



\* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	BC0 + BC10 Duplexer	Date	March 31, 2011
Part Number	D5NF878M0P1ET	Version 3.1bc	

**Table 1. Electrical Specification**

Item			Condition (MHz)	Specification			Unit	Remarks
				Min	Typ	Max		
Tx to ANT	Insertion loss		817~849	-	1.9	2.5	dB (*1)	
	Ripple		817~849	-	0.6	1.4	dB	
	VSWR	Ant	817~849	-	1.8	2.1	-	
		Tx	817~849	-	2.0	2.3		
	Input Power		817~849	29dBm, Ta=+50°C 50kh, CW			-	
	Absolute attenuation		772~804	30	35	-	dB	
			862~894	44	47	-	dB	
			1573~1606	40	42	-	dB	
			1624~1708	40	43	-	dB	
			1930~1990	44	50	-	dB	
			2110~2170	44	50	-	dB	
			2400~2557	36	43	-	dB	
ANT to Rx	Insertion loss		862~894	-	2.5	3.3	dB (*1)	-30 to -20 °C
				-	2.5	3.2		-20 to +20 °C
				-	2.5	3.0		+20 to +85 °C
	Ripple		862~894	-	0.7	1.8	dB	
	Phase balance		862~894	-13	-9 / +1	+13	Deg	
	Amplitude balance		862~894	-1.4	-0.5 / +0.8	+1.4	dB	
	VSWR	Ant	862~894	-	1.6	2.0	-	
		Rx	862~894	-	2.0	2.2		
	Absolute attenuation		817~849	50	55	-	dB	
			849-854	10	38	-	dB	
			2400~2500	45	51	-	dB	
Tx to Rx	Isolation		817~849	55	58	-	dB	
			862~894	48	50	-	dB	
Terminating Impedance			Tx port	50			Ohm	Single-ended
			Rx port	100			Ohm	Differential
			Ant port	50			Ohm	Single-ended
Operating Temperature				-30 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)

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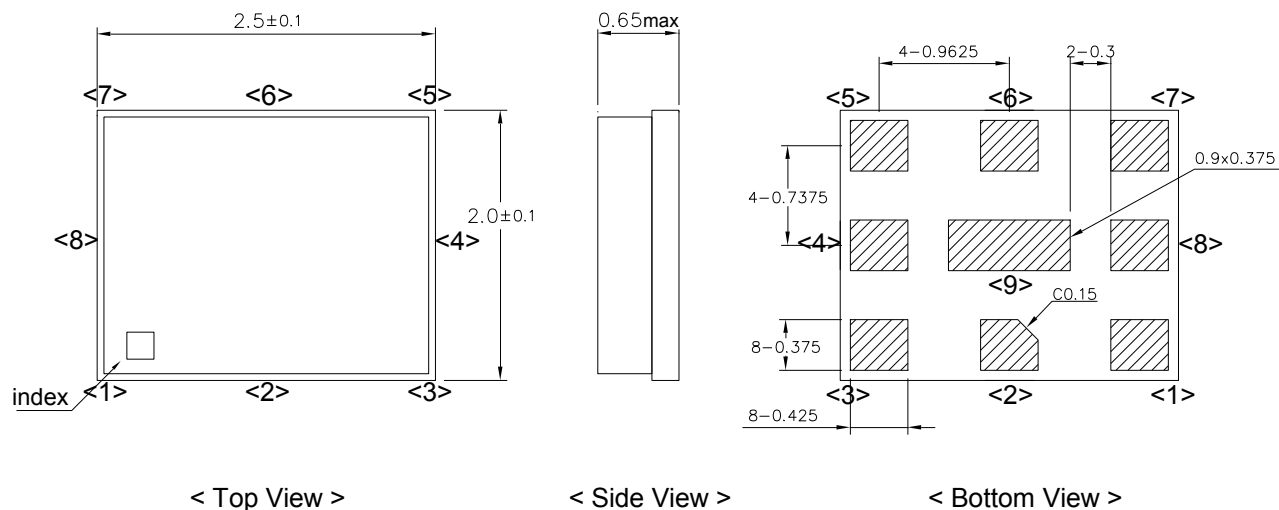
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## Dimensions

