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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

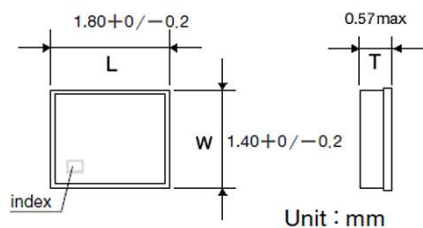
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## FBAR/SAW Devices (FBAR Duplexers)

## D6HQ1G962DP39



## ■ Features

- Item Summary  
FBAR, Duplexer, 1.8x1.4x0.57mm  
Band25
- Lifecycle Stage  
Mass Production
- Standard packaging quantity (minimum)  
Taping Embossed 3000 , 15000pcs

## ■ Products characteristics table

System	LTE
Type	FBAR
Function	Duplexer
band	Band25
Insertion Loss (typ) (Tx-ANT/ANT-Rx)	2.4/2.7 dB
Isolation (typ)	57/52 dB
Operating Temp. Range	-10 to +85 °C
RoHS2 Compliance (10 subst.)	Yes
REACH Compliance (173 subst.)	Yes
Halogen Free	Yes
Soldering	Reflow

## ■ External Dimensions

Dimension L	1.8 + 0/- 0.20 mm
Dimension W	1.4 + 0/- 0.20 mm
Dimension T	Max 0.57 mm

2017.04.30

The data is reference only. Electrical characteristics vary depending on environment or measurement condition.  
 TAIYO YUDEN reserves the right to make change to the Date at any time without notice.  
 Before making final selection, please check product specification.



Pb-free

\* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 25 Duplexer	Date	Apr.19, 2016
Part Number	D6HQ1G962DP39	Version 7.0deB	Final

**Table 1-1. Electrical Specification**

Item		Condition (MHz)	Specification			Unit	Remarks	
			Min	Typ	Max			
Tx to ANT	Insertion loss	1850 ~ 1915	-	2.4	3.8	dB(*1)		
		1850.48 ~ 1909.52	-	1.9	2.7		(*2)	
		1850.625 ~ 1909.375	-	2.0	3.0		(*3)	
	Ripple (any 5MHz)	1850~1915	-	0.5	2.4	dB		
	VSWR	ANT	1850~1915	-	1.6	2.1	-	
		Tx		-	1.8	2.2	-	
	Input Power	1850~1915	29dBm, Ta=+50°C 5kh, CW			dBm		
	Absolute attenuation	1559 ~ 1563	31	34	-	dB		
		1565.4 ~ 1573.4	31	34	-	dB		
		1573.4~1577.5	31	34	-	dB		
		1577.5~1585.4	31	34	-	dB		
		1597.6~1605.9	31	34	-	dB		
		1930 ~ 1995	35	50	-	dB	-10~+25 °C	
45			50	-	dB	+25~+85 °C		
2400 ~ 2500		22	36	-	dB			
3700 ~ 3830	28	38	-	dB				
5550 ~ 5745	20	30	-	dB				
ANT to Rx	Insertion loss	1930.48~1994.52	-	2.7	3.8	dB (*1)	-10 ~ +25 °C	
					3.6		+25 ~ +85 °C	
	Ripple (any 5MHz)	1930.48~1994.52	-	0.8	2.5	dB		
	VSWR	Ant	1930.48~1994.52	-	1.7	2.2	-	
		Rx		-	1.8	2.3	-	
	Absolute attenuation	1850 ~ 1915	40	57	-	dB		
		2400 ~ 2500	40	49	-	dB		
3860 ~ 3990		40	63	-	dB			
5790 ~ 5985		40	65	-	dB			

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

(\*2) The integrated isolation over channel band width (+/- 1.92MHz)

(\*3) The integrated isolation over channel band width (+/- 0.625MHz)



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**Table 1-2. Electrical Specification**

Item		Condition (MHz)	Specification			Unit	Remarks
			Min	Typ	Max		
Tx to Rx	Isolation	1850.25~1914.75	53	57	-	dB	-10 ~ +60 °C
			50	57	-	dB	+60 ~ +85 °C
	1930.25~1994.75	45	52	-	dB	(*3) -10 ~ +25 °C	
		48	52	-	dB	(*3) +25 ~ +85 °C	
Terminating Impedance		Tx port	50			Ω	Single-ended
		Rx port	50			Ω	Single-ended
		Ant port	50 // 3.9 nH			Ω	Single-ended
Operating Temperature			-10 to +85			°C	
Device size (Lmax. x Wmax. x Hmax.)			1.8 x 1.4 x 0.57			mm	

(\*3) The integrated isolation over channel band width (+/- 0.625MHz)



