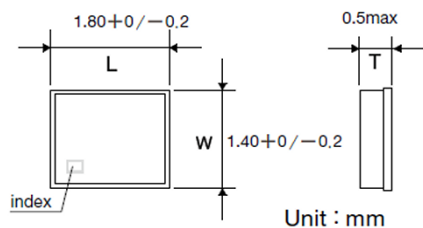


# FBAR/SAW Devices (SAW Duplexers)

## D6DA2G140K2A4



### ■ Features

- Item Summary  
SAW, Duplexer, 1.8x1.4x0.5mm  
Band 1 / BC 6
- Lifecycle Stage  
Mass Production
- Standard packaging quantity (minimum)  
Taping Embossed 3000 , 15000pcs

### ■ Products characteristics table

System	W-CDMA / CDMA / LTE
Type	SAW
Function	Duplexer
band	Band 1 / BC 6
Insertion Loss (typ) (Tx-ANT/ANT-Rx)	1.8/1.8 dB
Isolation (typ)	56/51 dB
Operating Temp. Range	-20 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 0.5 mm

2017.05.01

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 Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 1 Duplexer	Date	Feb. 10, 2015
Part Number	D6DA2G140K2A4	Ver.3.1fgE	Final

**Table 1. Electrical Specification**

Item		Condition (MHz)	Specification			Unit	Remarks	
			Min	Typ	Max			
Tx to ANT	Insertion loss	1920.48~1979.52	-	1.8	2.2	dB (*1)		
	Ripple	1920.48~1979.52	-	0.6	1.2	dB		
	VSWR	1920.48~1979.52	Tx	-	1.8	2.2	-	
			ANT	-	1.5	2.0	-	
	Absolute attenuation	1559~1563	38	41	-	dB		
		1565~1606	38	41	-	dB		
		1805~1880	10	25	-	dB		
		2110~2170	42	50	-	dB		
2400~2500		33	37	-	dB			
3840~3960		25	29	-	dB			
Input power	1920.48~1979.52	29dBm, Ta=+50deg.C, 10kh, CW			dBm			
ANT to Rx	Insertion loss	2110.48~2169.52	-	1.8	2.2	dB (*1)		
	Ripple	2110.48~2169.52	-	0.6	1.2	dB		
	VSWR	2110.48~2169.52	ANT	-	1.6	2.0	-	
			Rx	-	1.6	2.1	-	
	Absolute attenuation	190	50	81	-	dB	Rx-Tx	
		1730~1790	40	46	-	dB	2Tx -Rx	
		1920~1980	45	49	-	dB		
		1980~2015	15	49	-	dB		
2015~2075		18	28	-	dB	(Rx+Tx)/2		
2400~2500		35	40	-	dB			
4030~4150		35	44	-	dB	Rx+Tx		
5950~6130	33	41	-	dB	Rx+2Tx			
Tx to Rx	Isolation	1920.48~1979.52	53	56	-	dB		
			53(*2)	57(*2)	-			
		2110.48~2169.52	49	51	-	dB		
			51(*2)	55(*2)	-			
Terminating Impedance	Tx port	50			Ohm	Single-ended		
	Rx port	50			Ohm	Single-ended		
	Ant port	50 // 2.7nH			Ohm	Single-ended		
Operating Temperature		-20 to +85			°C			
Device size (Lmax x Wmax x Hmax)		1.8 x 1.4 x 0.5			mm			

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

(\*2) Case for shunt inductor is mounted on the test board. (HKQ0603W3N0H-T)

