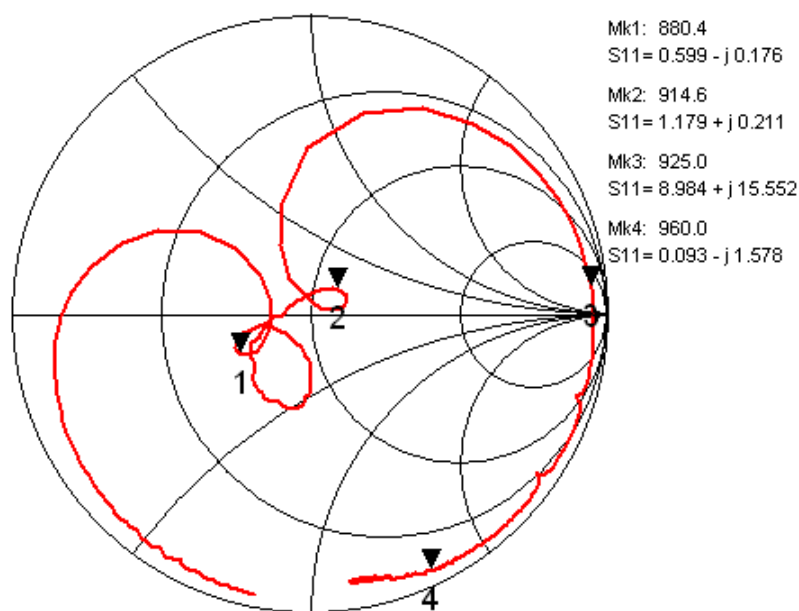
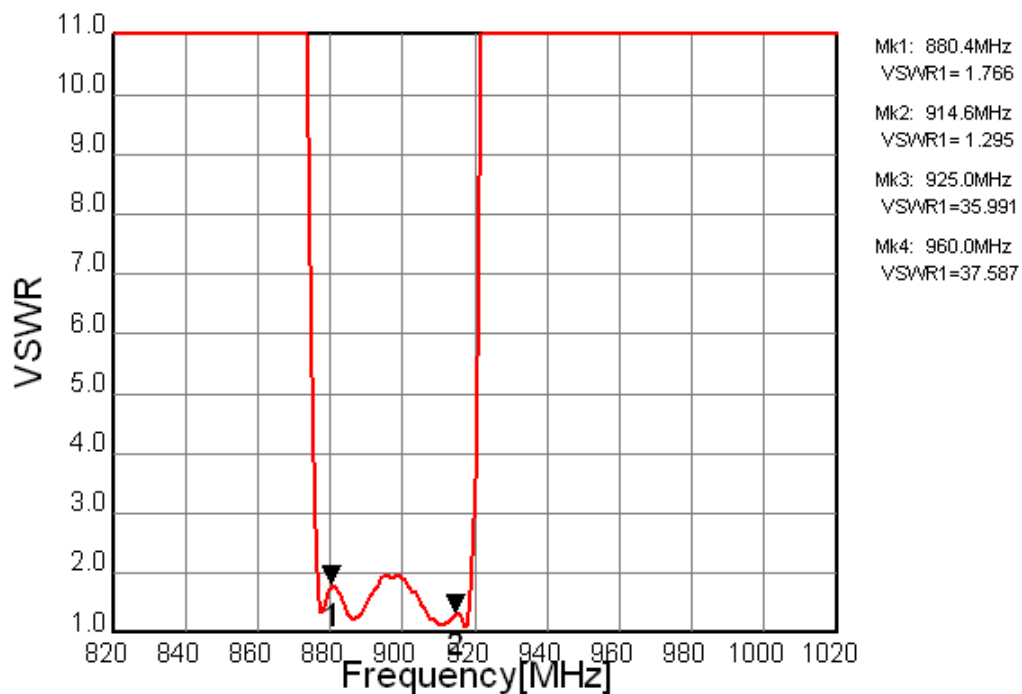
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## Tx Port