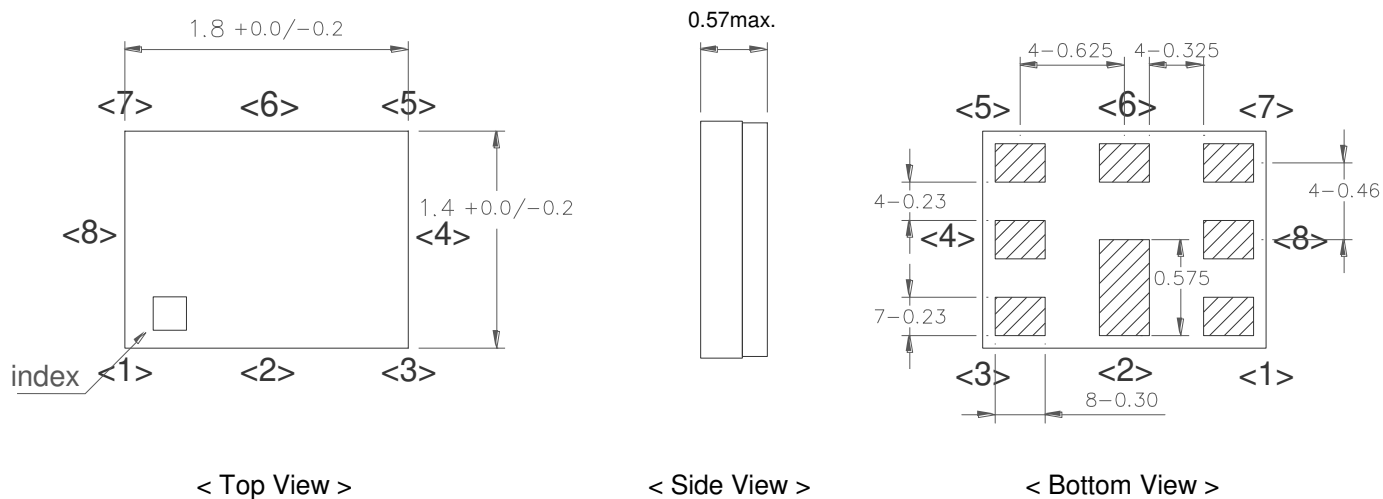
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### Dimensions



Unit: mm

### Pin Configuration

Pin No.	Pin name	Description
1	Rx	Receiver Pin
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	GND	Ground Pin

Figure 1. Dimensions and Pin assignment





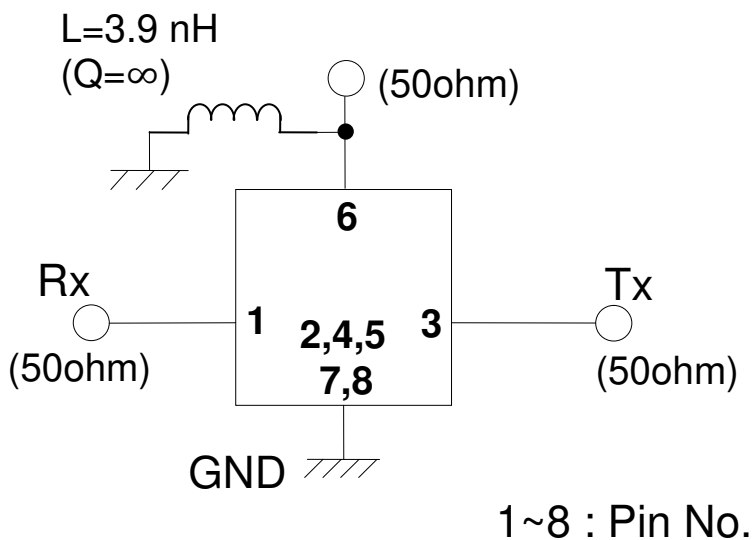
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### Evaluation Circuit