**TAIYO YUDEN**



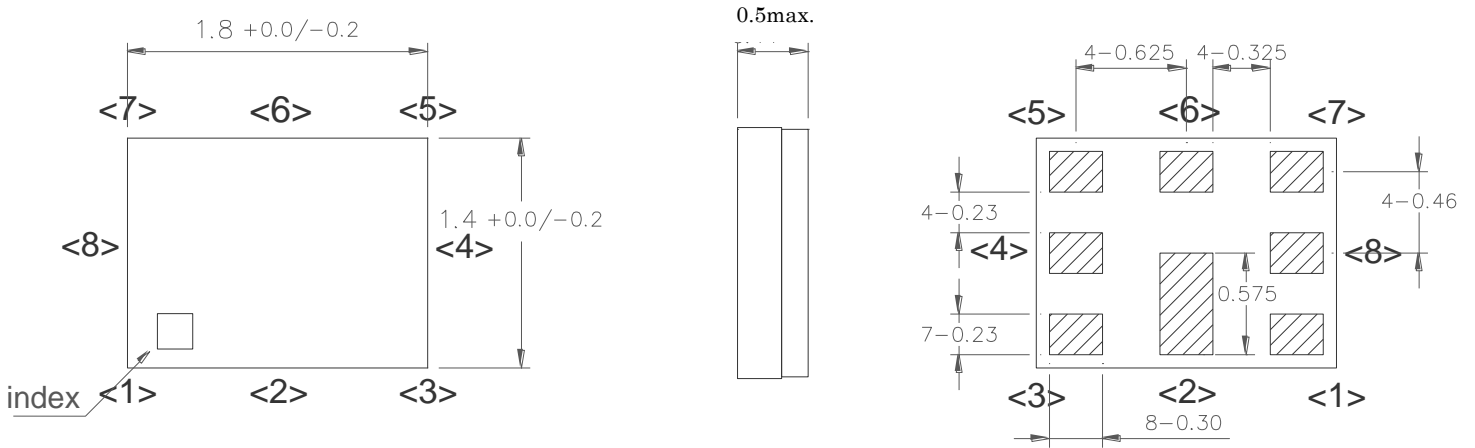
\* Pb Free Part



MSL1

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Part Number	D6DA2G140K2A4	Ver.3.1fgE	Final