**Figure 3-3. Electrical Characteristics**



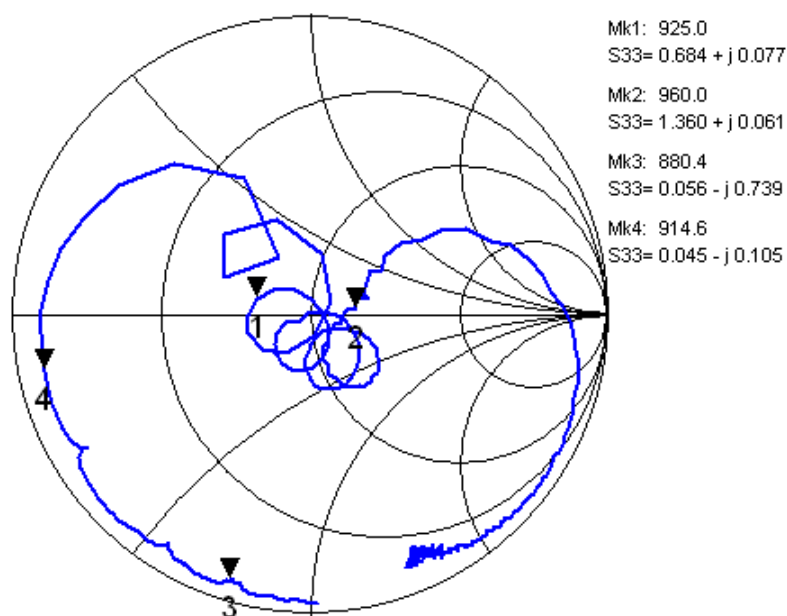
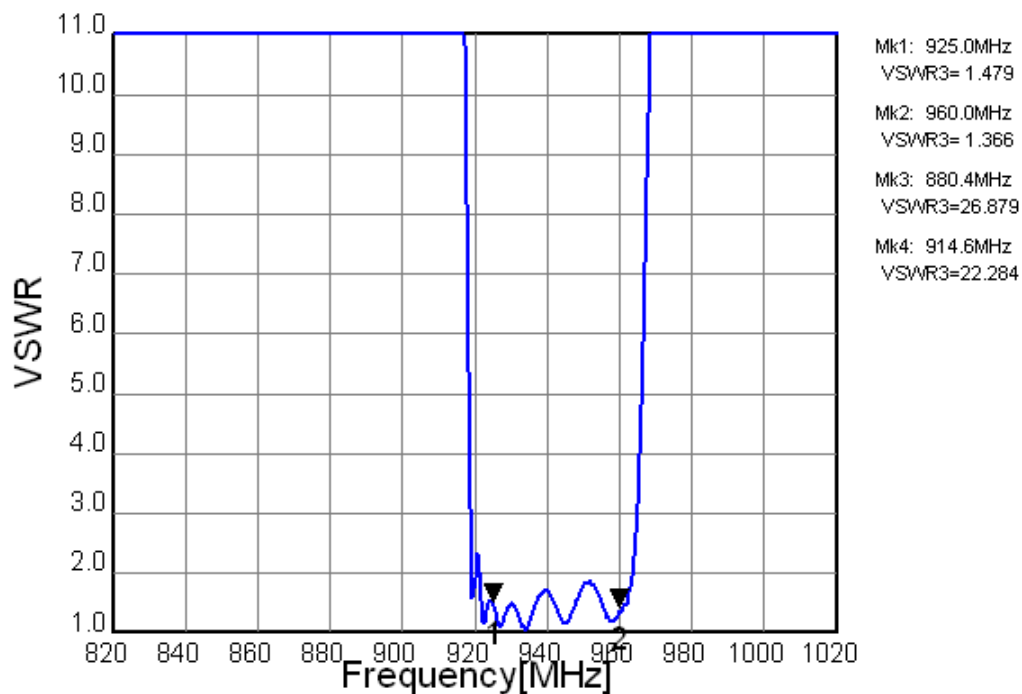
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MSL1