### Recommended foot print pattern

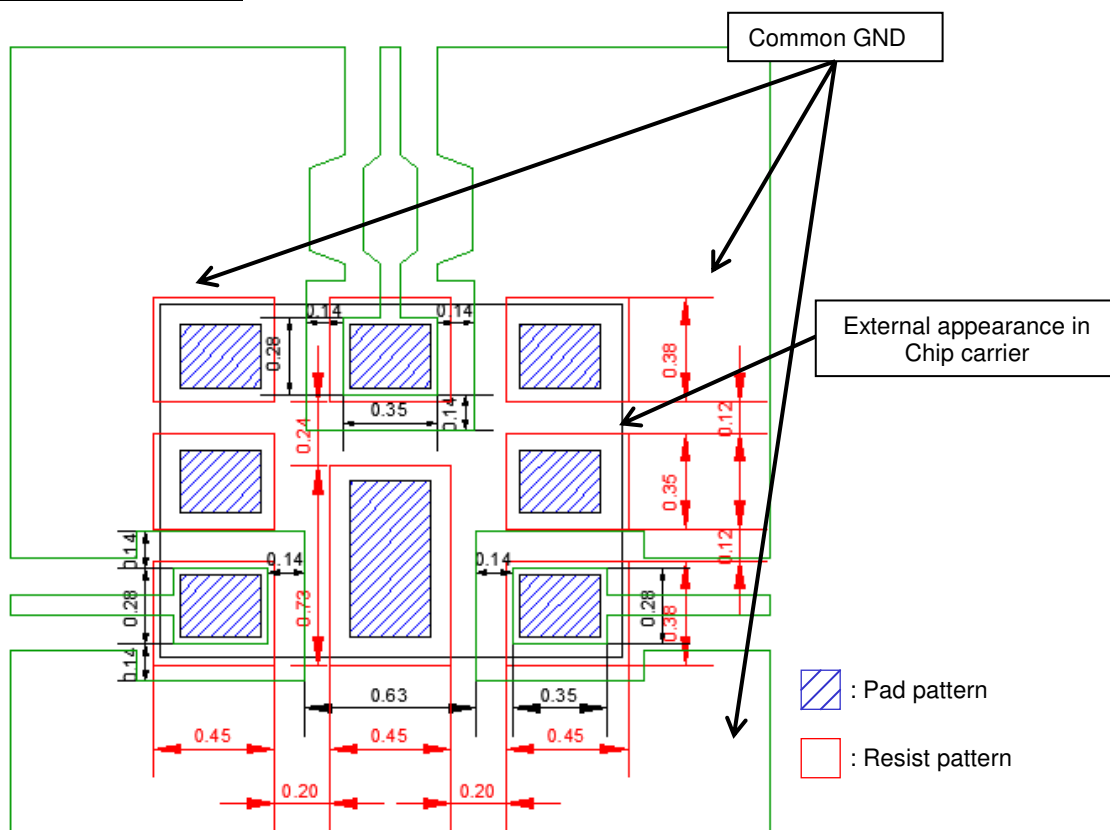


Figure 2. Recommended foot print pattern



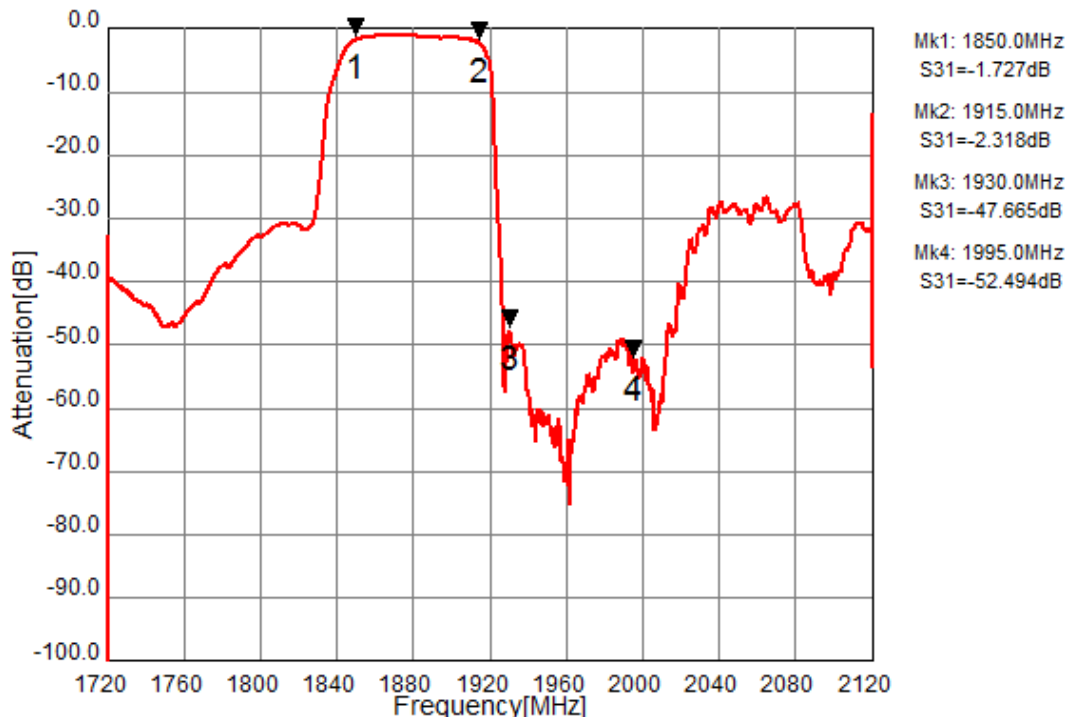
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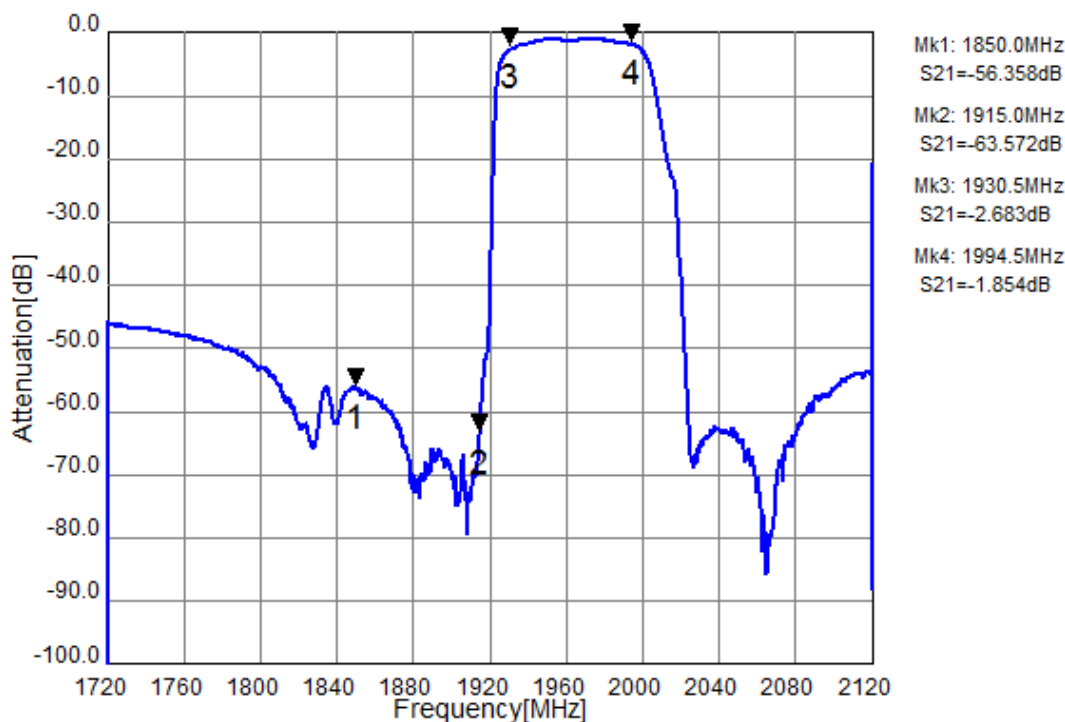
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## Tx to Ant