### Dimensions



### 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**





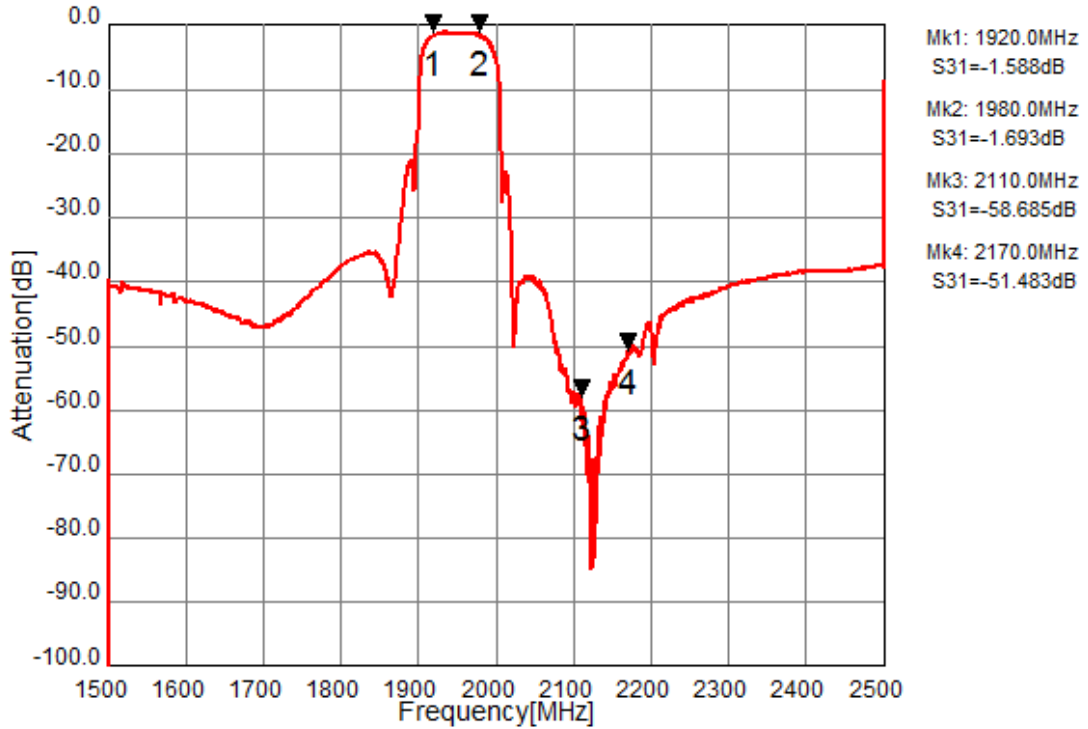
\* Pb Free Part



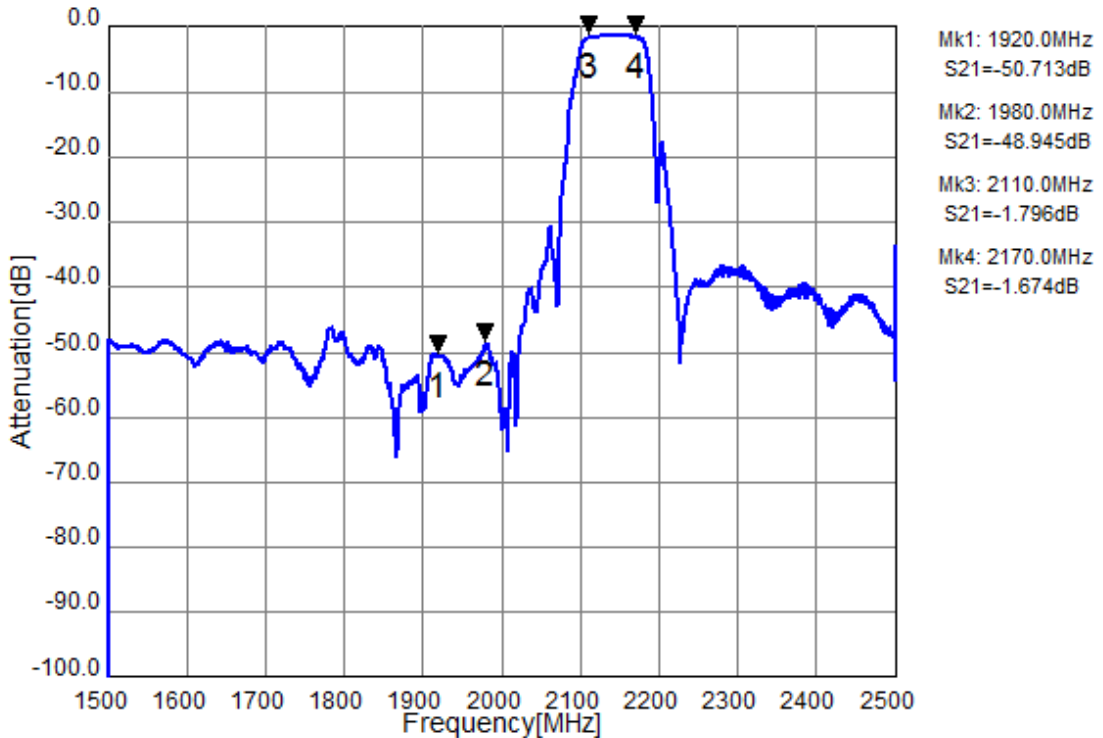
MSL1

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Part Number	D6DA2G140K2A4	Ver.3.1fgE	Final