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## Rx Port



**Figure 3-4. Electrical Characteristics**



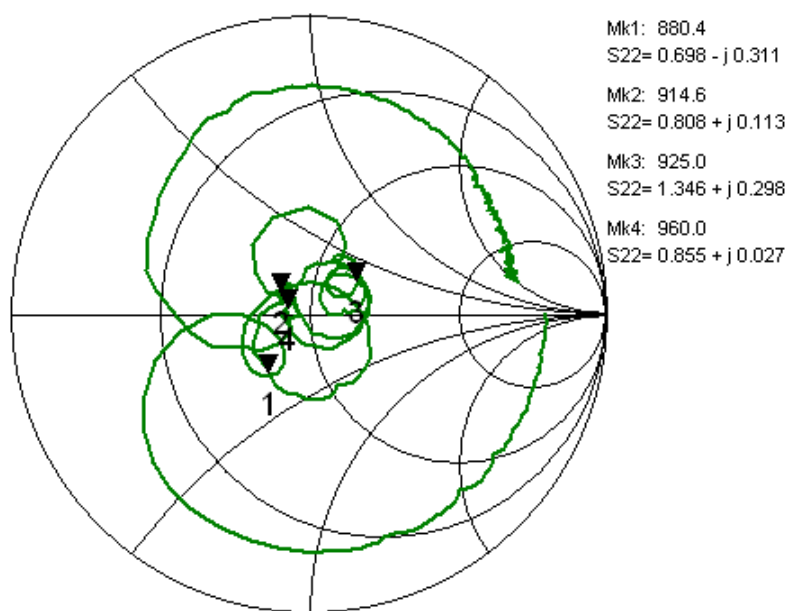
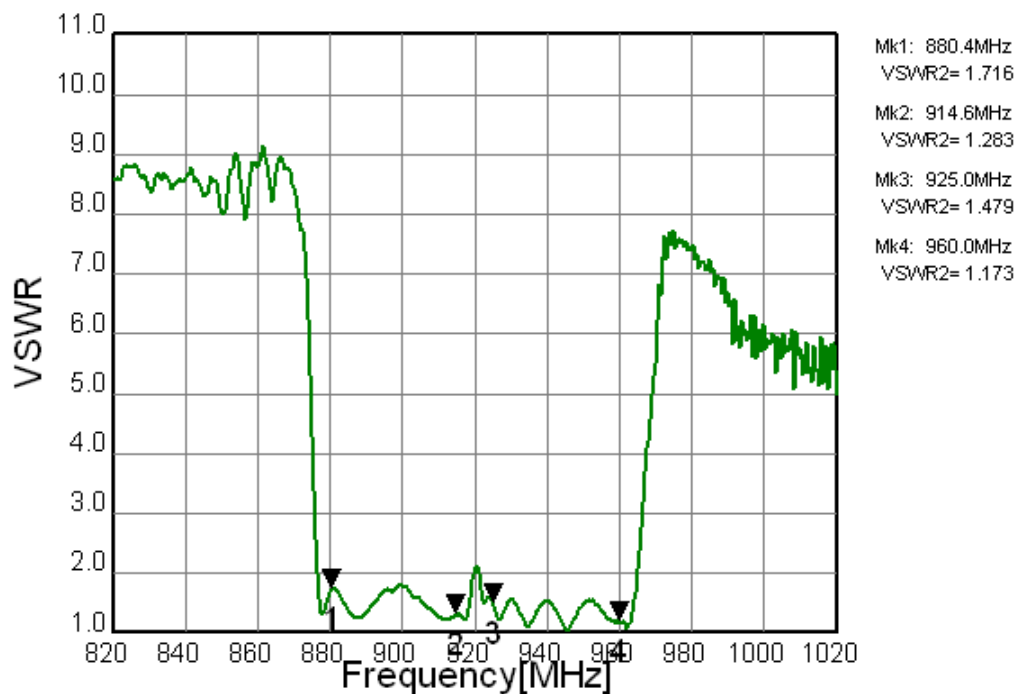
\* Pb Free Part



MSL1

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Part Number	FAR-D5NF-942M50-P1GZ	Version 1.1ef	