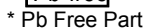


Unit: mm

## 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**



## Evaluation Circuit



**Figure 2. Recommended foot print pattern**

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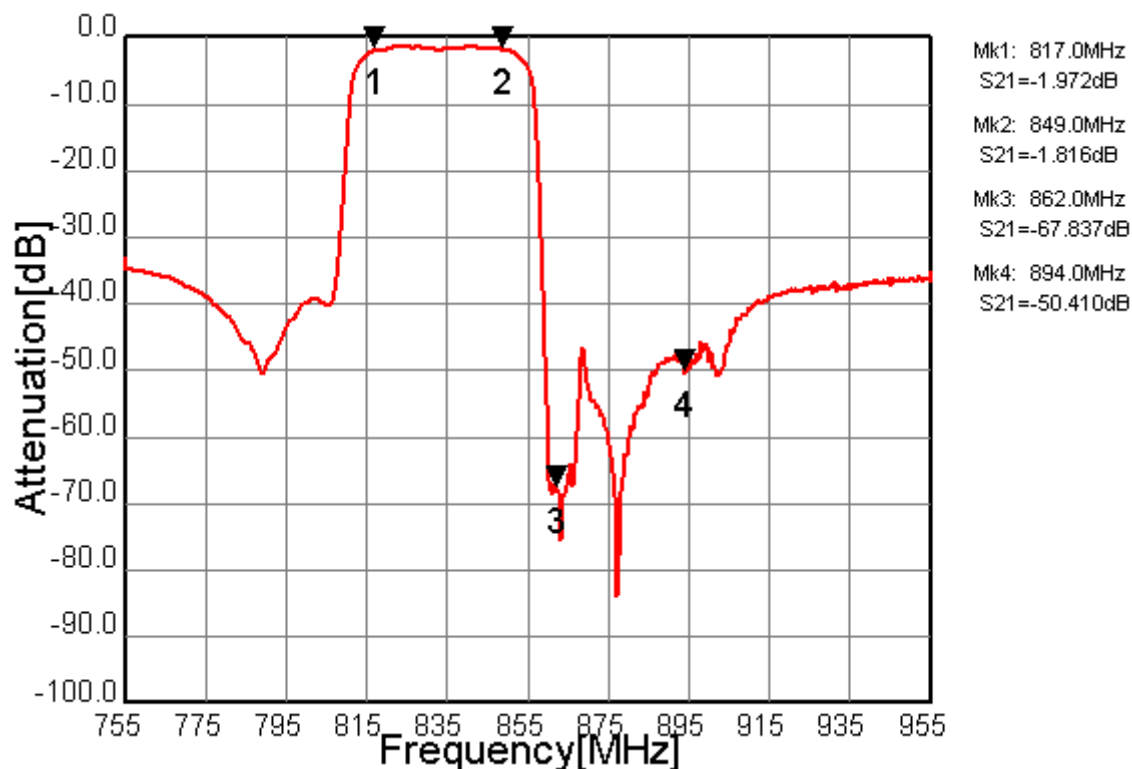
\* Pb Free Part



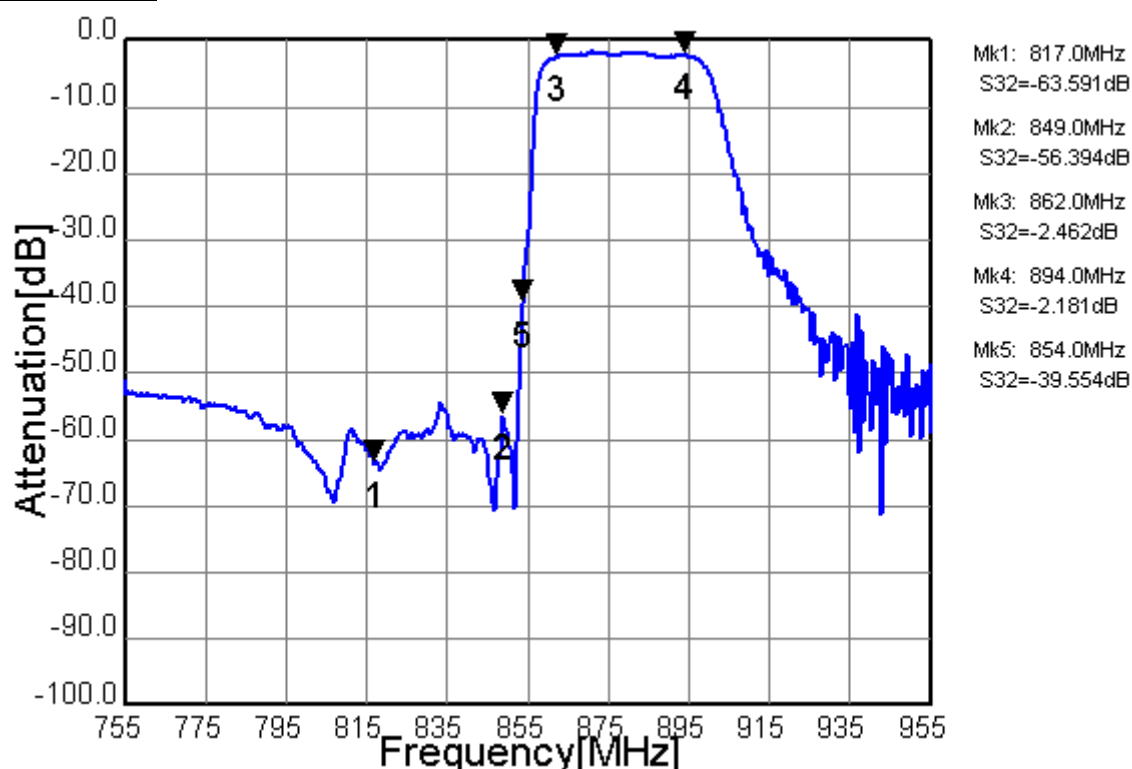
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## Tx to Ant



