



\* Pb Free Part



Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 21 Duplexer	Date	Mar. 07, 2018
Part Number	D6DA1G503K2Y1	Version 2.2cbC	Final

**Table 1-1. Electrical Specification**

Item			Condition (MHz)	Specification			Unit	Remarks
				Min.	Typ.	Max.		
Tx to Ant	Insertion loss (*1)		1447.9 - 1462.9	-	1.3	1.8	dB	
	Ripple		1447.9 - 1462.9	-	0.4	1.0	dB	
	VSWR	Tx	1447.9 - 1462.9	-	1.3	2.0	-	
		Ant	1447.9 - 1462.9	-	1.3	2.0	-	
	Input Power		1447.9 - 1462.9	+29 dBm, CW, +50 °C, 10000h			-	
				+29 dBm, LTE 5 MHz 1RB, +50 °C, 10000h			-	
				+30 dBm, CW, +50 °C, 5000h			-	
				+30 dBm, LTE 5 MHz 1RB, +50 °C, 5000h			-	
	Absolute attenuation		1475.9 - 1495.9	5	9	-	dB	+15 to +70 °C
			1495.9 - 1510.9	50	60	-	dB	
			1559 - 1563	35	43	-	dB	
			1565.42 - 1573.38	36	50	-	dB	
			1573.37 - 1577.47	40	55	-	dB	
			1577.46 - 1585.42	37	50	-	dB	
			1597.55 - 1605.89	40	45	-	dB	
			2400 - 2500	38	49	-	dB	
			2895.8 - 2925.8	33	40	-	dB	
			4343.7 - 4388.7	22	30	-	dB	
Ant to Rx	Insertion loss (*1)		1495.9 - 1510.9	-	1.3	1.8	dB	
	Ripple		1495.9 - 1510.9	-	0.3	1.0	dB	
	VSWR	Ant	1495.9 - 1510.9	-	1.4	2.0	-	
		Rx	1495.9 - 1510.9	-	1.4	2.0	-	
	Absolute attenuation		1447.9 - 1462.9	52	58	-	dB	
			2400 - 2500	38	42	-	dB	
			2991.8 - 3021.8	40	45	-	dB	
			4487.7 - 4532.7	45	53	-	dB	



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**Table 1-2. Electrical Specification**

Item		Condition (MHz)	Specification			Unit	Remarks
			Min.	Typ.	Max.		
Tx to Rx	Isolation	1447.9 - 1462.9	55	60	-	dB	
		1495.9 - 1510.9	55	60	-	dB	-30 to +65 °C
			53	-	-	dB	+65 to +85 °C
Terminating Impedance		Tx port	50			Ω	
		Rx port	50			Ω	
		Ant port	50//8.5nH			Ω	
Operating Temperature			-30 to +85			°C	
Maximum DC in all ports			-	-	5	VDC	Device only
DC impedance to ground			100			MΩ	Device only
Device size (L max. x W max. x H max.)			1.8 x 1.4 x 0.44			mm	

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



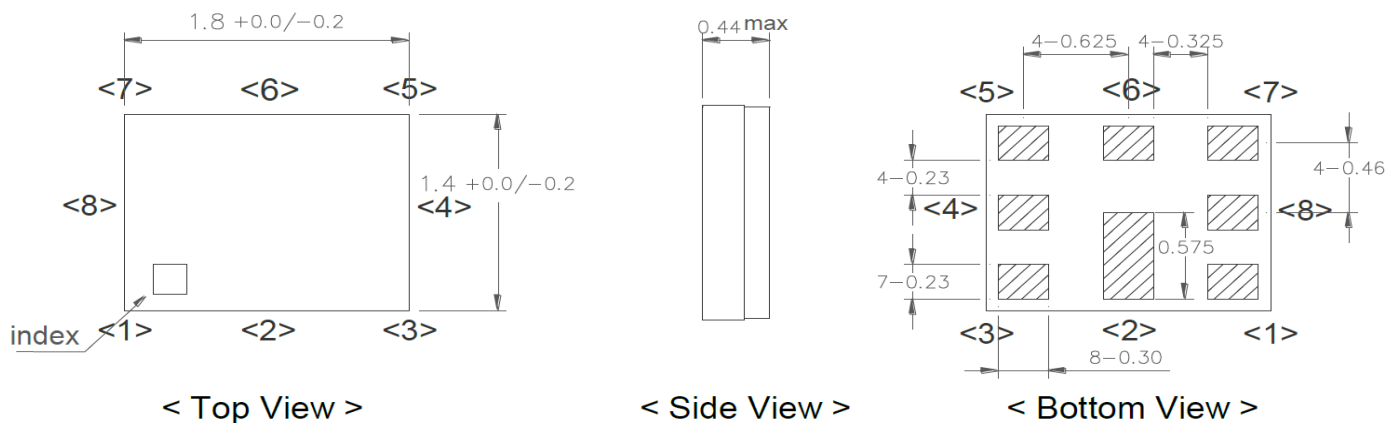
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## Dimensions