## Ant to Rx



**Figure 3-1. Electrical Characteristics**

These data **exclude** loss that comes from the test board.



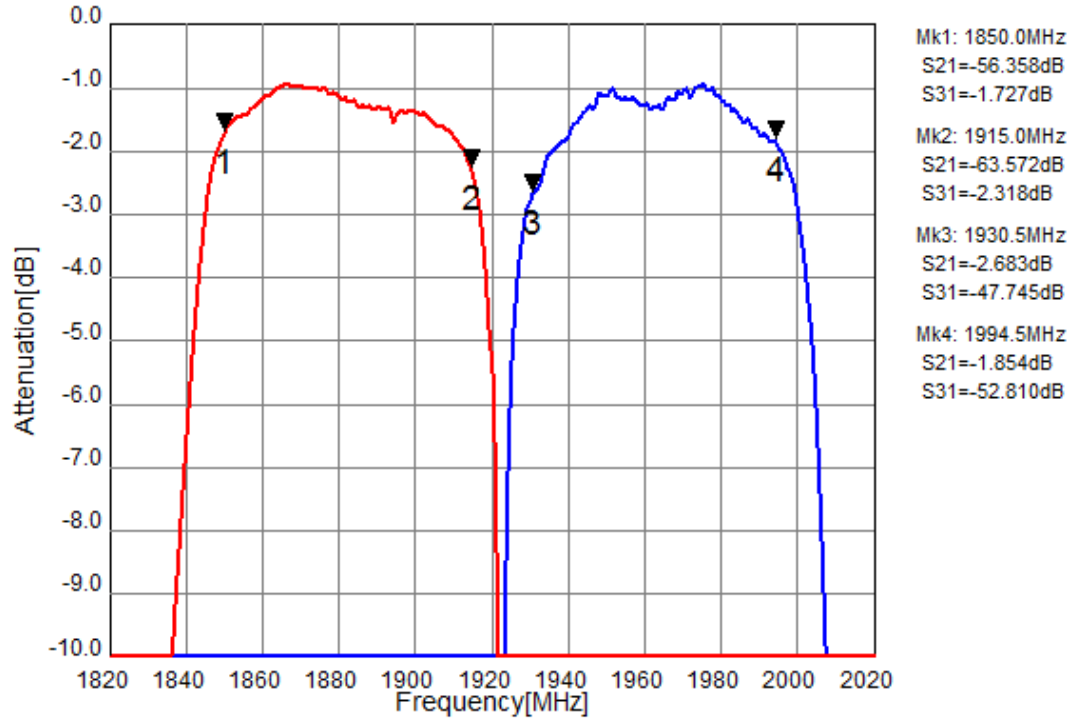
Pb-free  
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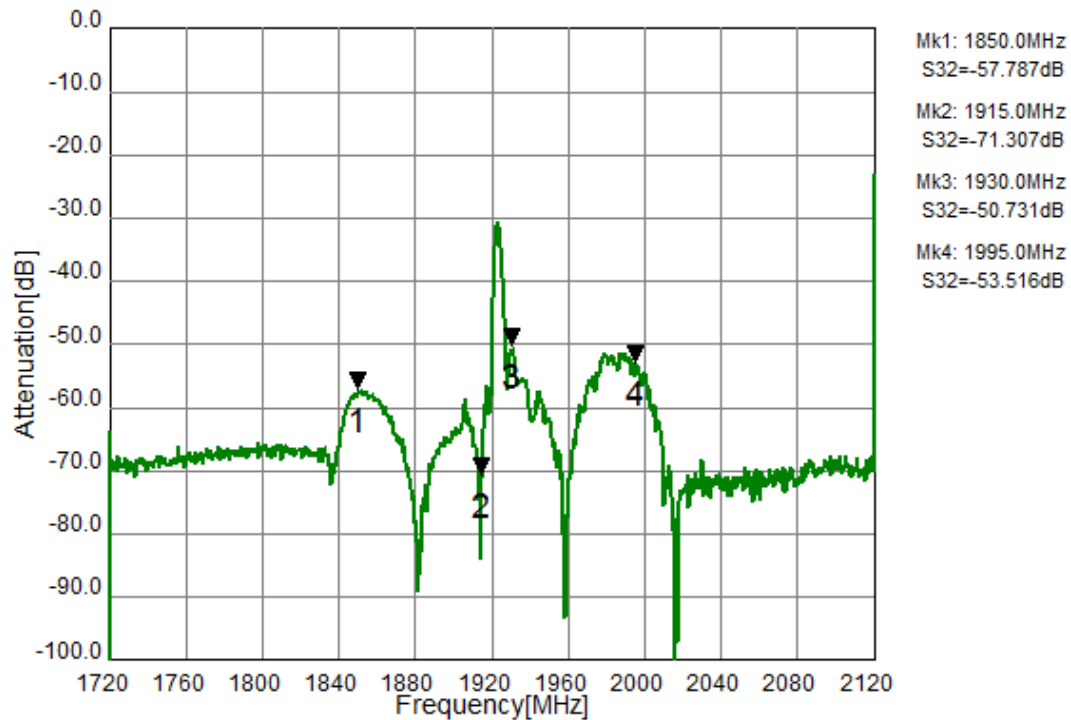
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## Tx to Ant, Ant to Rx