## Ant to Rx



**Figure 3-1. Electrical Characteristics**

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

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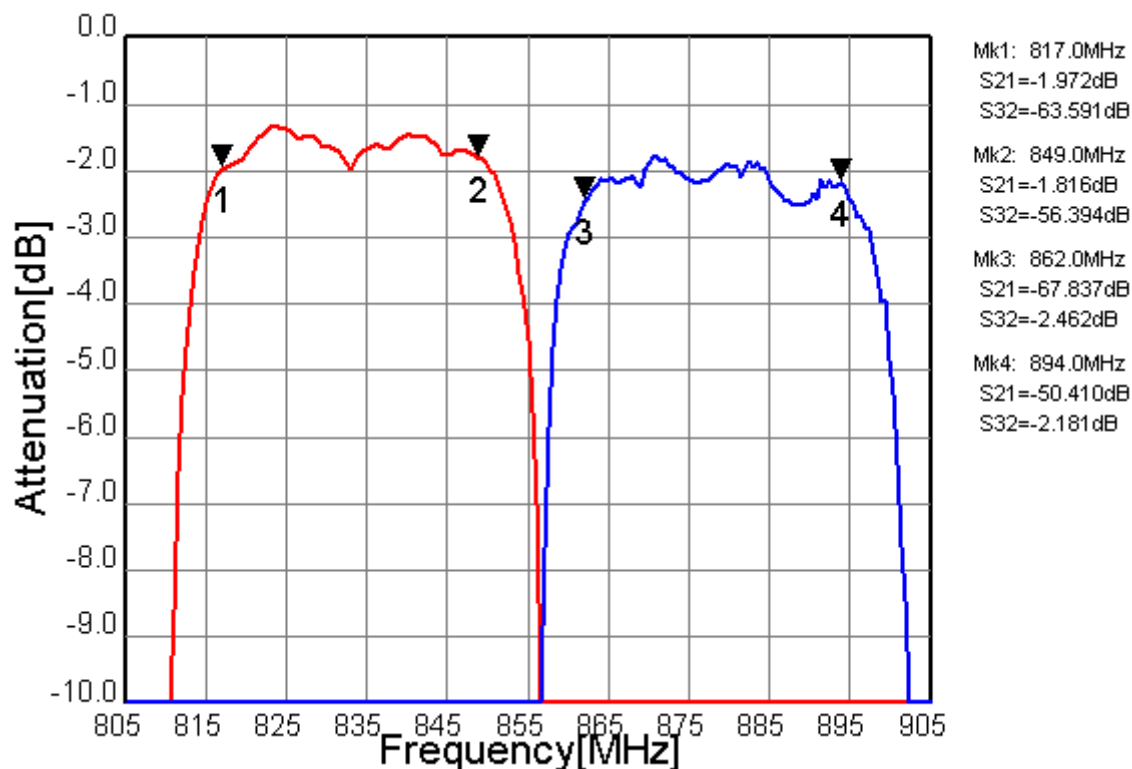
\* Pb Free Part



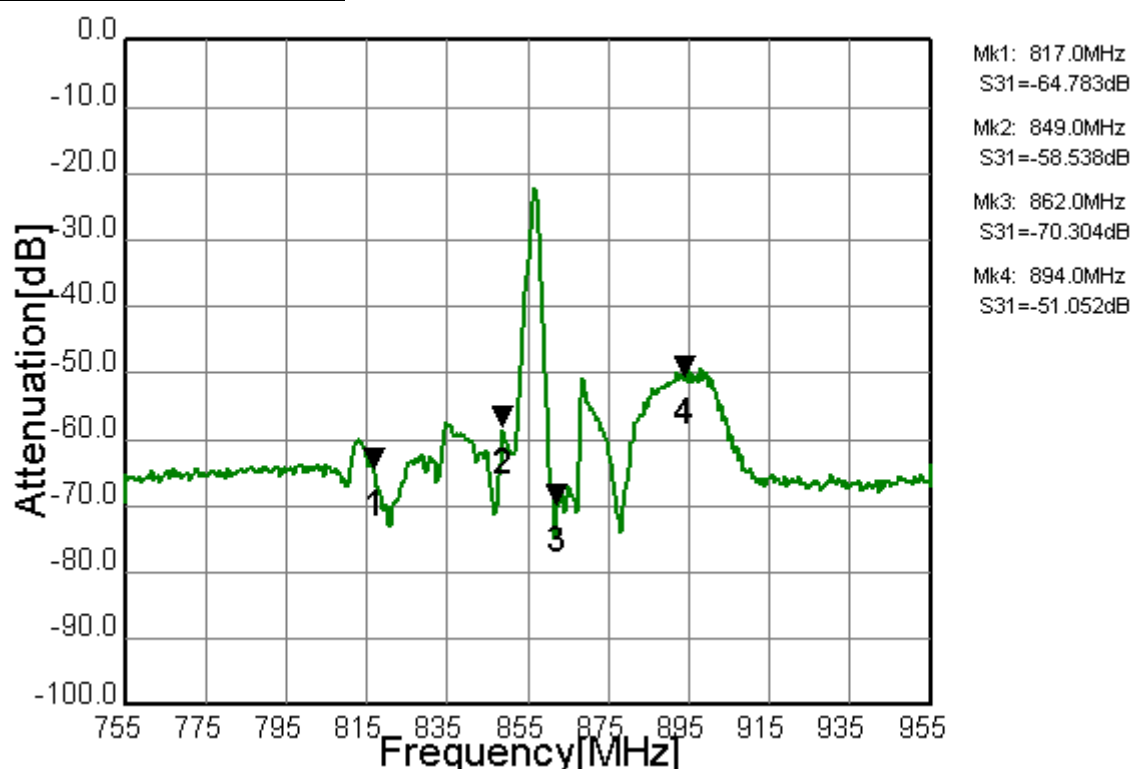
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Part Number	D5NF878M0P1ET	Version 3.1bc	