Unit: mm

**Figure 1. Dimensions**

## Pin Assignment

**Table 2. Pin Assignment**

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



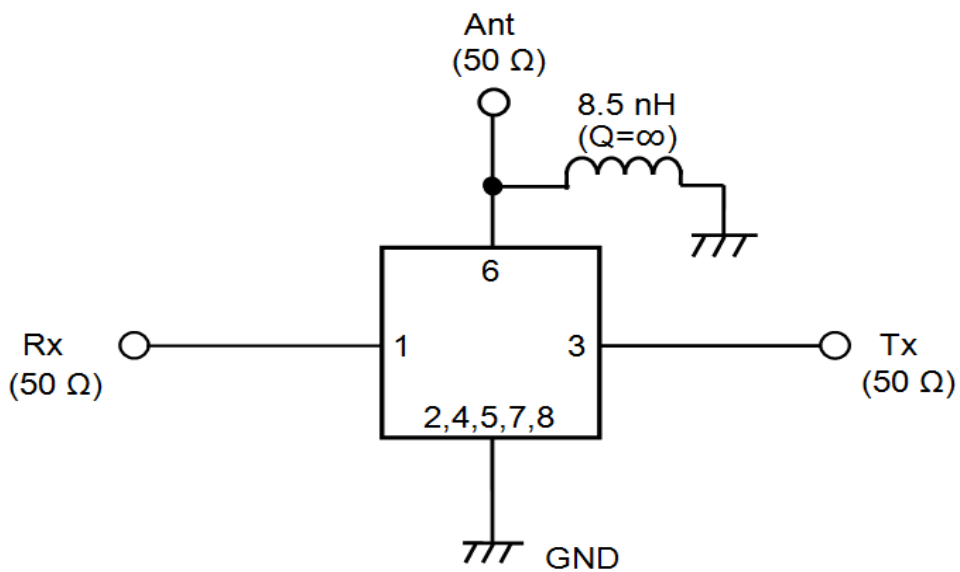
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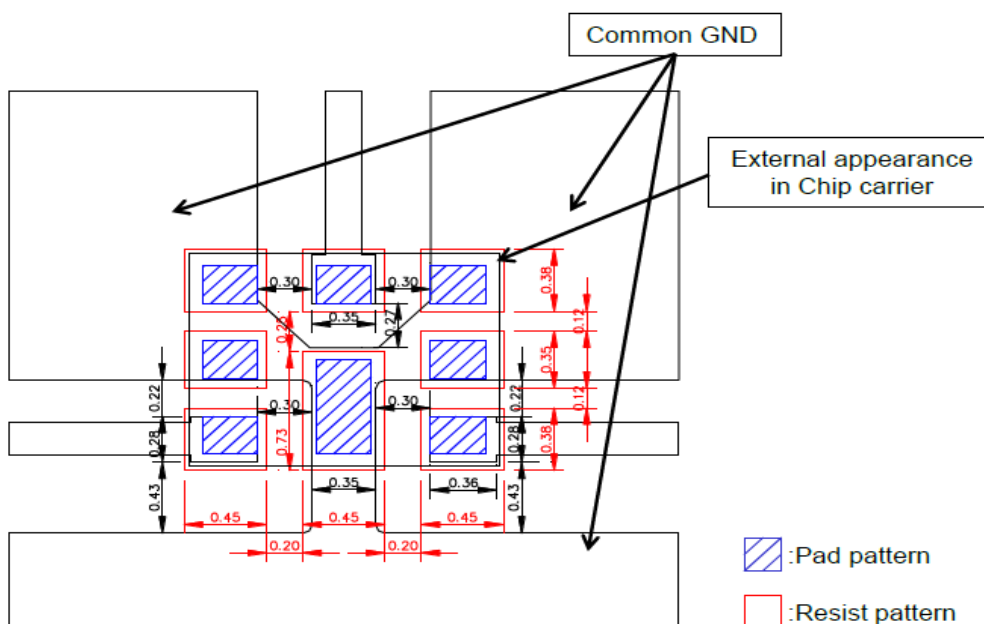
## Evaluation Circuit



1 to 8: Pin No.

