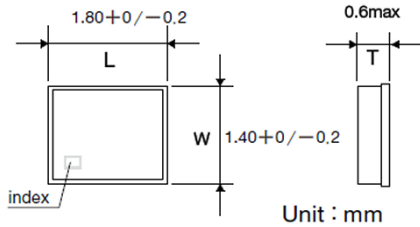


FBAR/SAW Devices (SAW Duplexers)

D5DA942M5K2S2



■ Features

- Item Summary
SAW, Duplexer, 1.8x1.4x0.6mm
Band 8
- 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 8
Insertion Loss (typ) (Tx-ANT/ANT-Rx)	1.3/1.5 dB
Isolation (typ)	58/56 dB
Operating Temp. Range	-30 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 0.6 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 Part



Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 8 Duplexer	DATE	Jan.29, 2016
Part Number	D5DA942M5K2S2	Version 2.1bbE	Final

Table 1-1. Electrical Specification

Item	Condition (MHz)	Specification			Unit	Remarks		
		Min	Typ	Max				
Tx to ANT	Insertion loss(*1)	882.4~912.6	-	1.3	2.4	dB (*2)	-20~+85°C	
		880.24~914.76	-	-	3.6	dB	-30~-20°C	
	-		1.6	3.2	dB	-20~+85°C		
	Ripple	880.24~914.76	-	1.5	3.2	dB		
	Input Power	882.4~912.6	Ta=+50°C, 29dBm, 10000h, LTE modulation			-		
	VSWR	Tx	880.24~914.76	-	1.4	2.1	-	
		Ant	880.24~914.76	-	1.4	2.1		
	Absolute Attenuation	927.4~957.6	48	54	-	dB(*2)	-20~+85°C	
			37	-	-	dB	-30~-20°C	
		925.24~959.76	42	-	-	dB	-20~+0°C	
			48	54	-	dB	+0~+85°C	
1565~1606		40	43	-	dB			
1760~1830		40	48	-	dB			
2640~2745	28	37	-	dB				
ANT to Rx	Insertion loss(*1)	927.4~957.6	-	1.5	2.5	dB (*2)	-20~+85°C	
		925.24~959.76	-	-	3.5	dB	-30~-20°C	
			-	1.8	3.0	dB	-20~+85°C	
	Ripple	925.24~959.76	-	1.1	2.9	dB		
	VSWR	Rx	925.24~959.76	-	1.8	2.1	-	
		Ant	925.24~959.76	-	1.7	2.1		
	Absolute Attenuation	880.24~914.76	45	54	-	dB		
1805~1875		40	52	-	dB			
2400~2500		40	49	-	dB			
2685~2790		40	48	-	dB			

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

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



* Pb Free Part



Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 8 Duplexer	DATE	Jan.29, 2016
Part Number	D5DA942M5K2S2	Version 2.1bbE	Final

Table 1-2. Electrical Specification

Item		Condition (MHz)	Specification			Unit	Remarks
			Min	Typ	Max		
Tx to Rx	Isolation	882.4~912.6	55	58	-	dB(*2)	-20~+85°C
		880.24~914.76	48	-	-	dB	
			55	58	-	dB	-30~+25°C
		927.4~957.6	55	58	-	dB(*2)	-20~+85°C
		925.24~959.76	40	-	-	dB	-30~-20°C
			45	-	-	dB	-20~+0°C
53	56		-	dB	+0~+85°C		
Terminating Impedance		Tx port	50 // 22nH			Ω	Single-ended
		Rx port	50			Ω	Single-ended
		Ant port	50 // 8.2nH			Ω	Single-ended
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 0.6			mm	

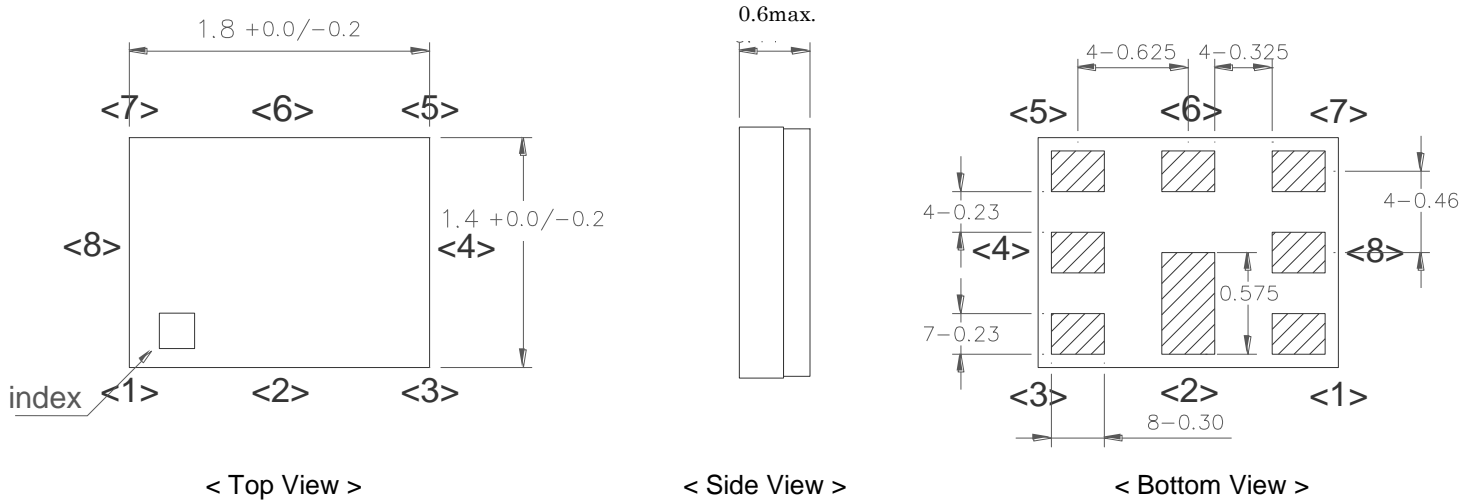
(*2) Integrated over +/-1.92MHz around the WCDMA channel center frequency