## 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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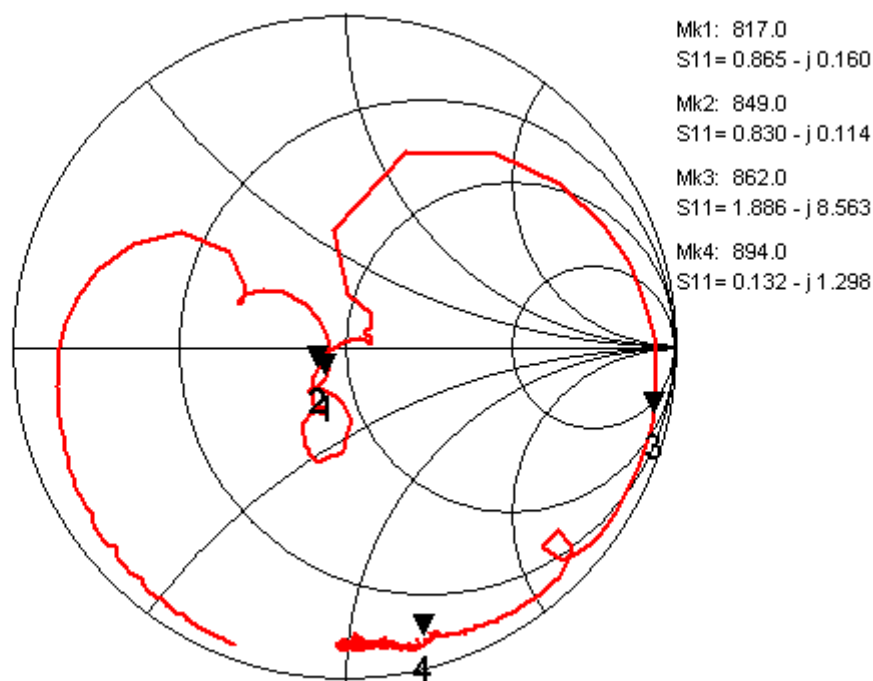
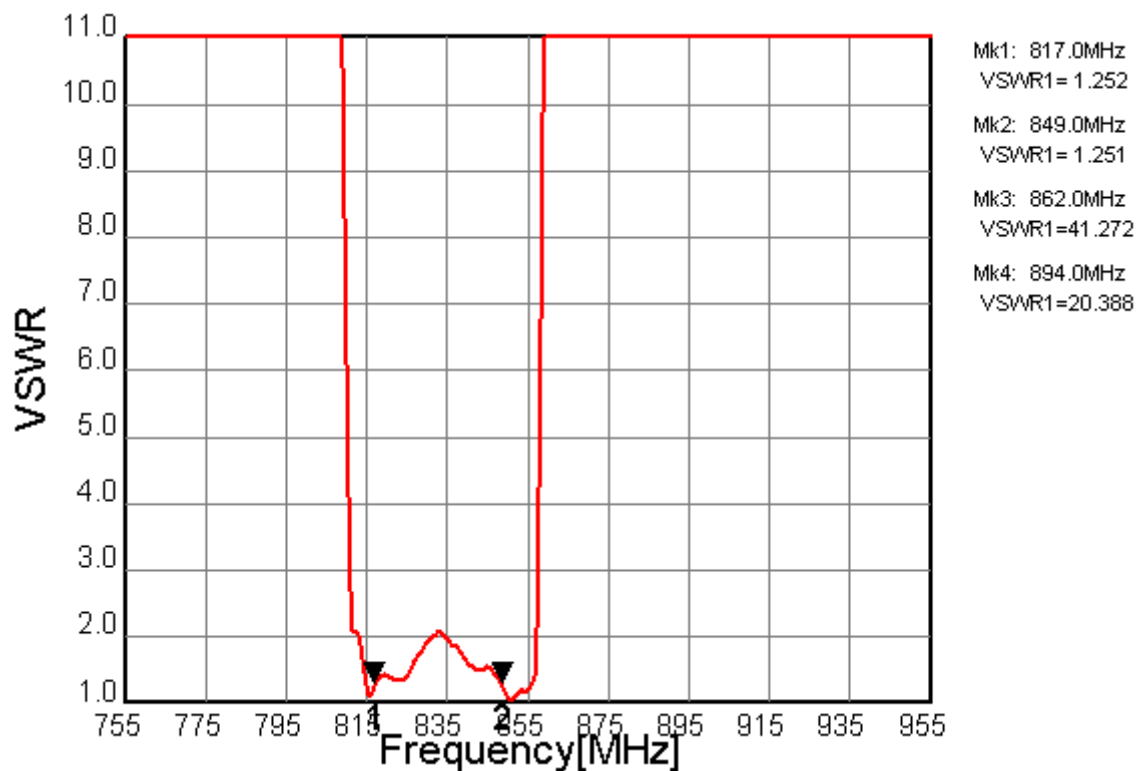
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## Tx Port