**Figure 2. Evaluation Circuit**

## Recommended Foot Print Pattern



**Figure 3. Recommended Foot Print Pattern**



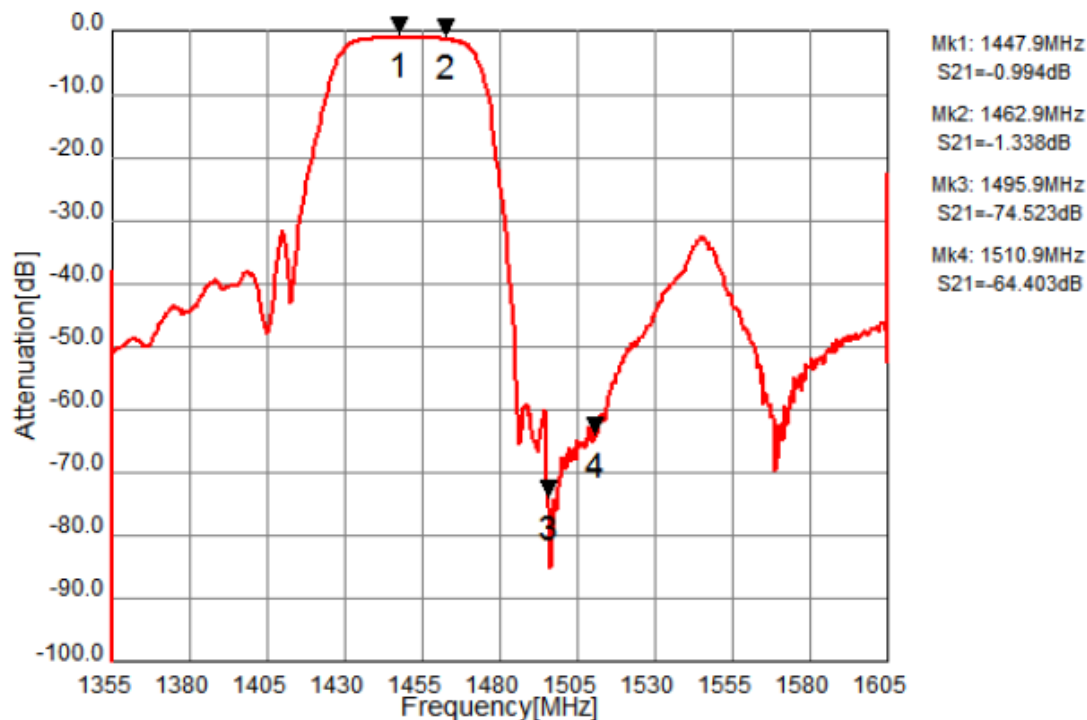
\* Pb Free Part



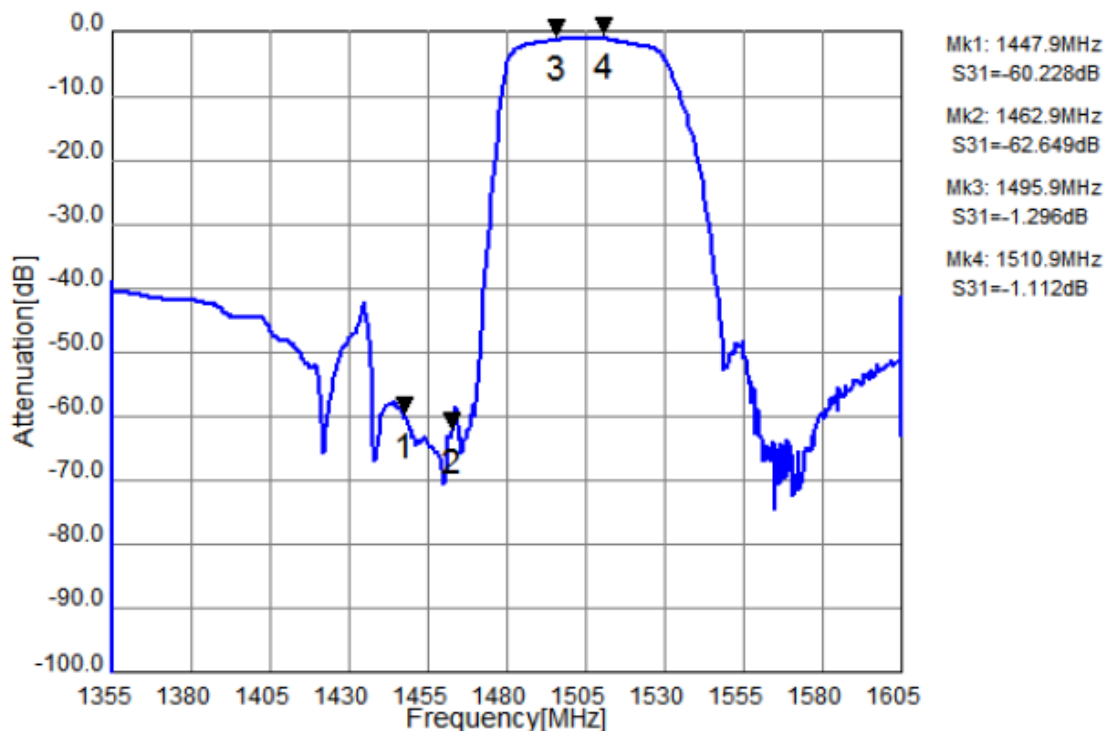
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### Tx to Ant



### Ant to Rx



**Figure 4-1. Electrical Characteristics**

Specification of insertion loss excludes loss that comes from the test board.