* Pb Free Part

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	Band 8 Duplexer	DATE	Jan.29, 2016
Part Number	D5DA942M5K2S2	Version 2.1bbE	Final

Dimensions



Unit: mm

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

Figure 1. Dimensions and Pin assignment



* Pb Free Part



Customer Name	Standard	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	Band 8 Duplexer	DATE	Jan.29, 2016
Part Number	D5DA942M5K2S2	Version 2.1bbE	Final

Evaluation Circuit

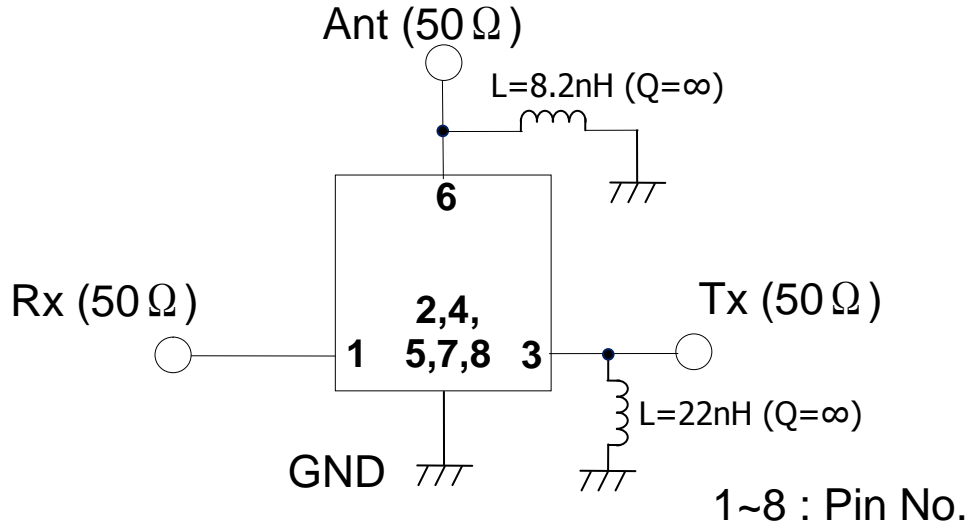


Figure 2. Evaluation Circuit

Recommended foot print pattern

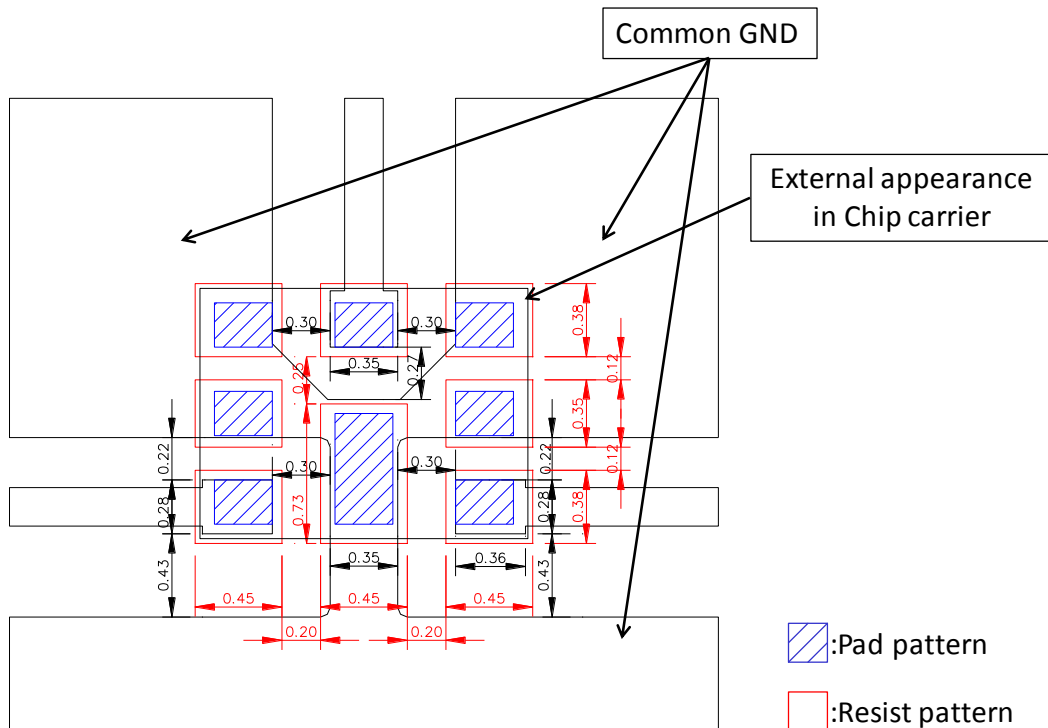


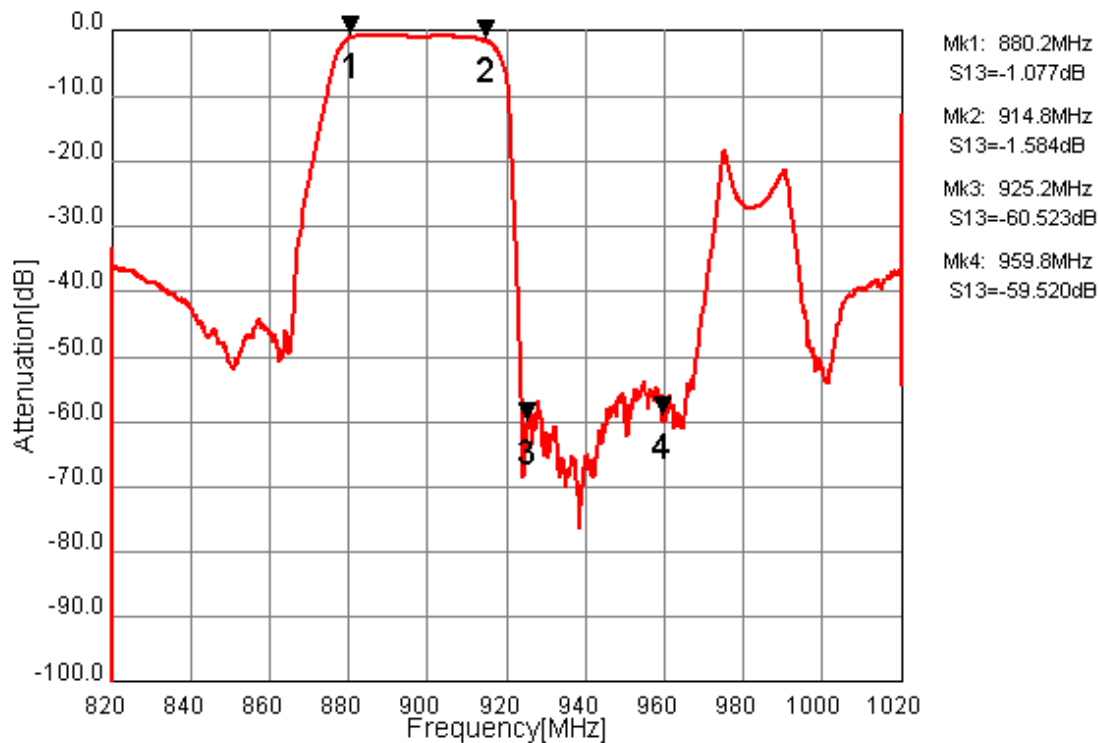
Figure 3. Recommended foot print pattern



* Pb Free Part

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	Band 8 Duplexer	DATE	Jan.29, 2016
Part Number	D5DA942M5K2S2	Version 2.1bbE	Final