## Tx to Ant



## Ant to Rx



**Figure 3-1. Electrical Characteristics**

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



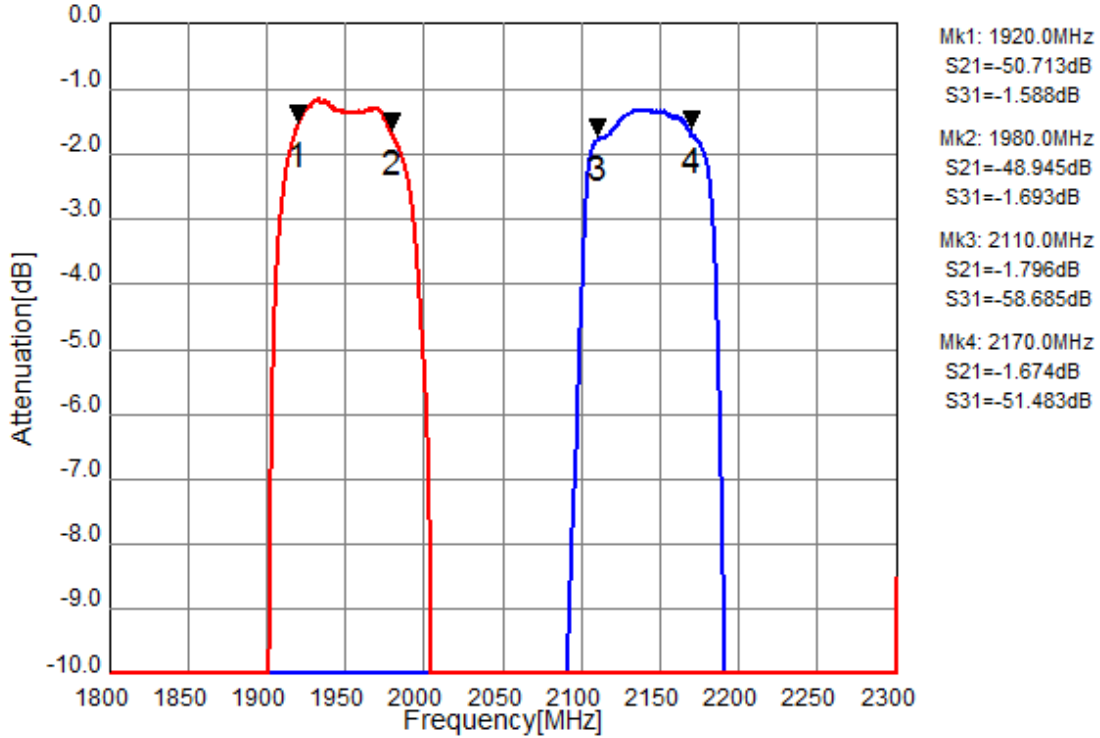
\* Pb Free Part



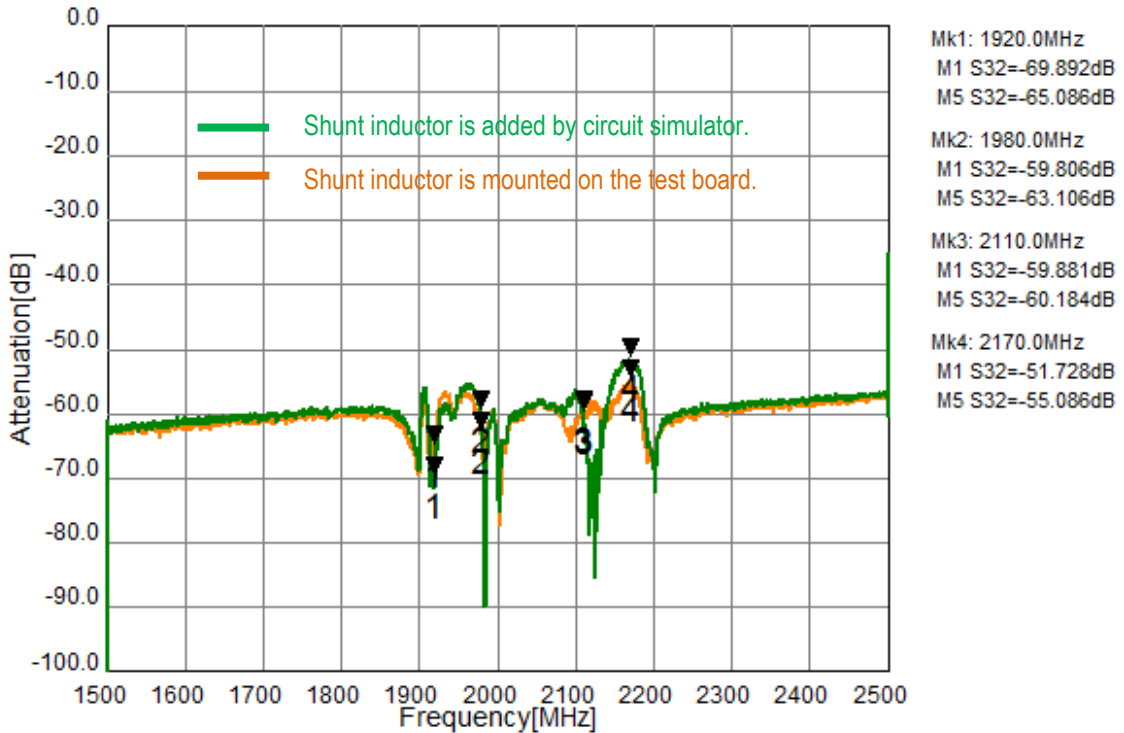
MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 1 Duplexer	Date	Feb. 10, 2015
Part Number	D6DA2G140K2A4	Ver.3.1fgE	Final