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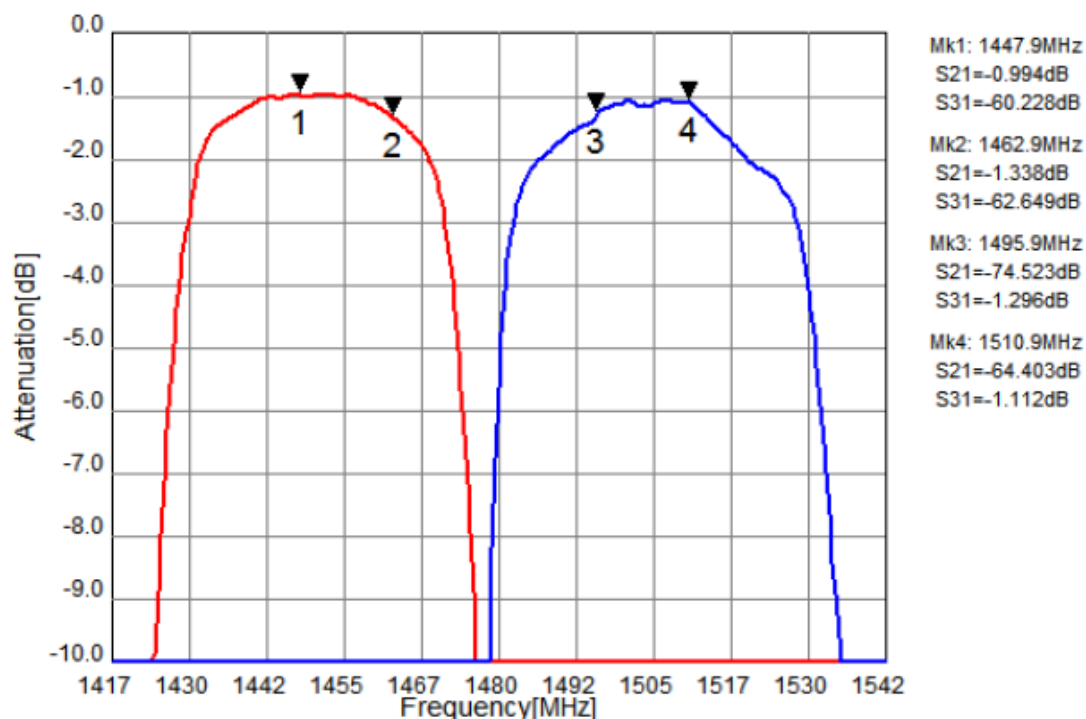
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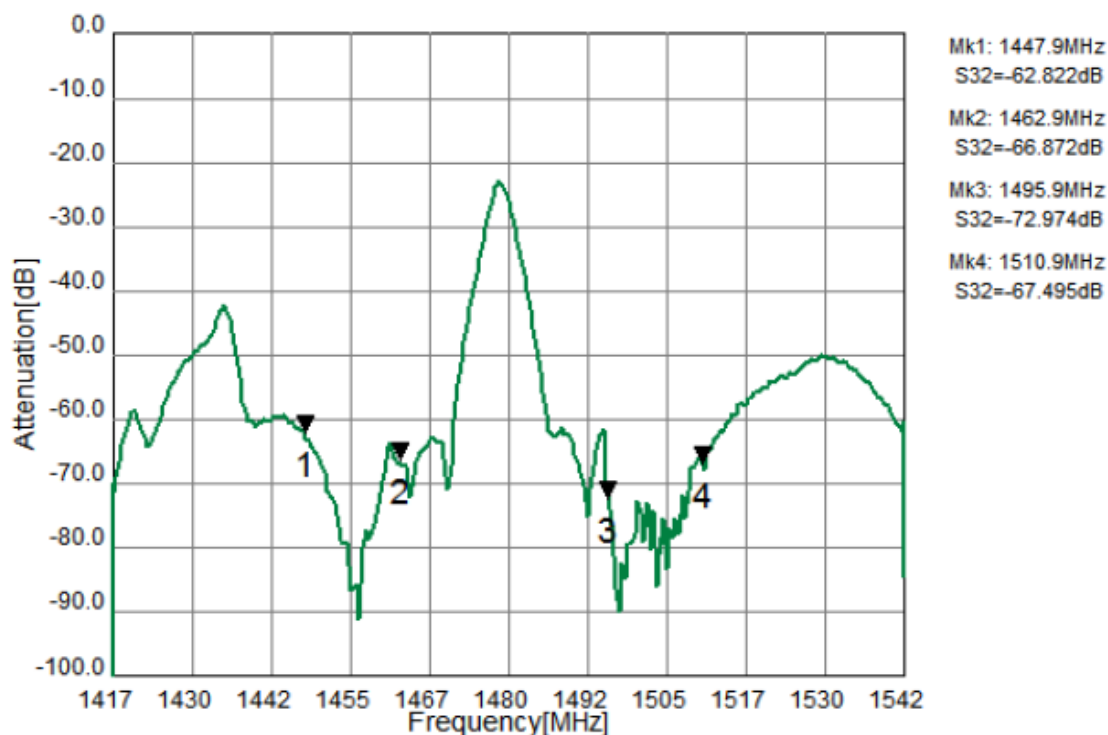
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### Tx to Ant, Ant to Rx