Tx to Ant



Ant to Rx

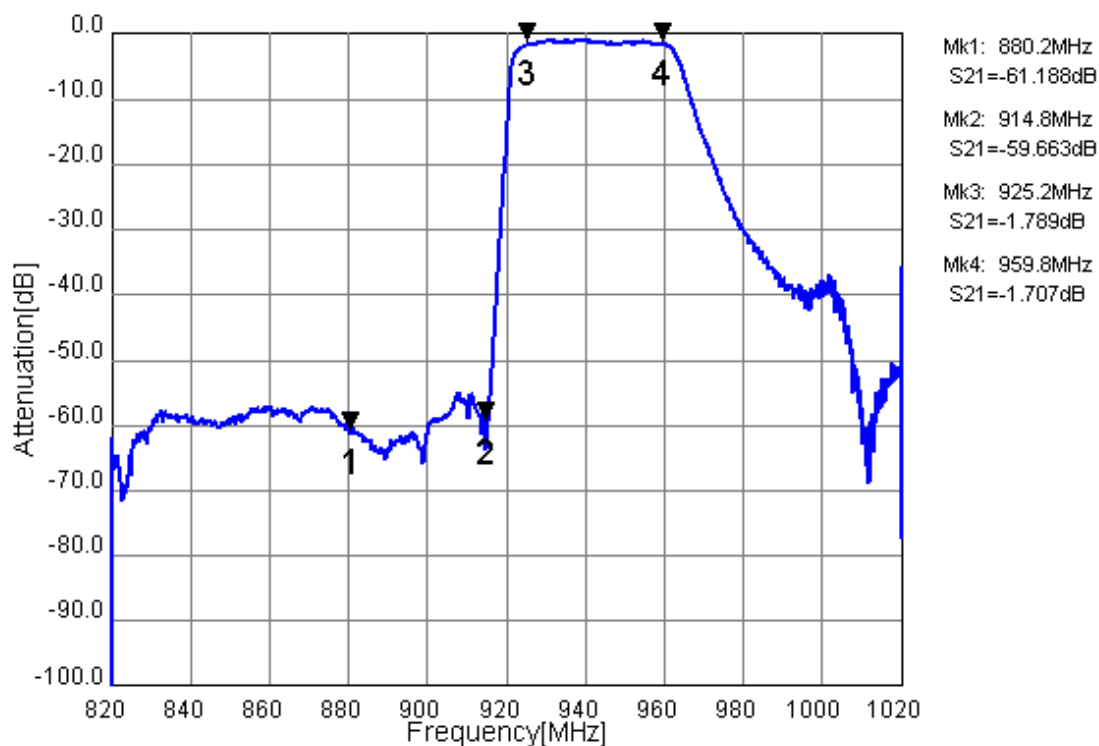


Figure 4-1. Electrical Characteristics

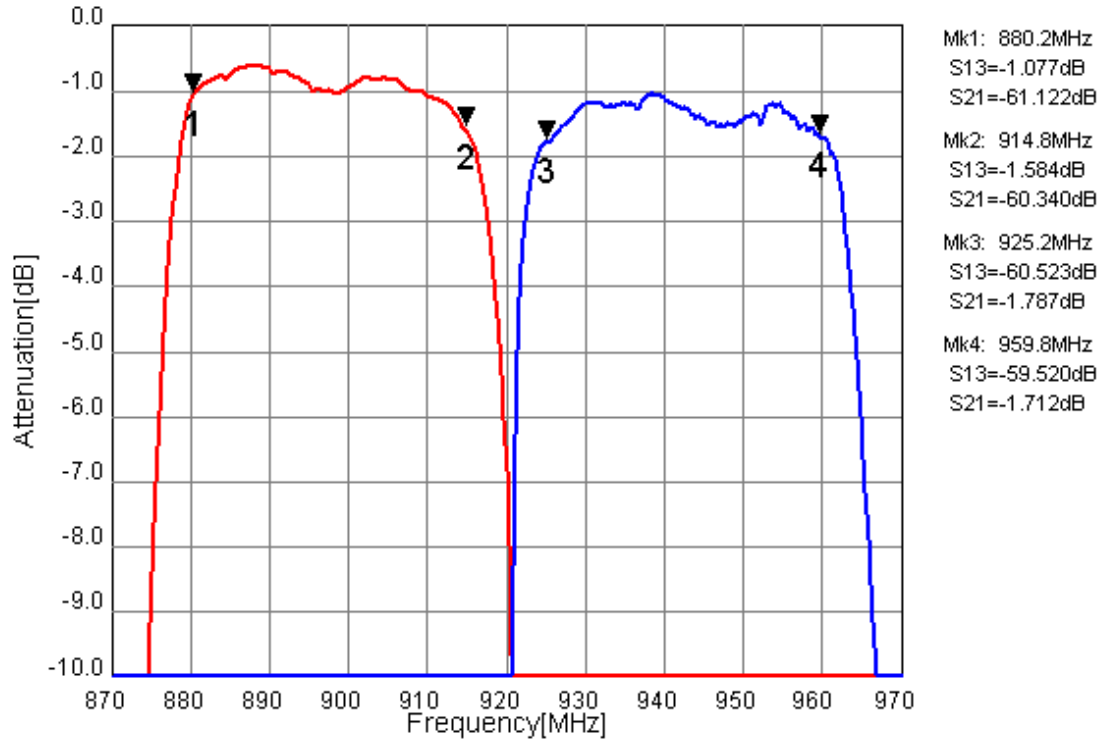
These data **exclude** loss that comes from the test board.



* Pb Free Part

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	Band 8 Duplexer	DATE	Jan.29, 2016
Part Number	D5DA942M5K2S2	Version 2.1bbE	Final