## 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.



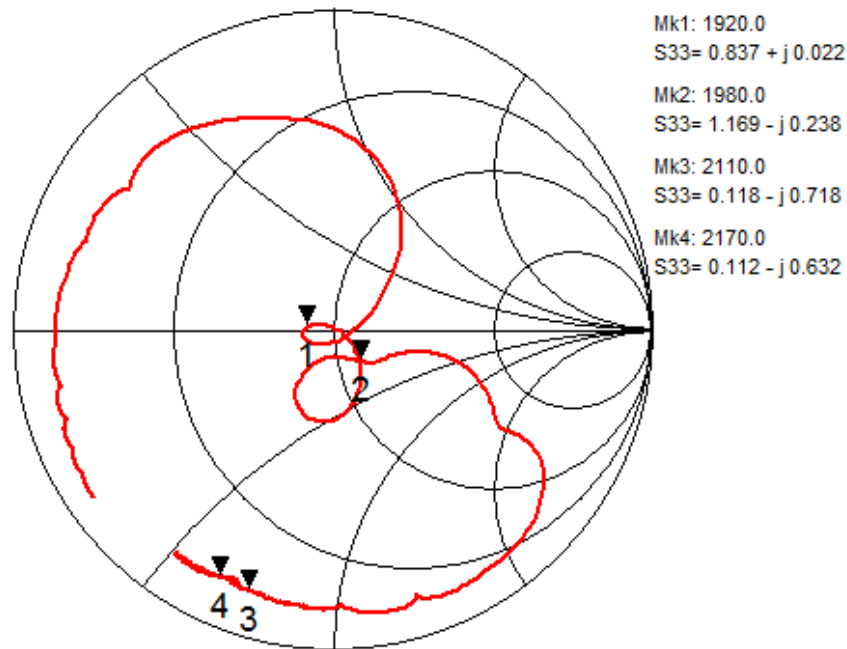
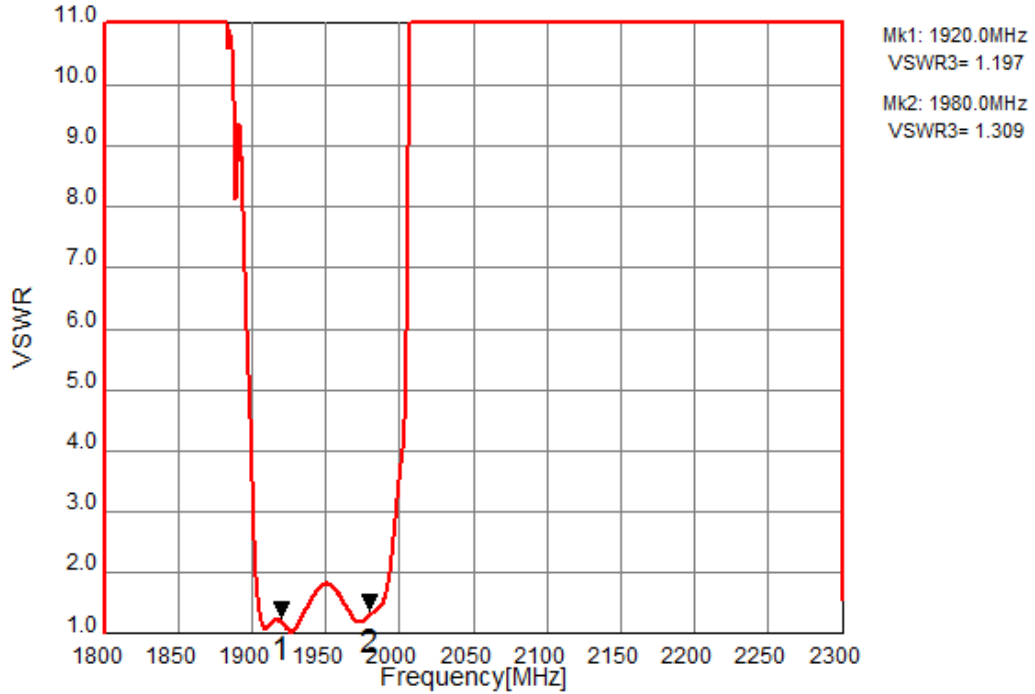
\* Pb Free Part



MSL1

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Part Number	D6DA2G140K2A4	Ver.3.1fgE	Final