### Tx to Rx Isolation



**Figure 4-2. Electrical Characteristics**



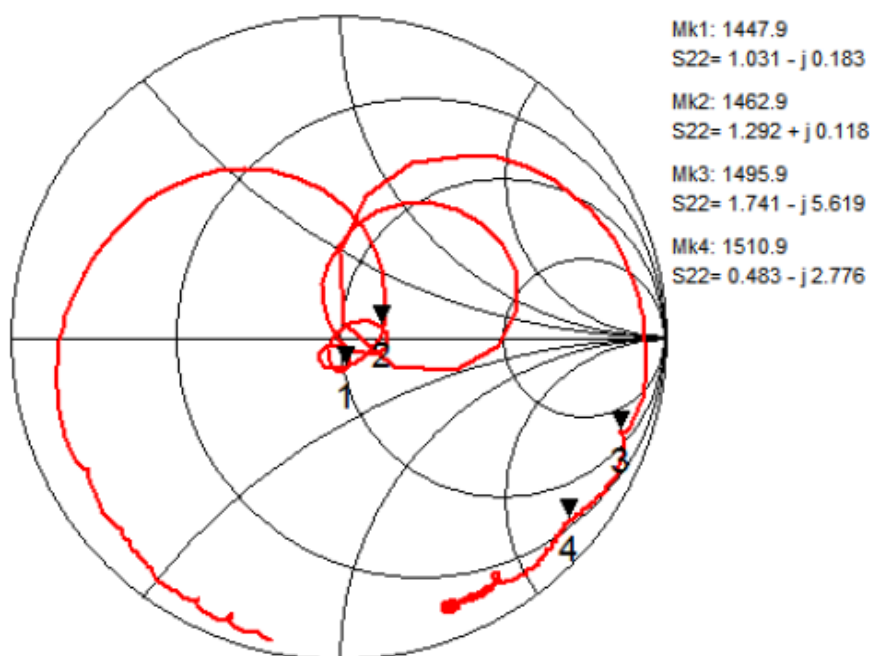
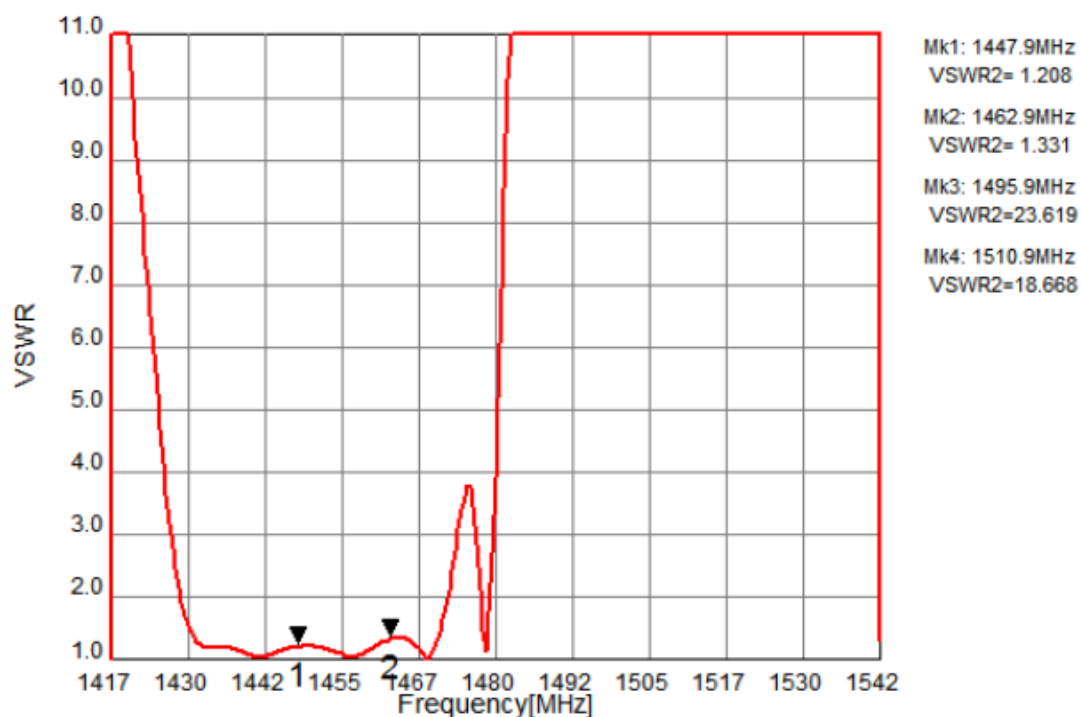
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## Tx Port