Tx to Ant, Ant to Rx



Tx to Rx Isolation

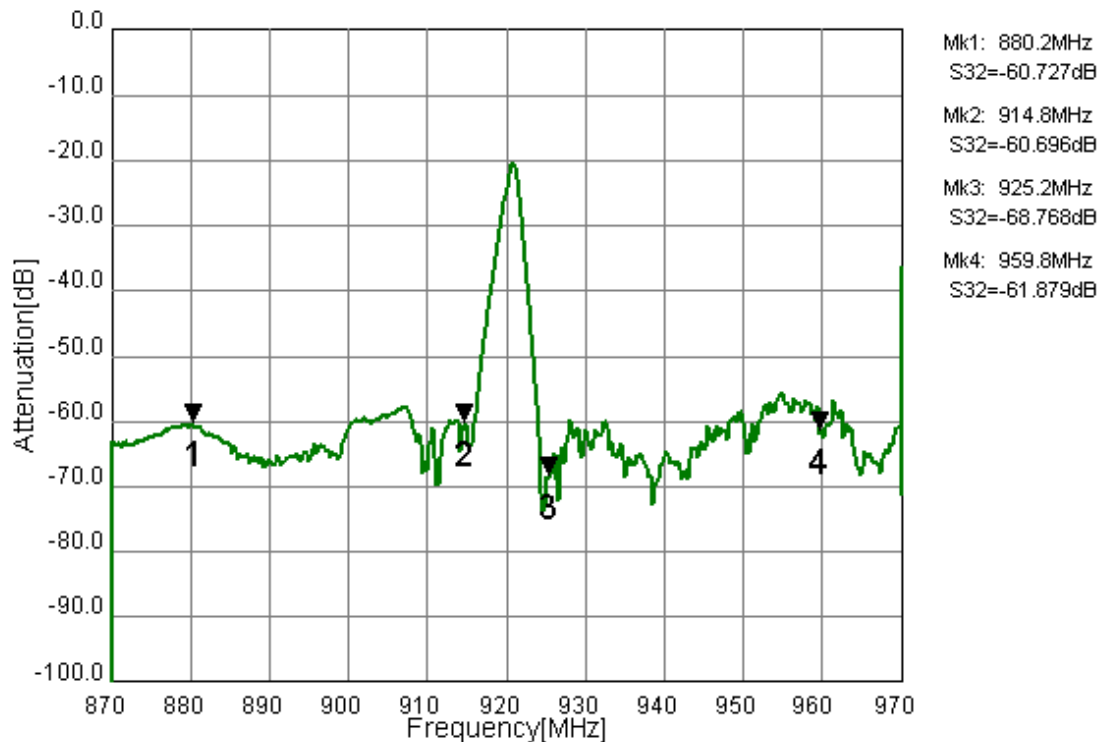


Figure 4-2. Electrical Characteristics

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



* Pb Free Part

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	Band 8 Duplexer	DATE	Jan.29, 2016
Part Number	D5DA942M5K2S2	Version 2.1bbE	Final