## Tx Port



**Figure 3-3. Electrical Characteristics**



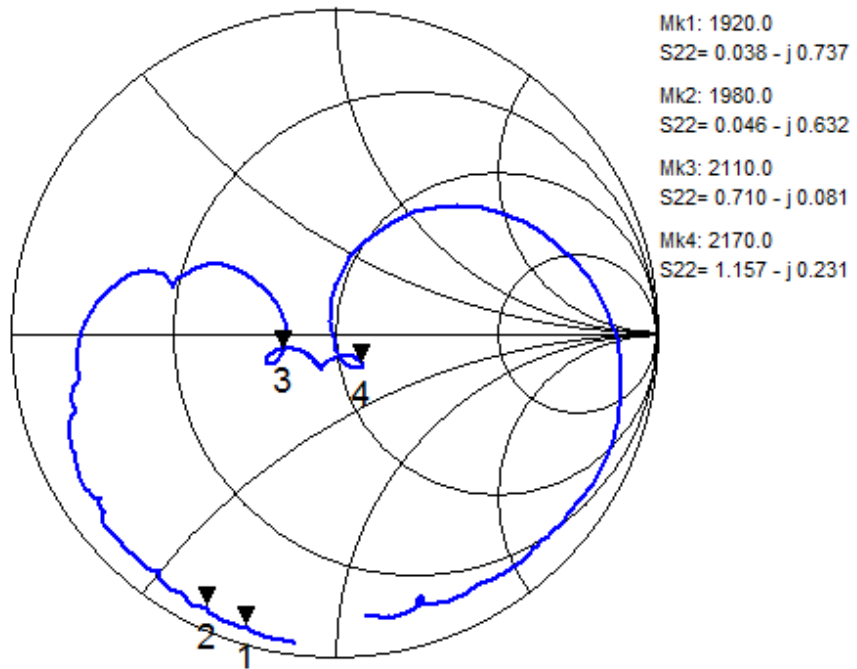
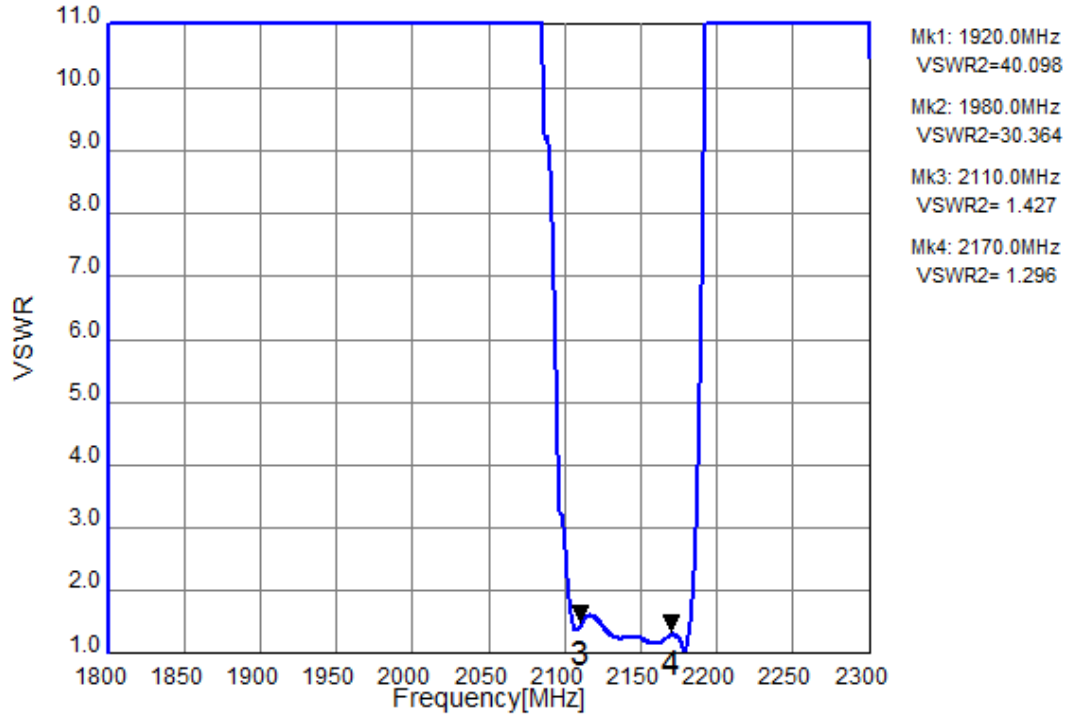
\* Pb Free Part



MSL1

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Part Number	D6DA2G140K2A4	Ver.3.1fgE	Final