**Figure 3-3. Electrical Characteristics**

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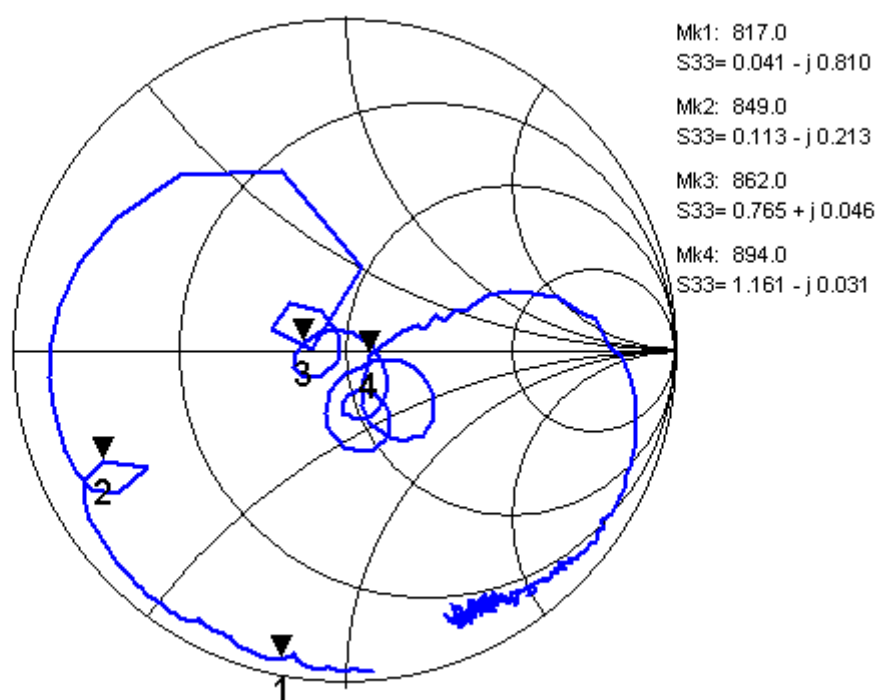
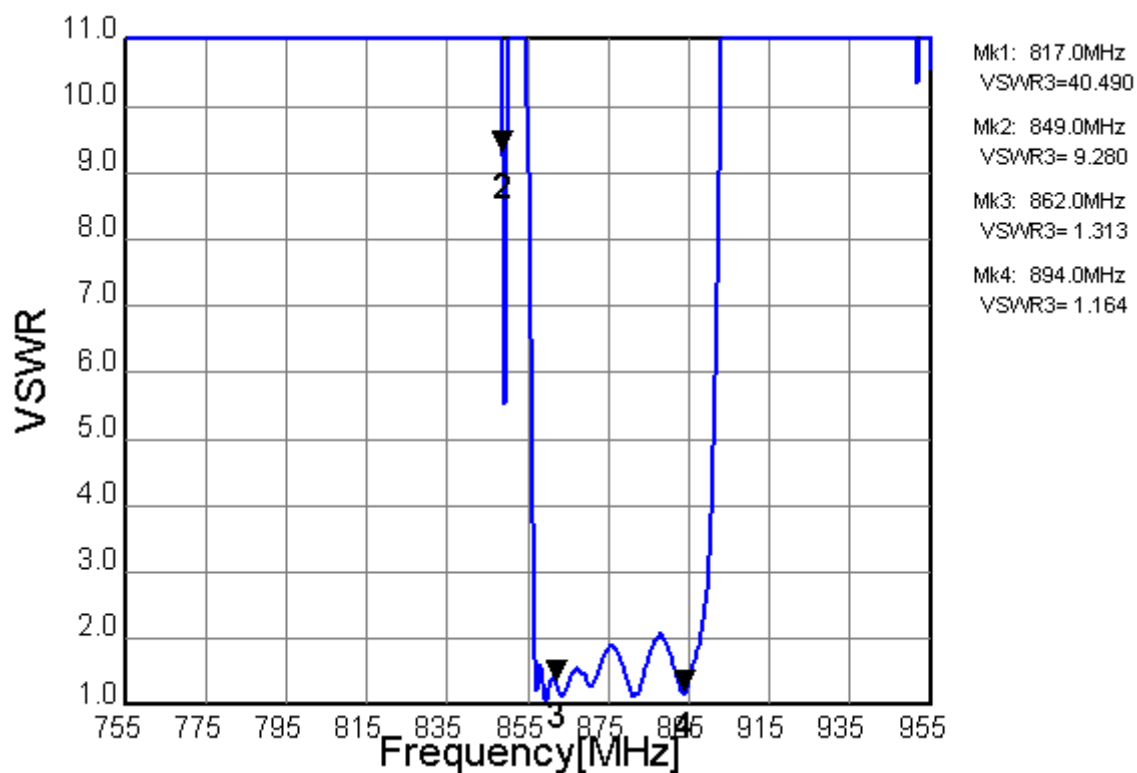
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## Rx Port