**Figure 4-3. Electrical Characteristics**



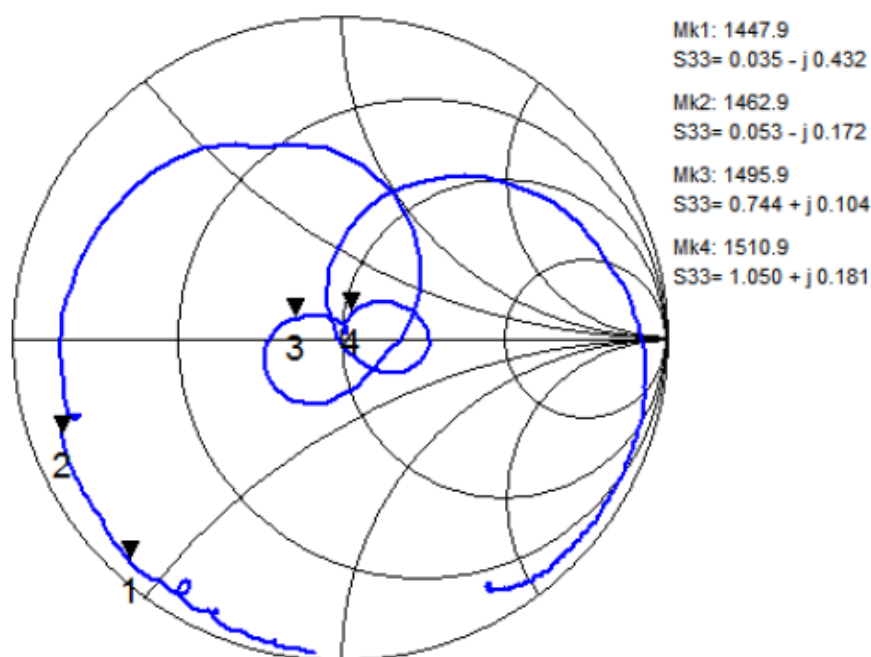
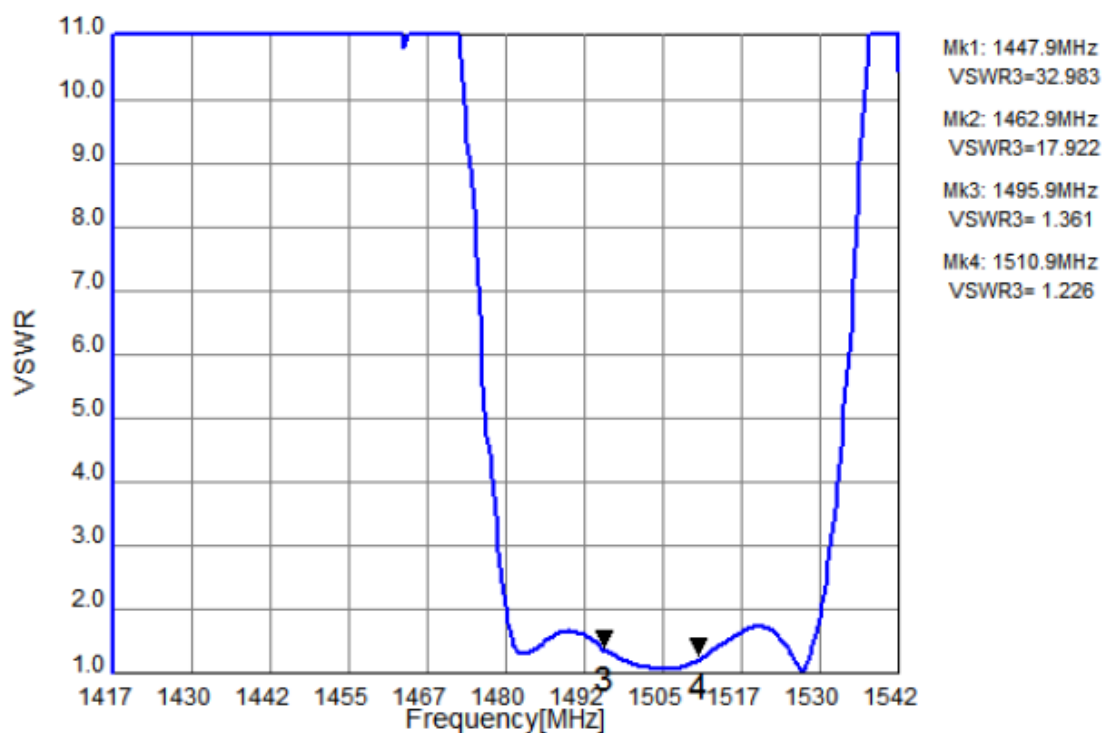
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## Rx Port