Tx Port

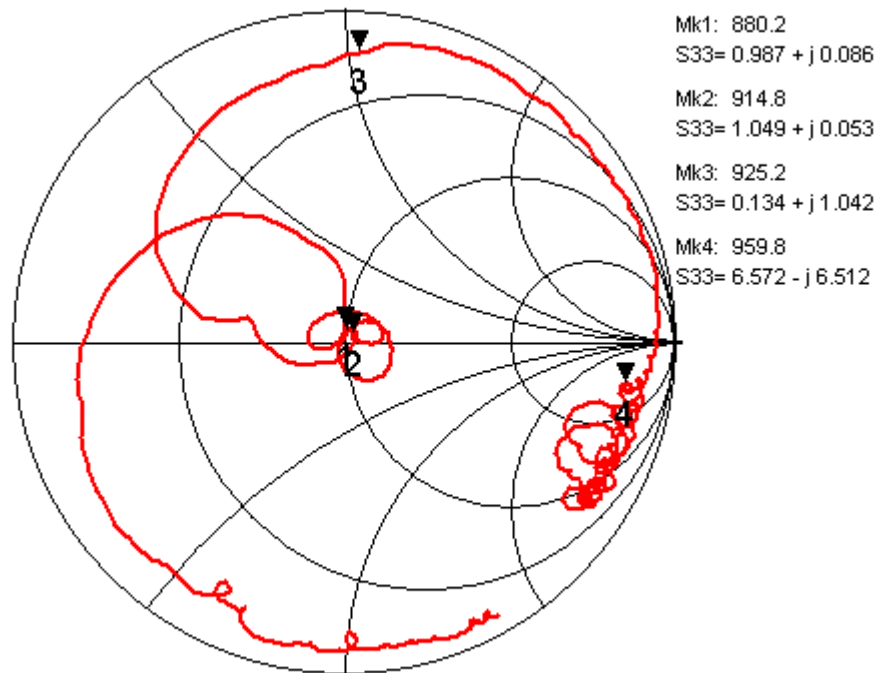
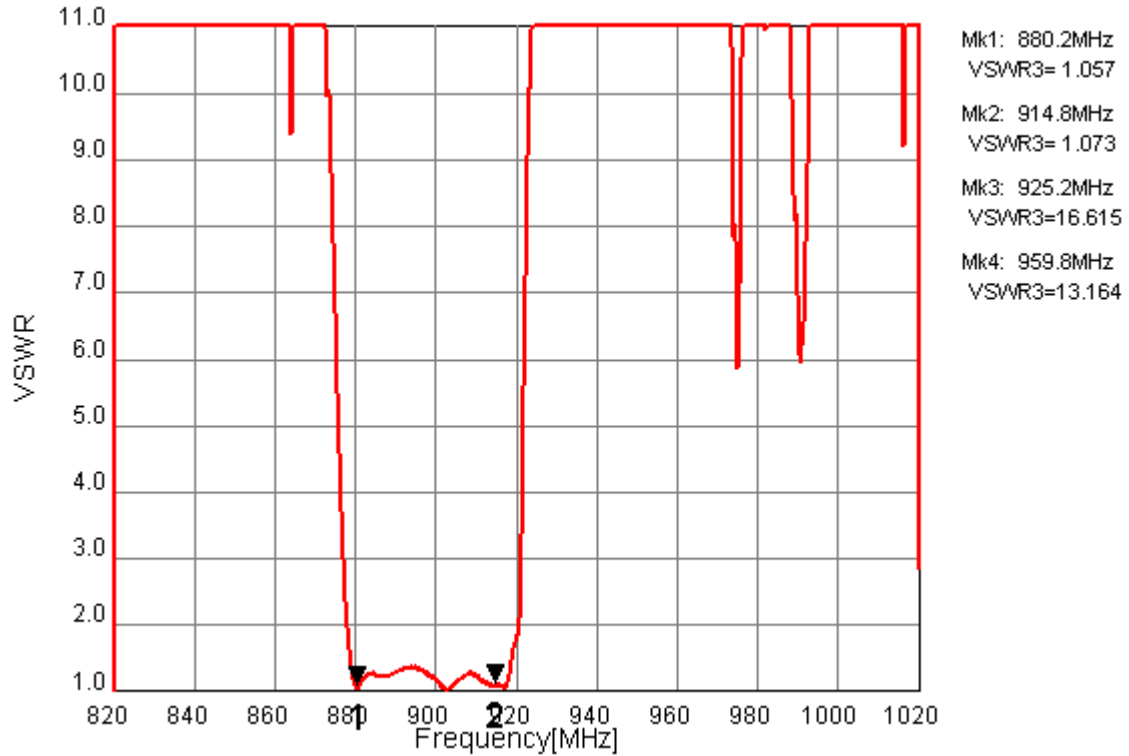


Figure 4-3. Electrical Characteristics



* Pb Free Part

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	Band 8 Duplexer	DATE	Jan.29, 2016
Part Number	D5DA942M5K2S2	Version 2.1bbE	Final