**Figure 3-4. Electrical Characteristics**



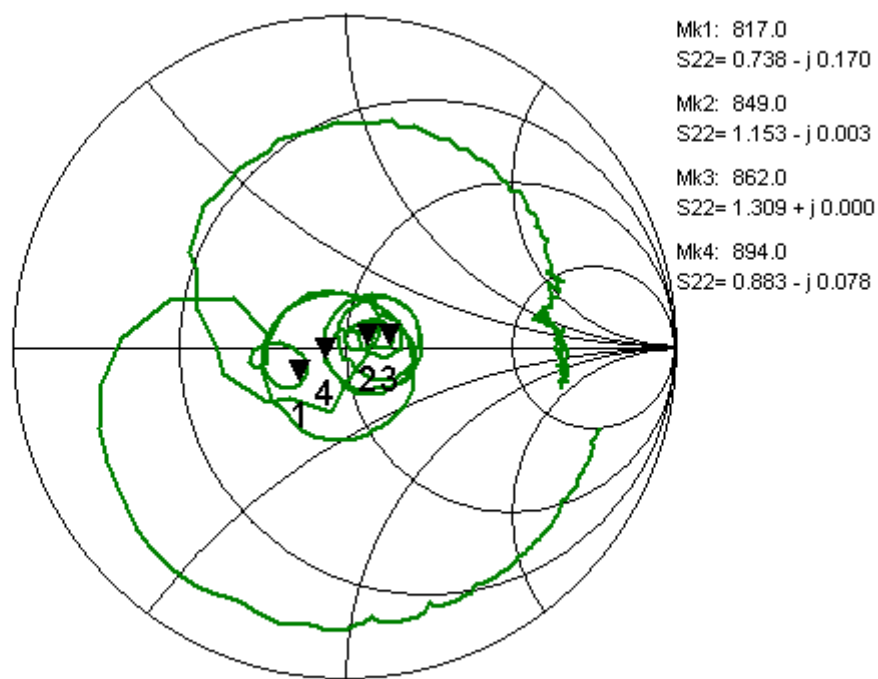
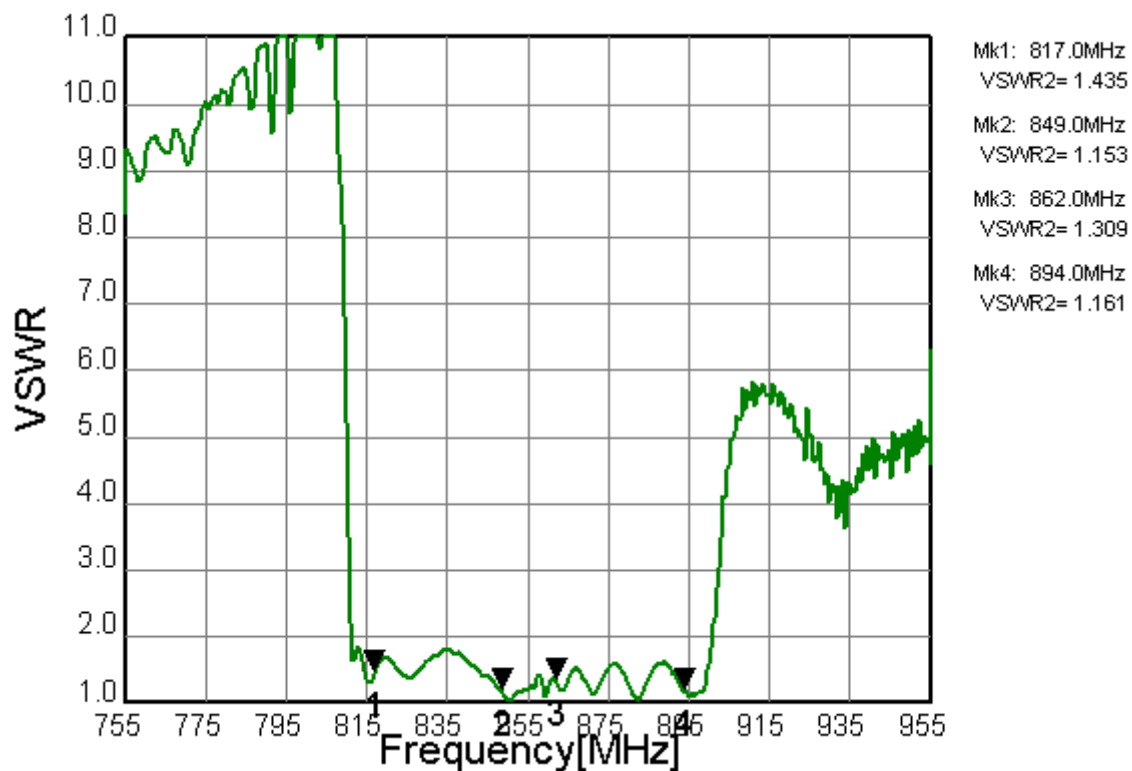
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## Ant Port



**Figure 3-5. Electrical Characteristics**

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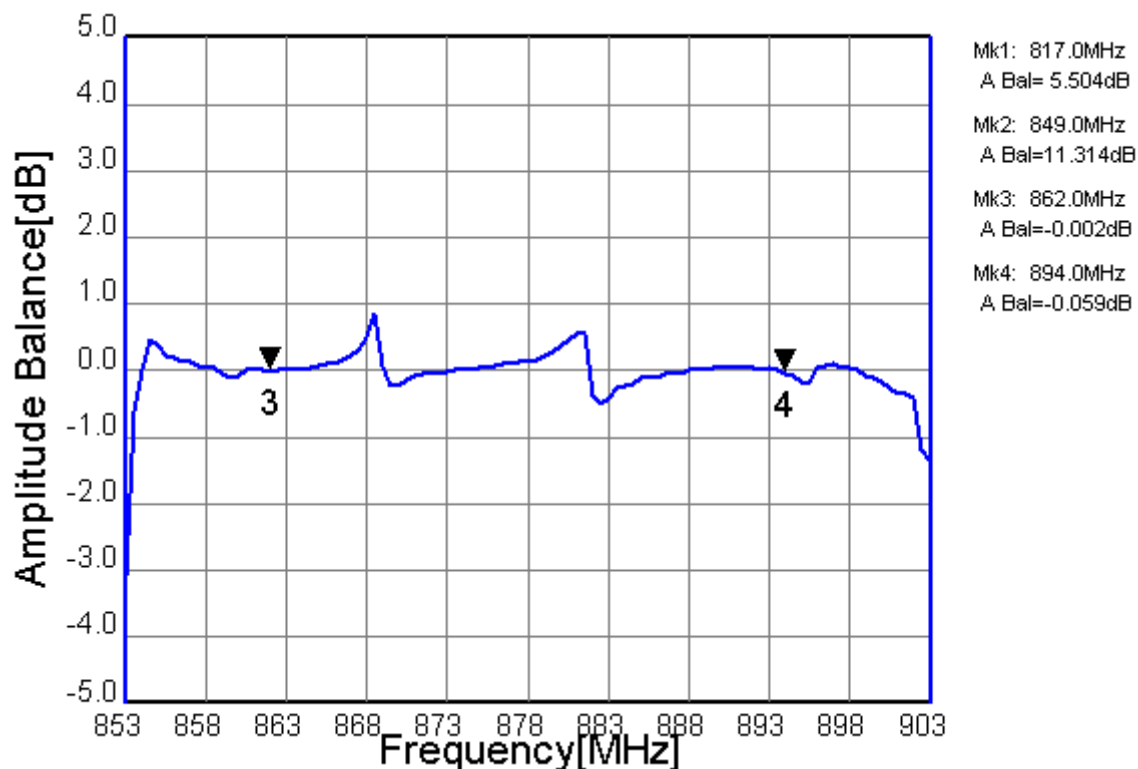
\* Pb Free Part