**Figure 4-4. Electrical Characteristics**





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## Ant Port

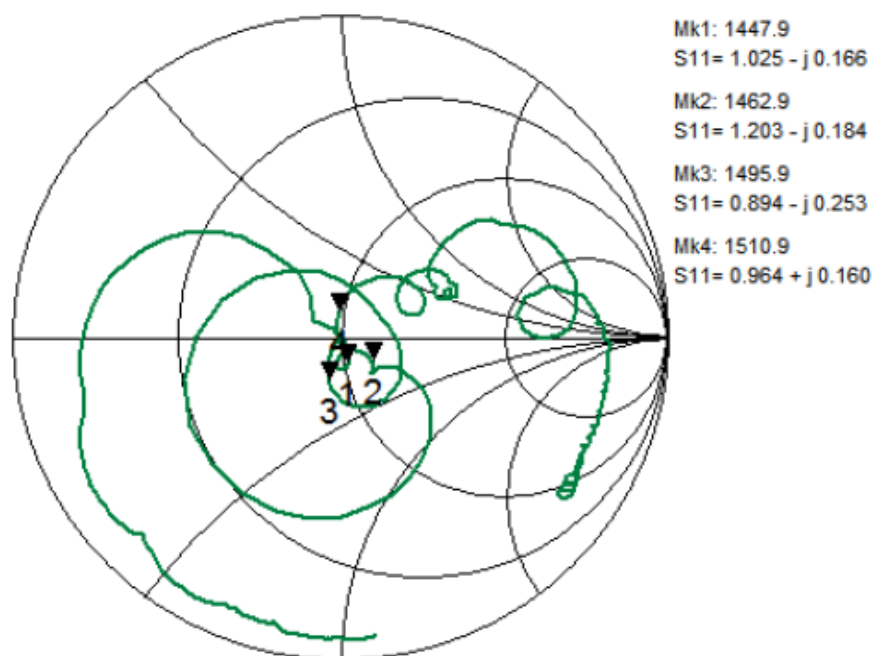
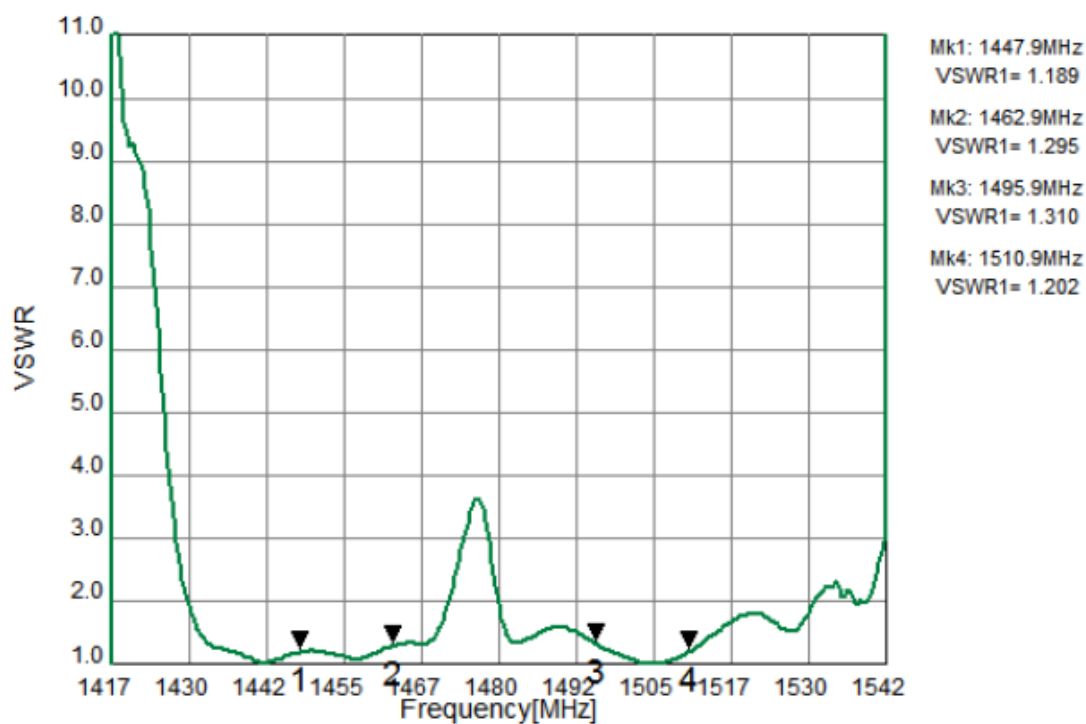