Rx Port

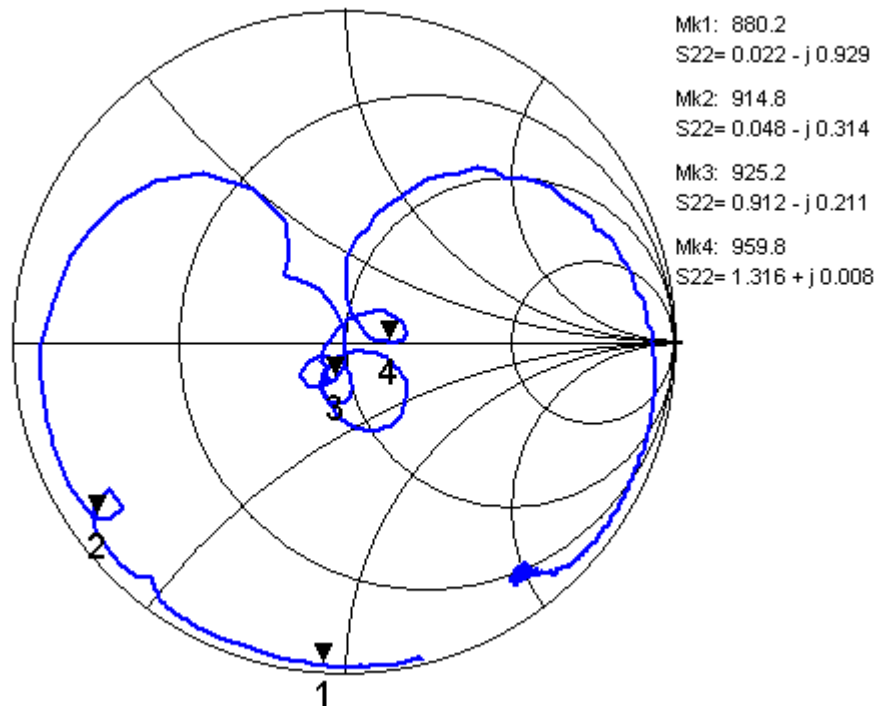
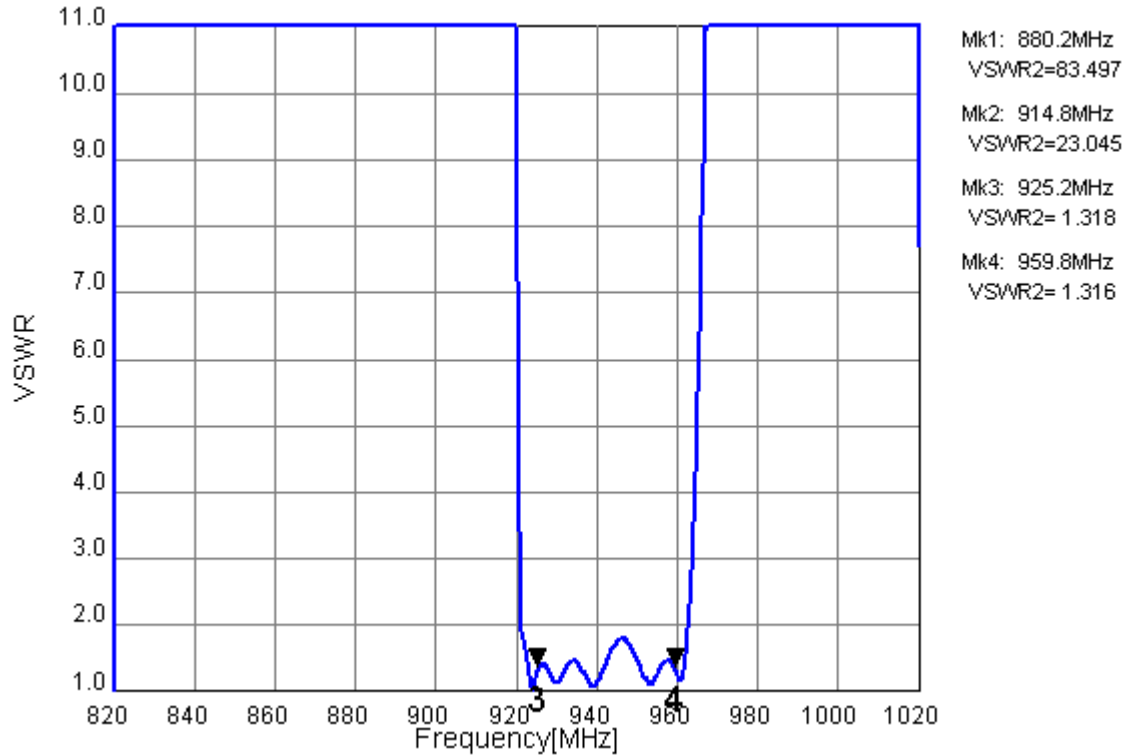


Figure 4-4. Electrical Characteristics



* Pb Free Part

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	Band 8 Duplexer	DATE	Jan.29, 2016
Part Number	D5DA942M5K2S2	Version 2.1bbE	Final