## Tx to Rx Isolation



**Figure 3-2. Electrical Characteristics**

These data **exclude** loss that comes from the test board.





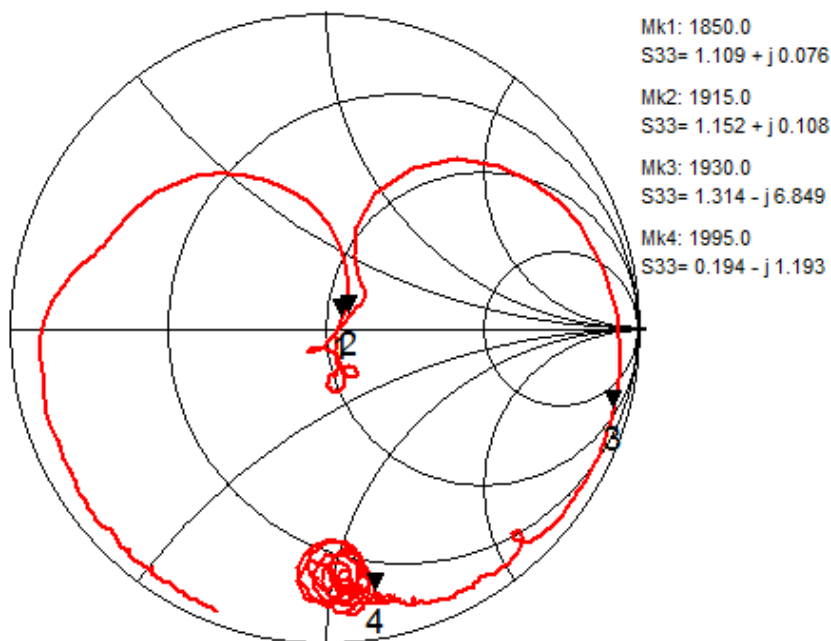
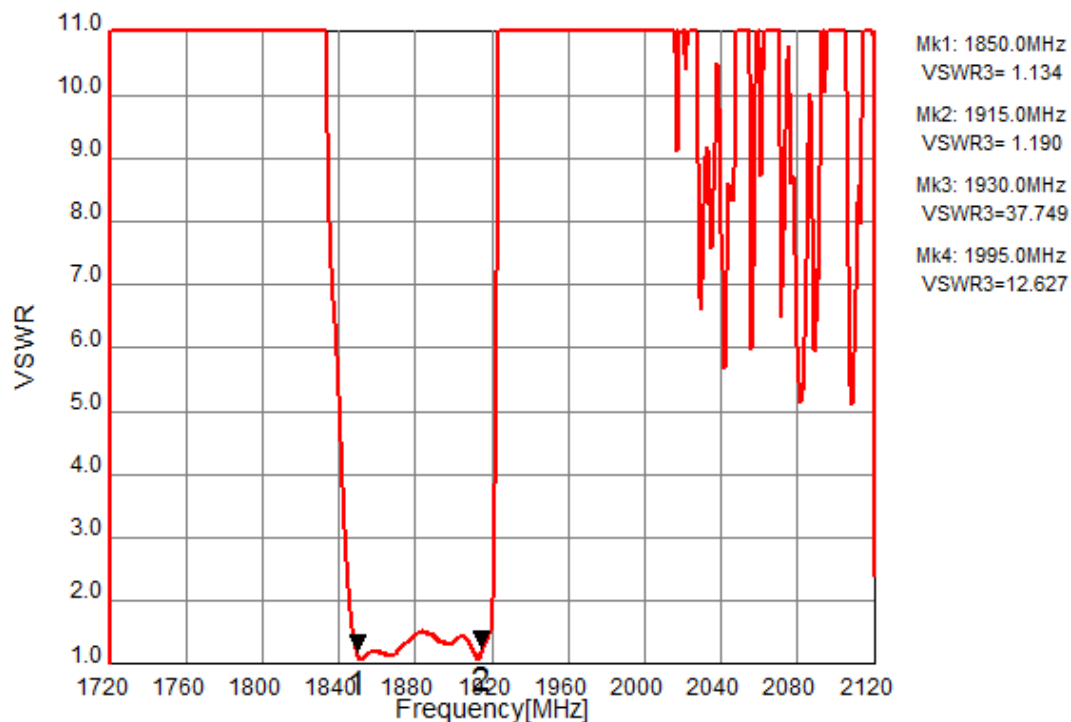
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## Tx Port