Figure 4-5. Electrical Characteristics



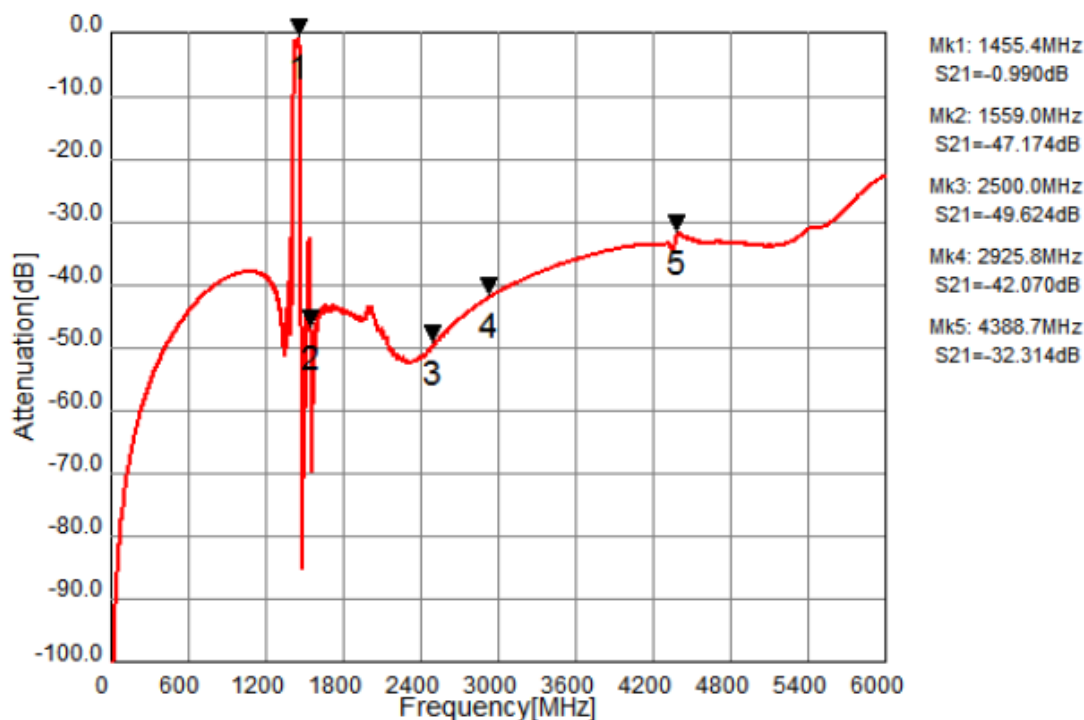
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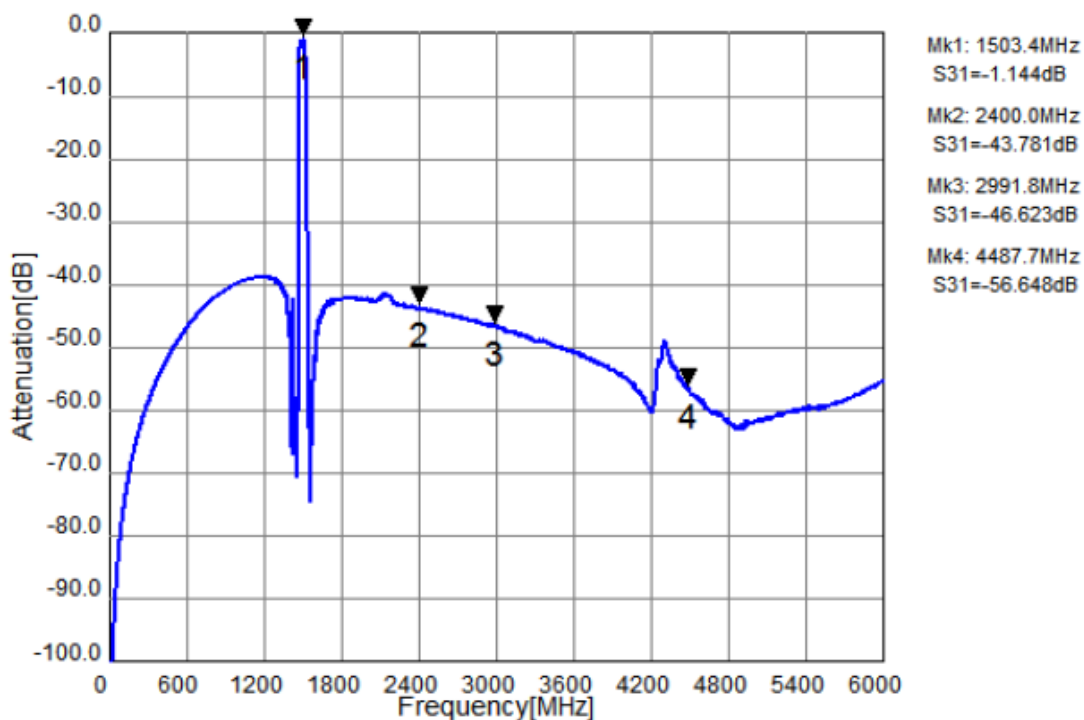
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### Tx to Ant(Wide span)



### Ant to Rx(Wide span)



**Figure 4-6. Electrical Characteristics**



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## Ordering Code

Ordering Code	Packing	Reel size	Status
D6DA1G503K2Y1-Z	Tape & Reel	3,000 pcs.	MP
D6DA1G503K2Y1-ZA	Tape & Reel	less than 3,000 pcs.	MP
D6DA1G503K2Y1-Y	Tape & Reel	15,000 pcs.	MP
D6DA1G503K2Y1-YA	Tape & Reel	less than 15,000 pcs.	MP
D6DA1G503K2Y1-Q	Bulk	few pcs.	MP

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

\*MP : Mass Production

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Please do not incorporate our products into any equipment requiring high levels of safety and/or reliability (e.g., aerospace equipment, aviation equipment, medical equipment classified as Class IV by IMDRF, nuclear control equipment, undersea equipment, military equipment).  
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