## Ant Port



**Figure 3-5. Electrical Characteristics**





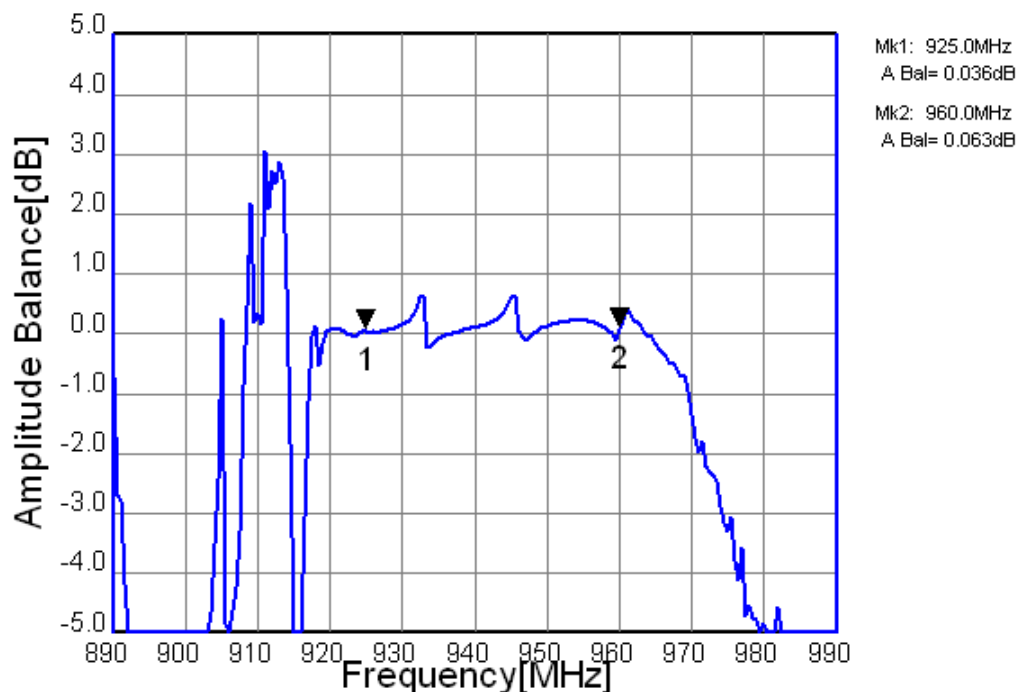
\* Pb Free Part



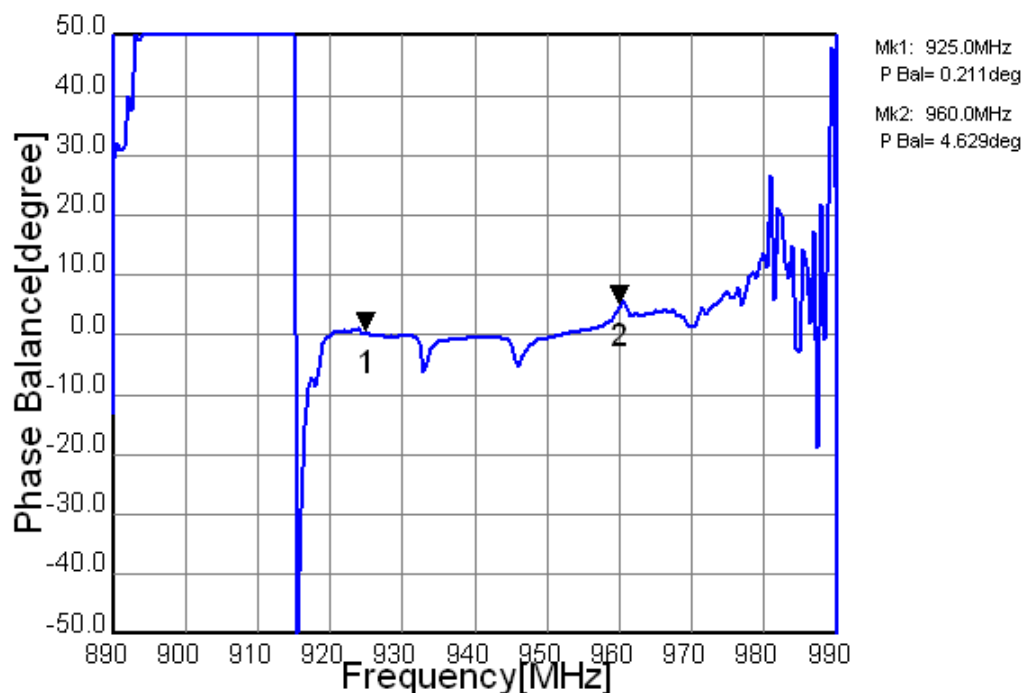
MSL1

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Part Number	FAR-D5NF-942M50-P1GZ	Version 1.1ef	