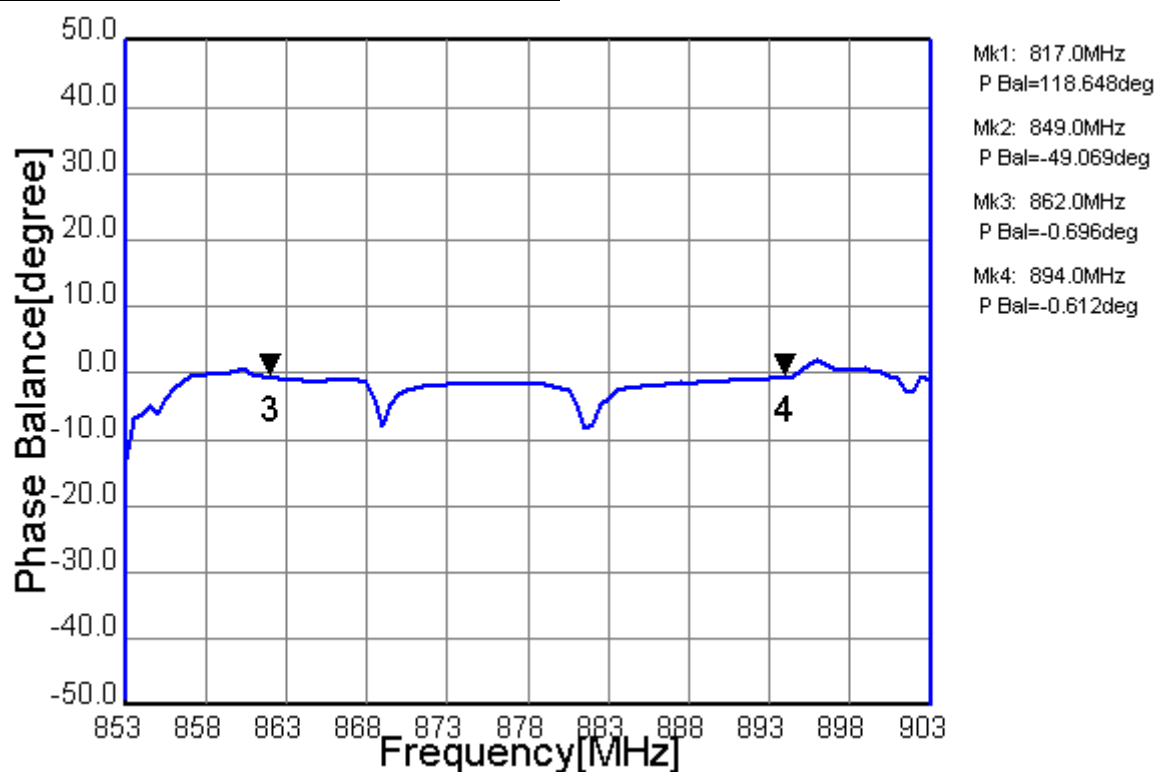
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## Ant to Rx (Amplitude balance)