**Figure 3-3. Electrical Characteristics**

**TAIYO YUDEN**



Pb-free  
\* Pb Free Part



MSL1

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## Rx Port

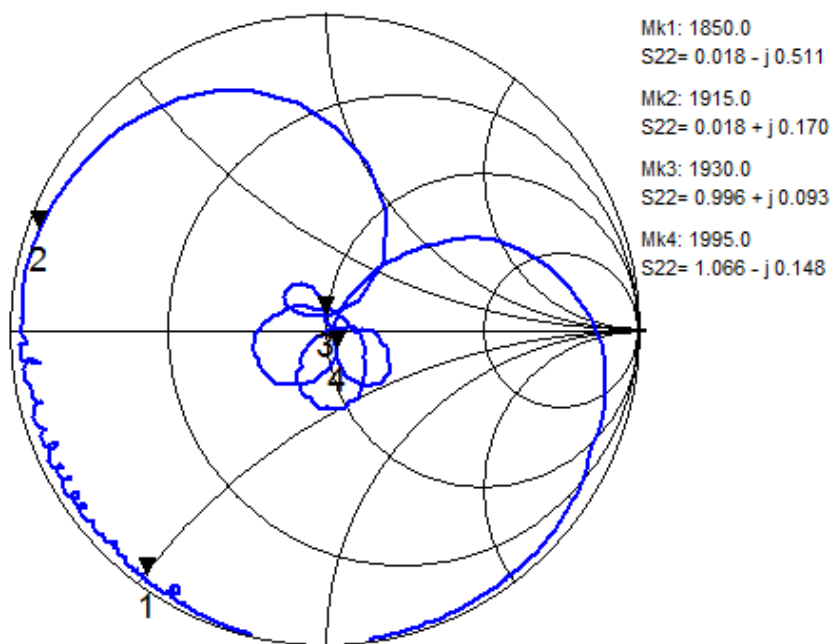
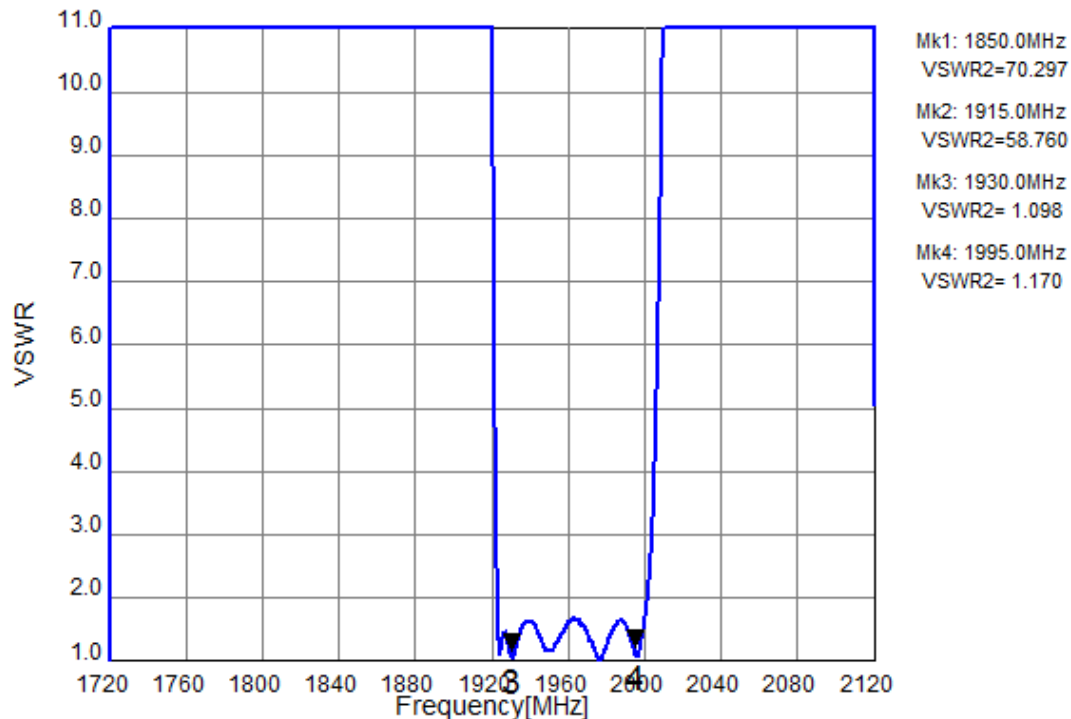