## Ant to Rx (Amplitude balance)



## Ant to Rx (Phase balance)



**Figure 3-6. Electrical Characteristics**

**TAIYO YUDEN**



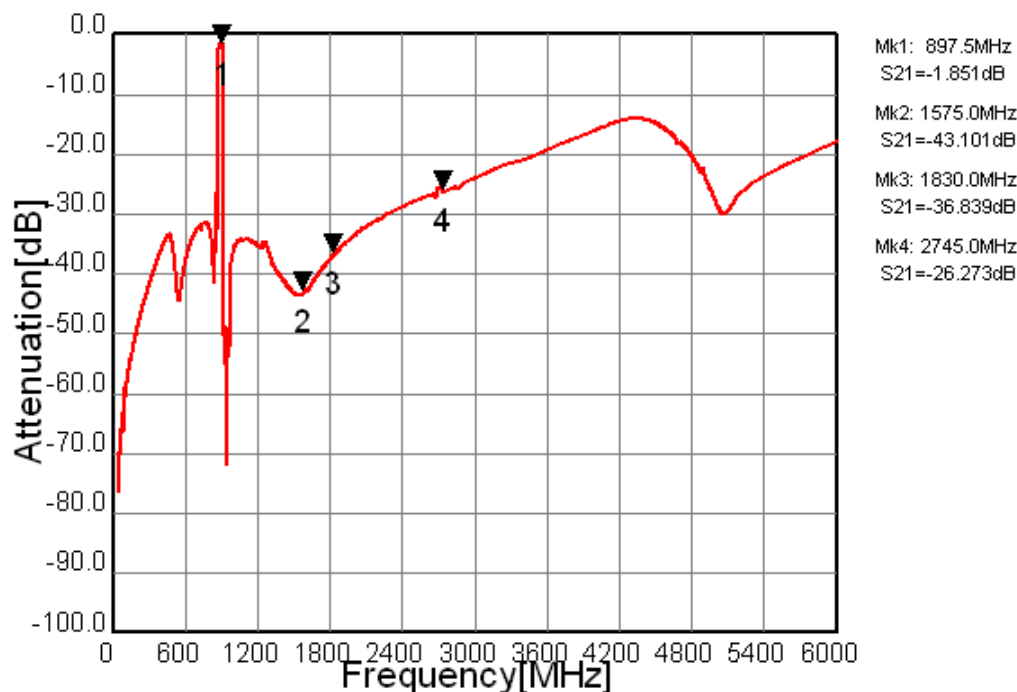
\* Pb Free Part



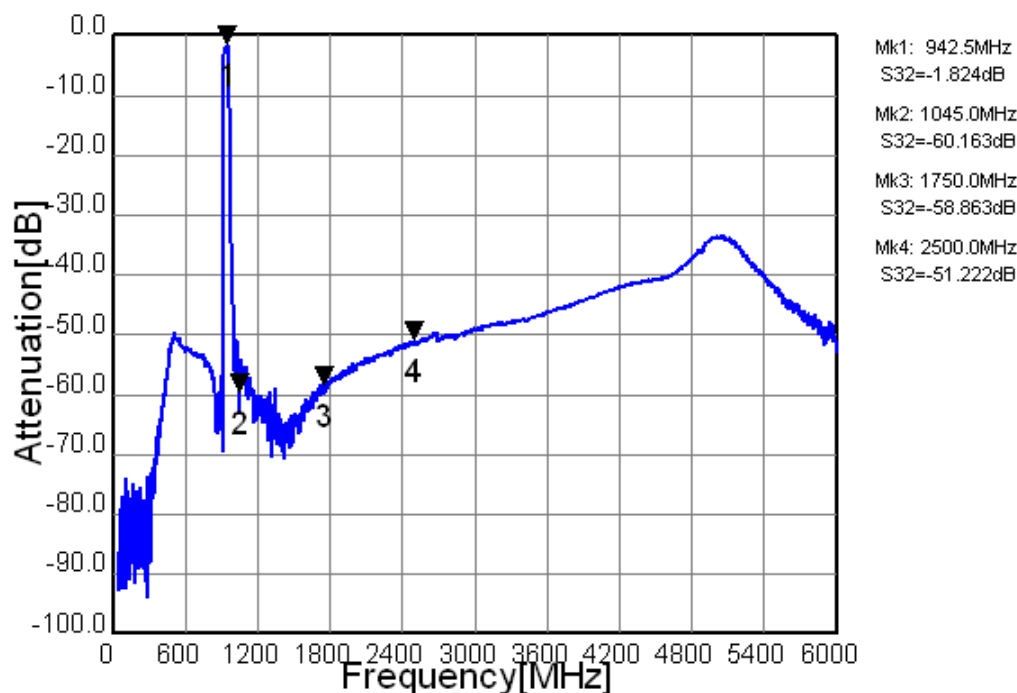
MSL1

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## Tx to Ant (Wide span)



## Ant to Rx (Wide span)



**Figure 3-7. Electrical Characteristics**