## Ant to Rx (Phase balance)



**Figure 3-6. Electrical Characteristics**

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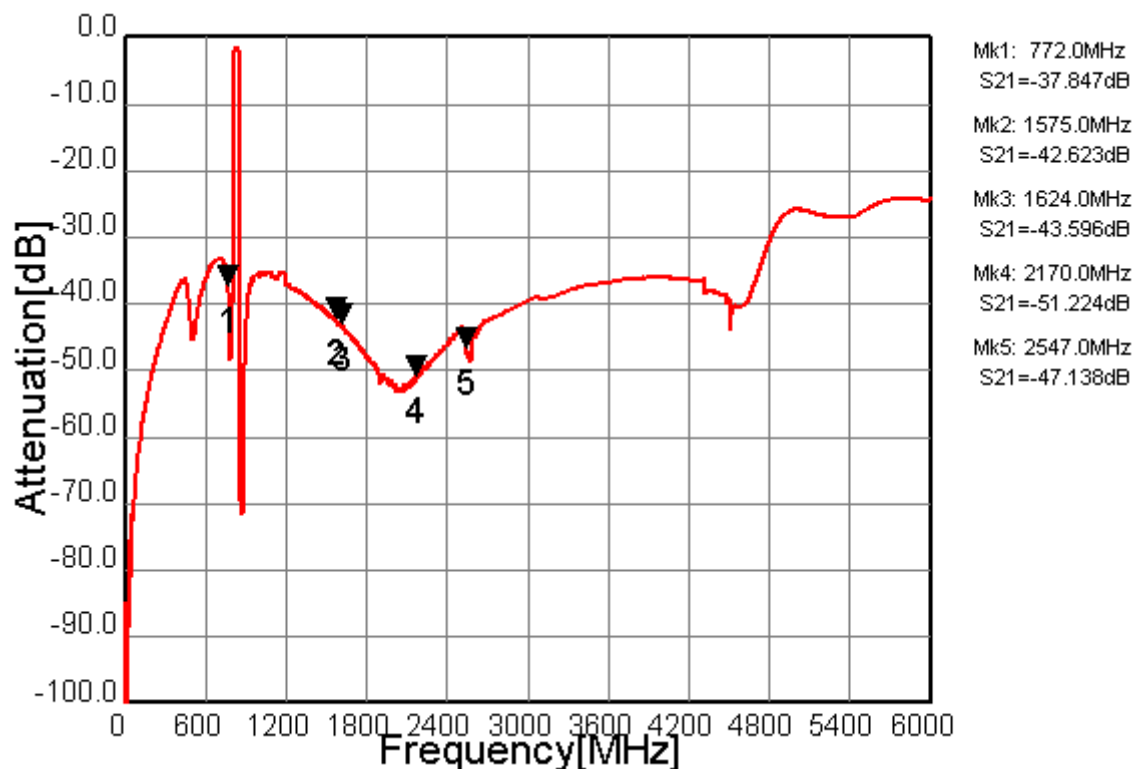
\* Pb Free Part



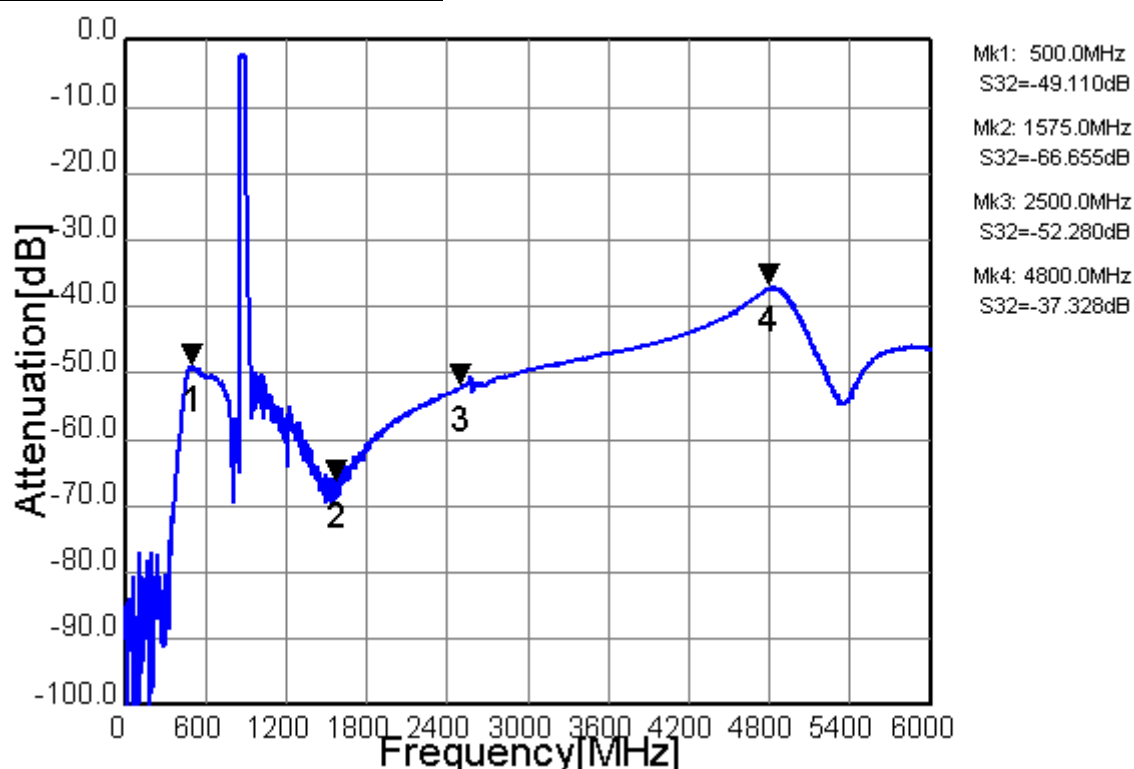
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## Tx to Ant (Wide span)



## Ant to Rx (Wide span)



**Figure 3-7. Electrical Characteristics**

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## Ordering Code

Ordering Code	Packing	Reel size	Status
D5NF878M0P1ET- <b>Z</b>	Tape & Reel	3,000 pcs.	MP
D5NF878M0P1ET- <b>ZA</b>	Tape & Reel	less than 3,000 pcs.	MP
D5NF878M0P1ET- <b>U</b>	Tape & Reel	10,000 pcs.	MP
D5NF878M0P1ET- <b>UA</b>	Tape & Reel	less than 10,000 pcs.	MP
D5NF878M0P1ET-Q	Bulk	few pcs.	MP

\*Minimum order quantity (MOQ) is assigned for each inquiry, Please contact to Sales Representatives..

\*MP : Mass Production

( For Engineering Sample (ES) order, please add a letter of "S" at the end of the ordering code indicated above. )

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Please conduct validation and verification of products in actual condition of mounting and operating environment before commercial shipment of the equipment.

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