Ant Port

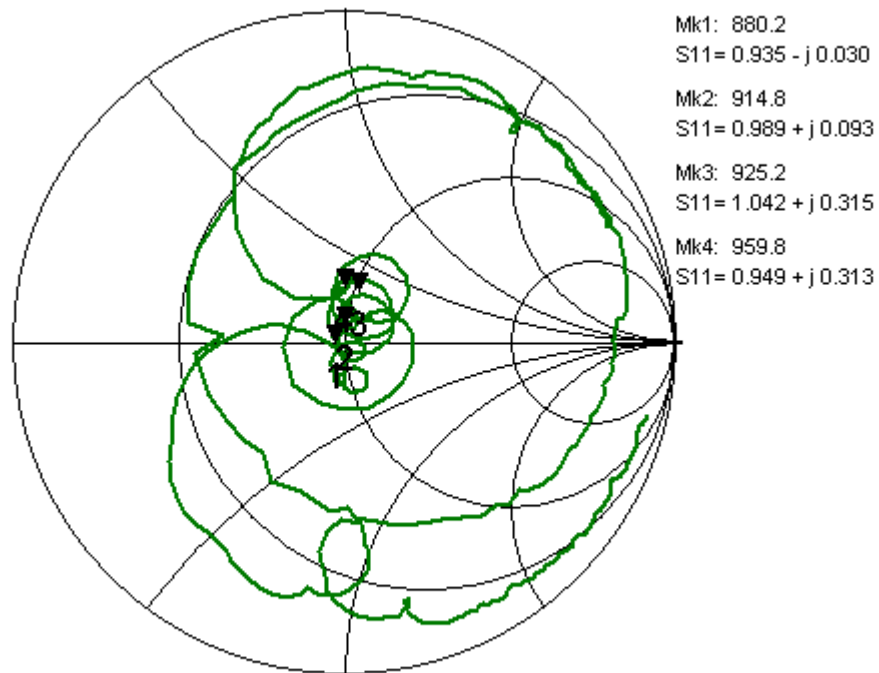
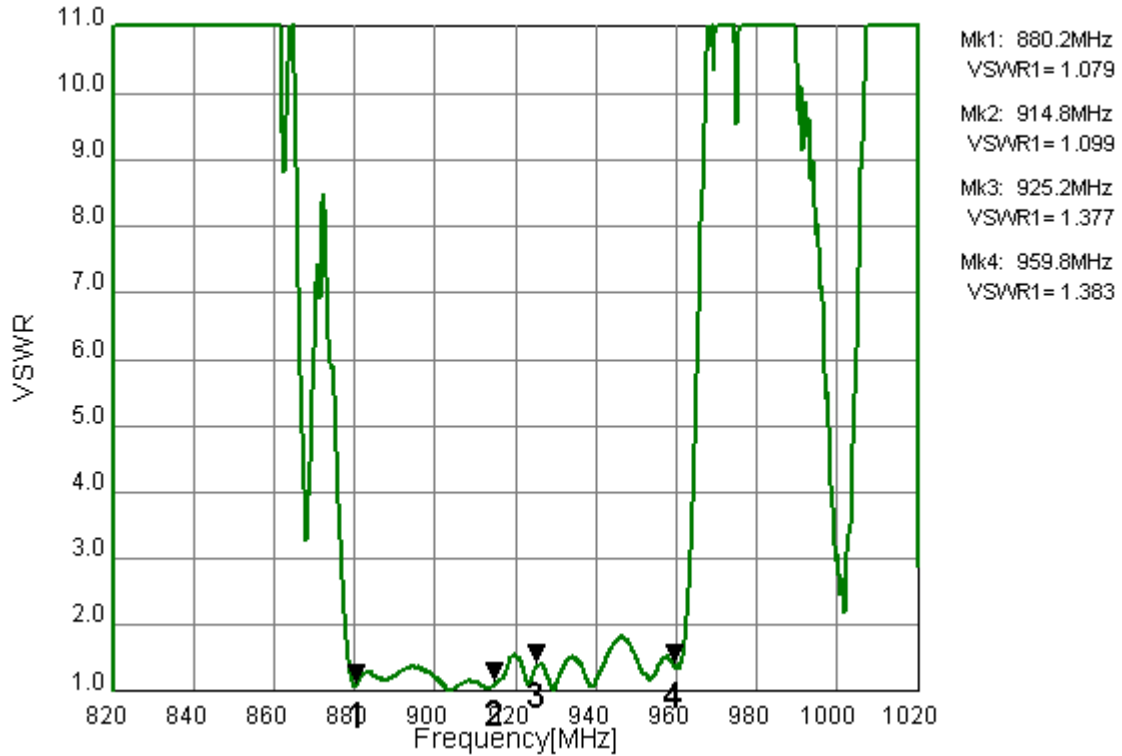