Figure 3-4. Electrical Characteristics



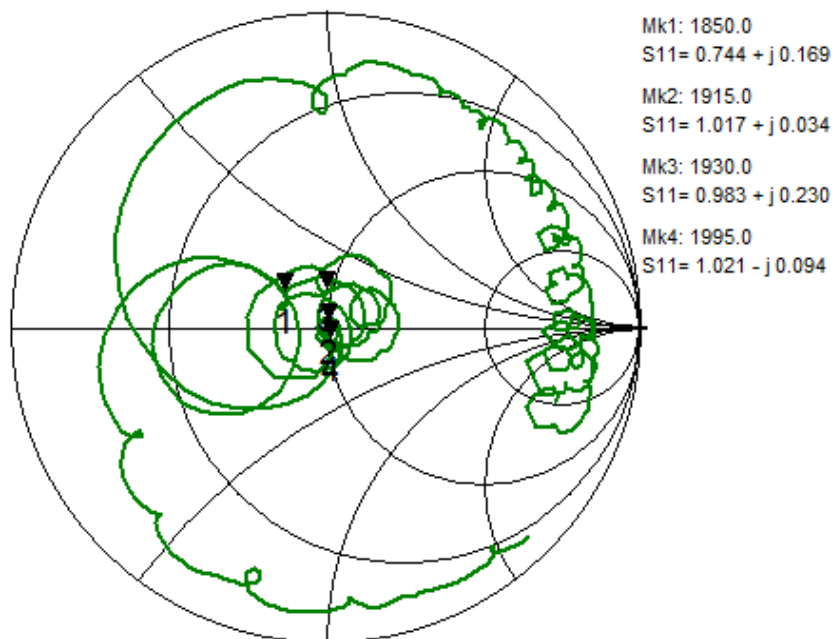
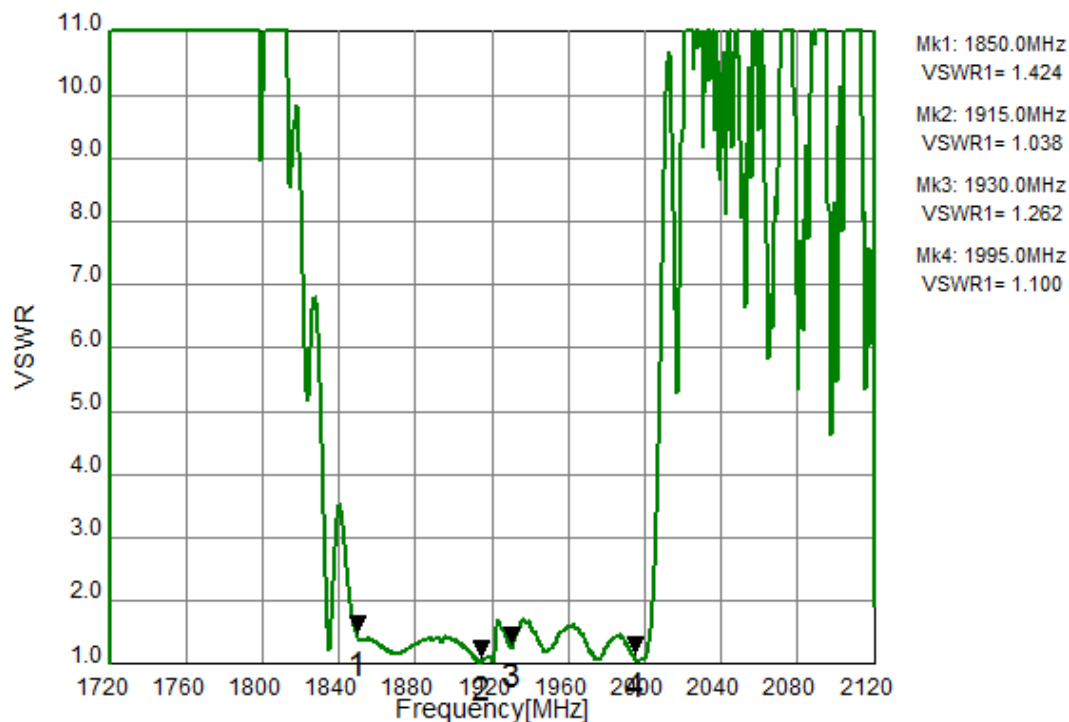
Pb-free  
\* Pb Free Part