## Rx Port



**Figure 3-4. Electrical Characteristics**





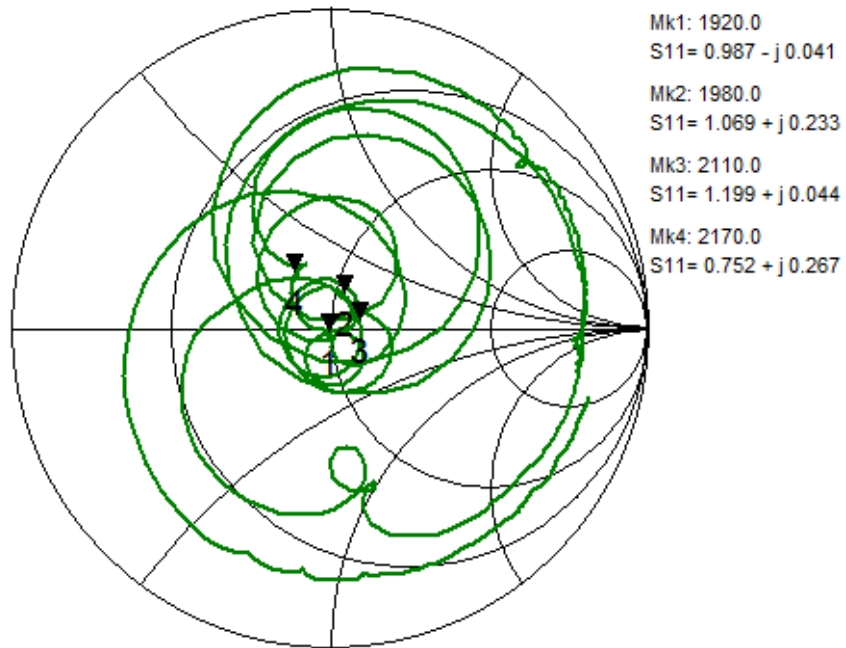
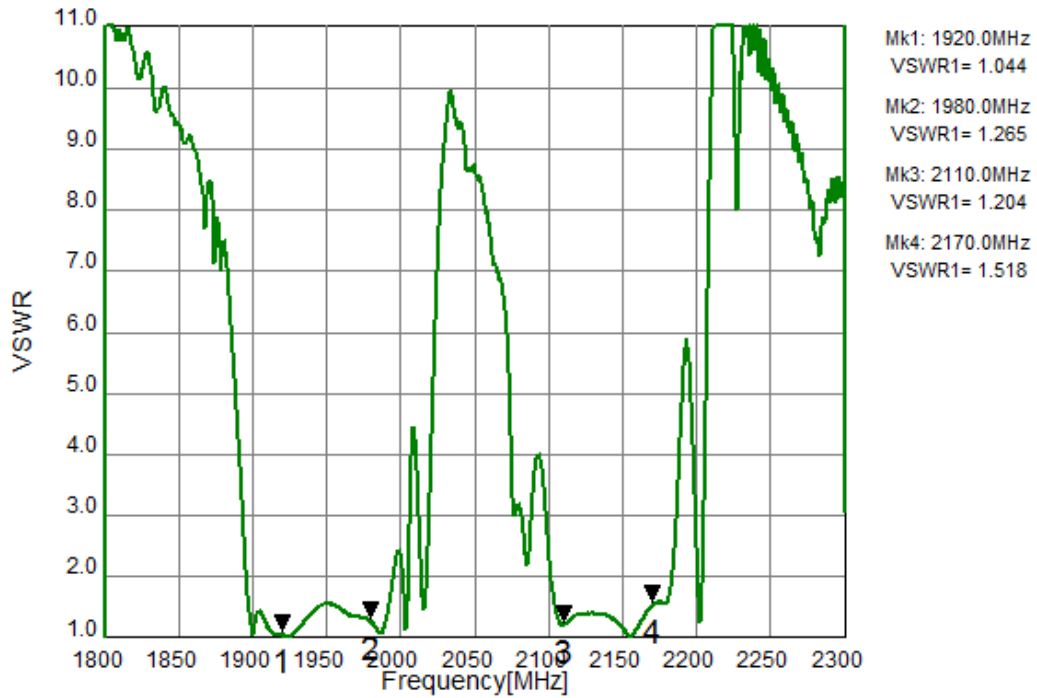
\* Pb Free Part