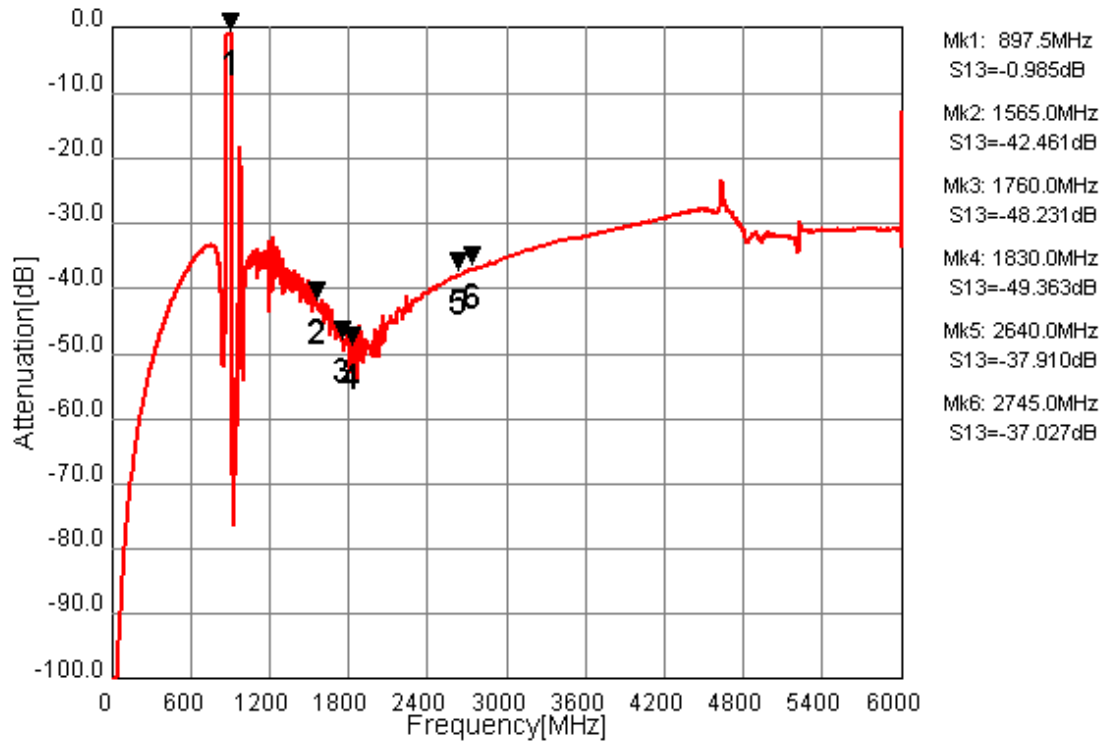
Figure 4-5. Electrical Characteristics



* Pb Free Part

Customer Name	Standard	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	Band 8 Duplexer	DATE	Jan.29, 2016
Part Number	D5DA942M5K2S2	Version 2.1bbE	Final

Tx to Ant (Wide span)



Ant to Rx (Wide span)

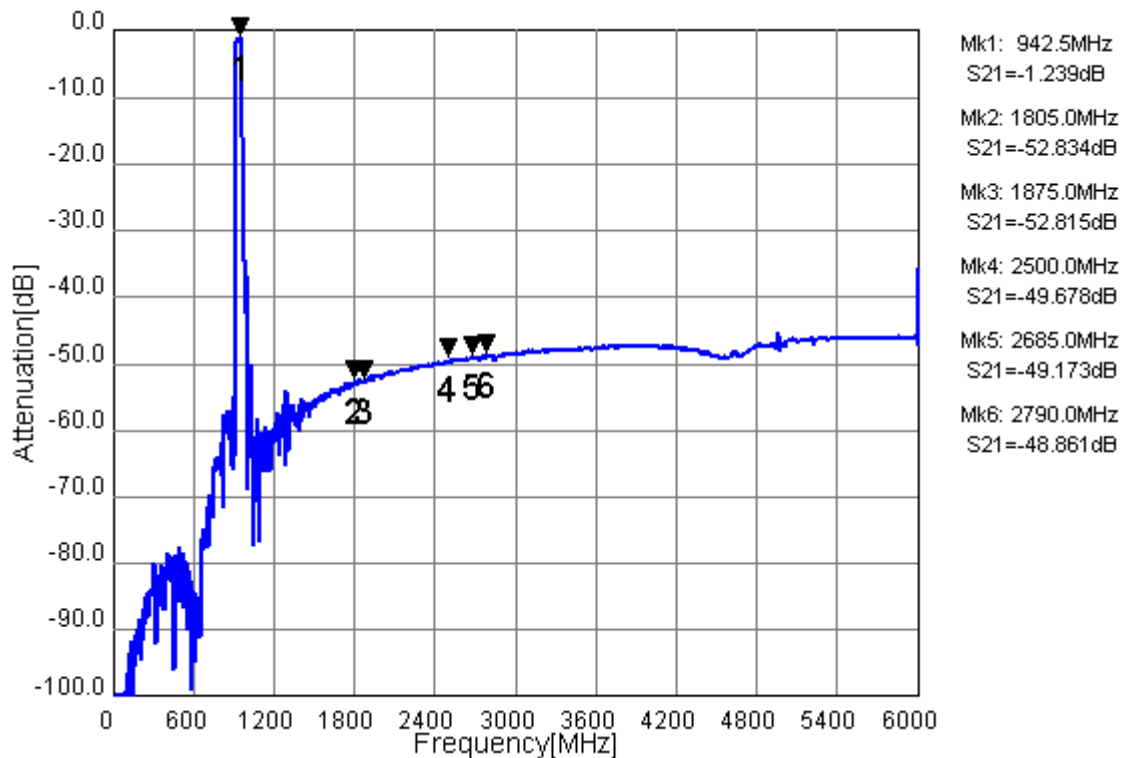


Figure 4-6. Electrical Characteristics



* Pb Free Part



Customer Name	Standard	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	Band 8 Duplexer	DATE	Jan.29, 2016
Part Number	D5DA942M5K2S2	Version 2.1bbE	Final

Ordering Code

Ordering Code	Packing	Reel size	Status
D5DA942M5K2S2- Z	Tape & Reel	3,000 pcs.	MP
D5DA942M5K2S2- ZA	Tape & Reel	less than 3,000 pcs.	MP
D5DA942M5K2S2- Y	Tape & Reel	15,000 pcs.	MP
D5DA942M5K2S2- YA	Tape & Reel	less than 15,000 pcs.	MP
D5DA942M5K2S2- 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.