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## Ant Port



**Figure 3-5. Electrical Characteristics**



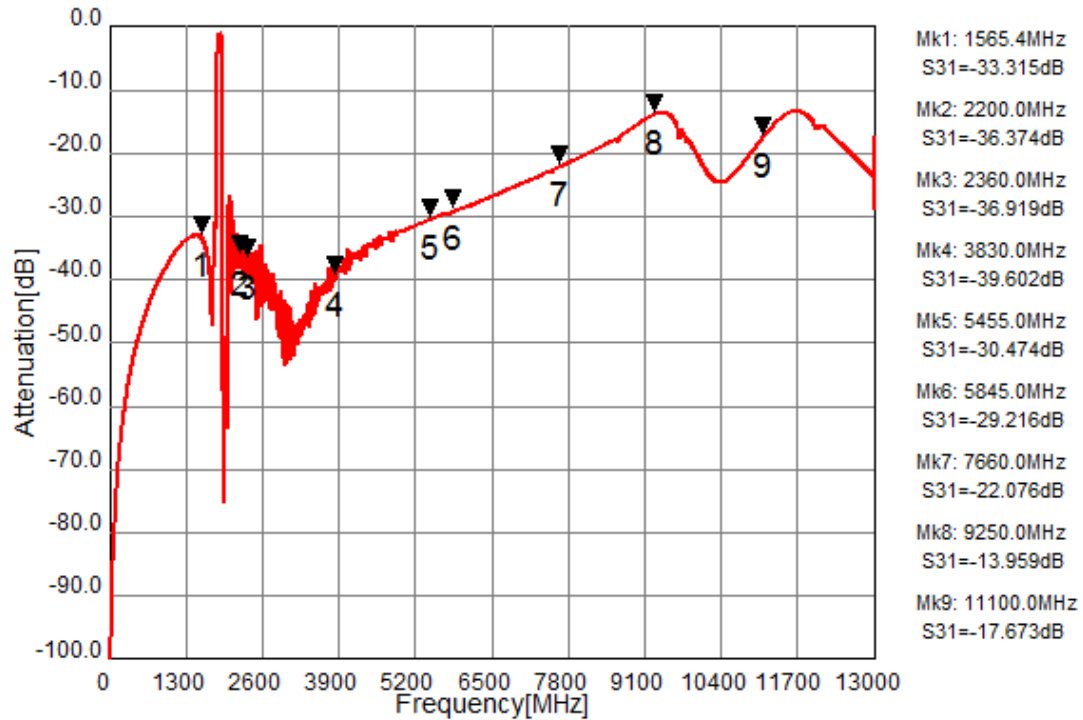
Pb-free  
\* Pb Free Part



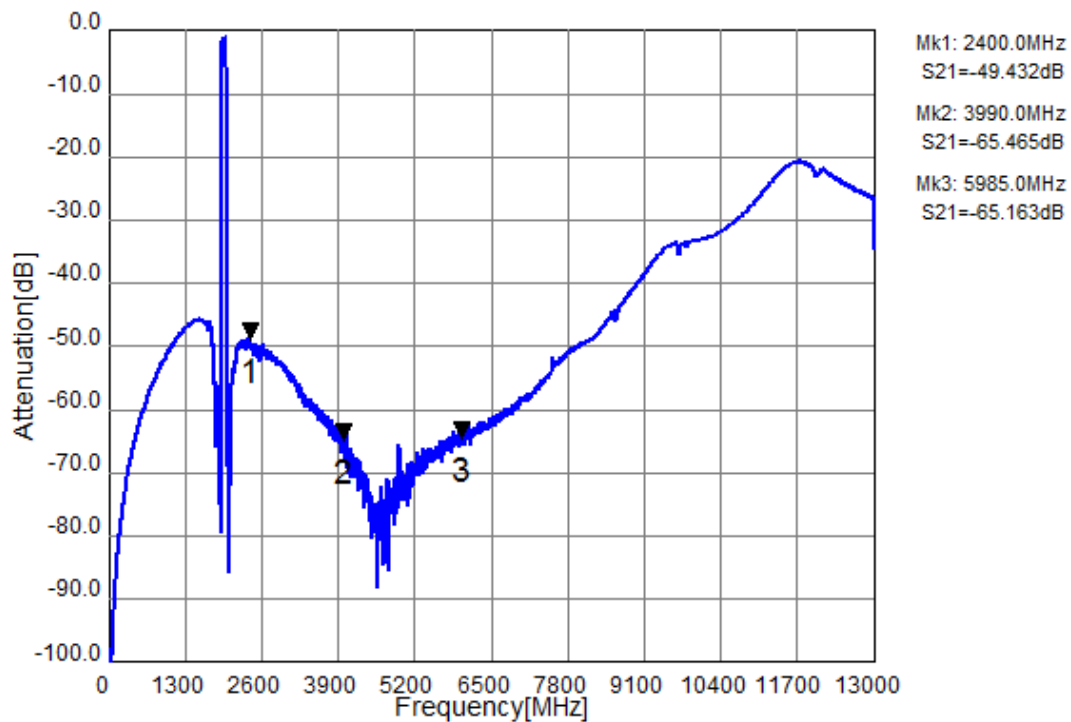
MSL1

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### Tx to Ant (Wide span)



### Ant to Rx (Wide span)



v

**Figure 3-6. Electrical Characteristics**



Pb-free

\* Pb Free Part



MSL1

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## Ordering Code

Ordering Code	Packing	Reel size	Status
D6HQ1G962DP39-Z	Tape & Reel	3,000 pcs.	MP
D6HQ1G962DP39-ZA	Tape & Reel	less than 3,000 pcs.	MP
D6HQ1G962DP39-Y	Tape & Reel	15,000 pcs.	MP
D6HQ1G962DP39-YA	Tape & Reel	less than 15,000 pcs.	MP
D6HQ1G962DP39-Q	Bulk	few pcs.	MP

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

\*MP : Mass Production

## Notice

All of the contents specified herein are subject to change without notice due to technical improvements, etc.

Please contact TAIYO YUDEN Co., Ltd. for further details of product specifications.

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

This product is for general electronics equipment such as Audio-Visual equipment, household electronics, office supplies, information services and telecommunications; therefore, in case this product is used for any medical equipment, space equipment, nuclear equipment or disaster prevention equipment, please contact TAIYO YUDEN in advance.

In case this product is used for general electronics equipment or circuits which require high safety and high reliability, thoroughly evaluate on safety and add a protection circuit if necessary.