MSL1

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## Ant Port



**Figure 3-5. Electrical Characteristics**



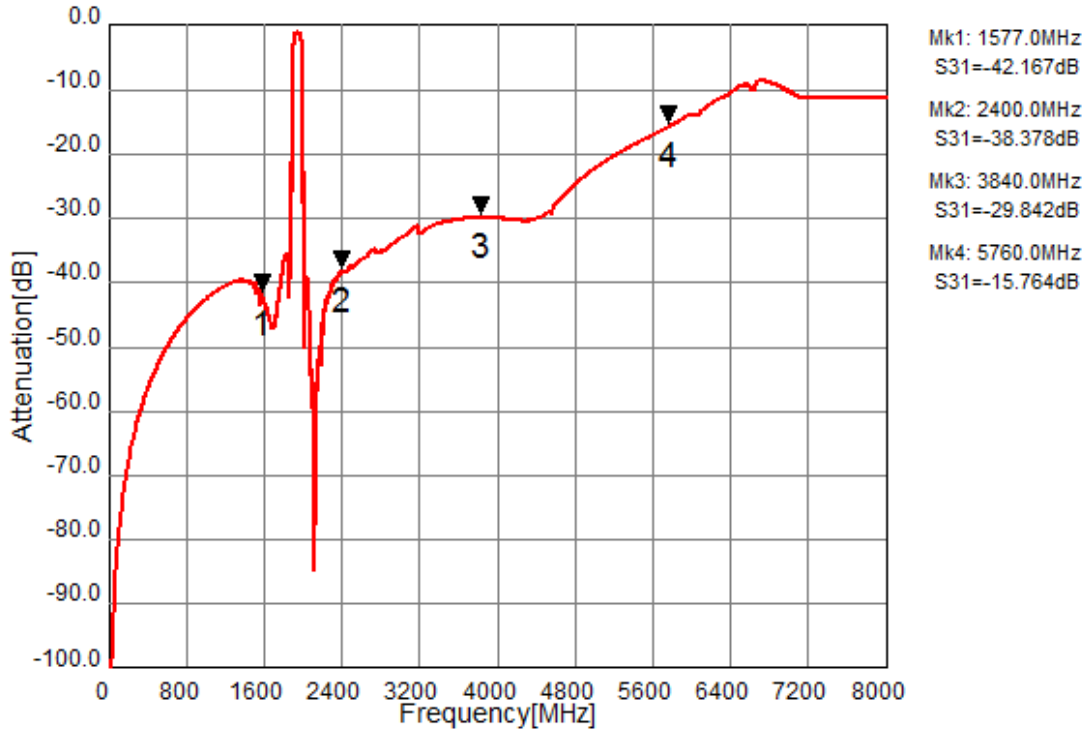
\* Pb Free Part



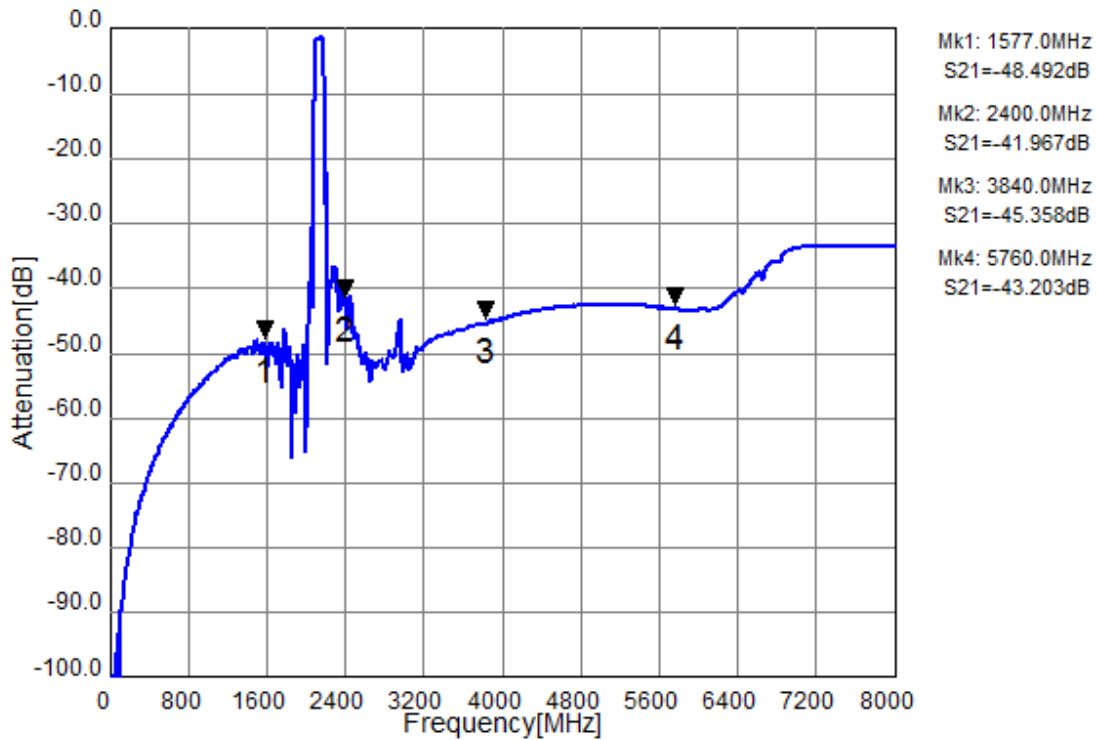
MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
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Part Number	D6DA2G140K2A4	Ver.3.1fgE	Final

### Tx to Ant (Wide span)



### Ant to Rx (Wide span)



**Figure 3-6. Electrical Characteristics**



\* Pb Free Part



MSL1

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 1 Duplexer	Date	Feb. 10, 2015
Part Number	D6DA2G140K2A4	Ver.3.1fgE	Final

## Ordering Code

Ordering Code	Packing	Reel size	Status
D6DA2G140K2A4-Z	Tape & Reel	3,000 pcs.	MP
D6DA2G140K2A4-Z	Tape & Reel	less than 3,000 pcs.	MP
D6DA2G140K2A4-Y	Tape & Reel	15,000 pcs.	MP
D6DA2G140K2A4-YA	Tape & Reel	less than 15,000 pcs.	MP
D6DA2G140K2A4-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.