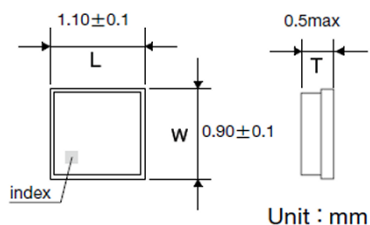


# FBAR/SAW Devices (FBAR Type)

## F6HG2G441EG65



### ■ Features

- Item Summary  
FBAR, 1.1x0.9x0.5mm
- Lifecycle Stage  
Mass Production
- Standard packaging quantity (minimum)  
Taping Embossed 5000 , 15000pcs

### ■ Products characteristics table

System	W-LAN
Type	FBAR
Function	Other
band	Other
Insertion Loss (typ)	1.3 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	1.1 ± 0.10 mm
Dimension W	0.9 ± 0.10 mm
Dimension T	Max 0.5 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.



MSL1

\*Pb Free part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co., Ltd.	
System	W-LAN	DATE	May 19, 2016
Part Number	F6HG2G441EG65	Version 2.0bA	Final

**Table 1 Electrical Specification**

Item	Condition (MHz)	Specification			Unit	Remarks	
		Min.	Typ.	Max.			
Insertion loss integrated(*1)(*2)	2402.5 ~ 2421.5	-	1.4	2.0	dB		
	2407.5 ~ 2426.5	-	1.3	1.9	dB		
	2412.5 ~ 2471.5	-	1.3	1.8	dB		
	2457.5 ~ 2476.5	-	1.3	2.0	dB		
	2462.5 ~ 2481.5	-	1.5	2.4	dB		
Amplitude Ripple(*2)	2402.5 ~ 2421.5	-	0.6	1.5	dB		
	2407.5 ~ 2426.5	-	0.5	1.4	dB		
	2412.5 ~ 2471.5	-	0.5	1.3	dB		
	2457.5 ~ 2476.5	-	0.5	1.5	dB		
	2462.5 ~ 2481.5	-	0.7	1.9	dB		
VSWR	Input	2402.5 ~ 2481.5	-	1.5	2.0	-	
	Output	2402.5 ~ 2481.5	-	1.5	2.0	-	
Input Power	2402.5 ~ 2481.5	28dBm Ta=+50°C 10000h, CW					
Absolute Attenuation	800 - 2300	35	39	-	dB		
	2300 - 2370	48	51	-	dB	(*3)	
	2500 - 2505	23	61	-	dB	-30~-10°C (*3)	
		30		-	dB	-10~+25°C (*3)	
		42		-	dB	+25~+85°C (*3)	
	2505 - 2570	47	52	-	dB	(*3)	
	2570 - 2620	42	48	-	dB	(*3)	
	2620 - 2690	42	45	-	dB	(*3)	
2690 - 7500	30	39	-	dB			
Terminating Impedance	Input port	50//6.8nH(Q=∞)			Ω		
	Output port	50//6.8nH(Q=∞)			Ω		
Operating temperature		-30 to +85			°C		
Maximum DC in all ports		-	-	5	VDC	Device only	
Device size (L typ.x W typ.x H max.)		1.1 x 0.9 x 0.5			mm		

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

(\*2) The integrated loss over any 19MHz channel within the band.

(\*3) The integrated loss over any 5MHz channel within the band.

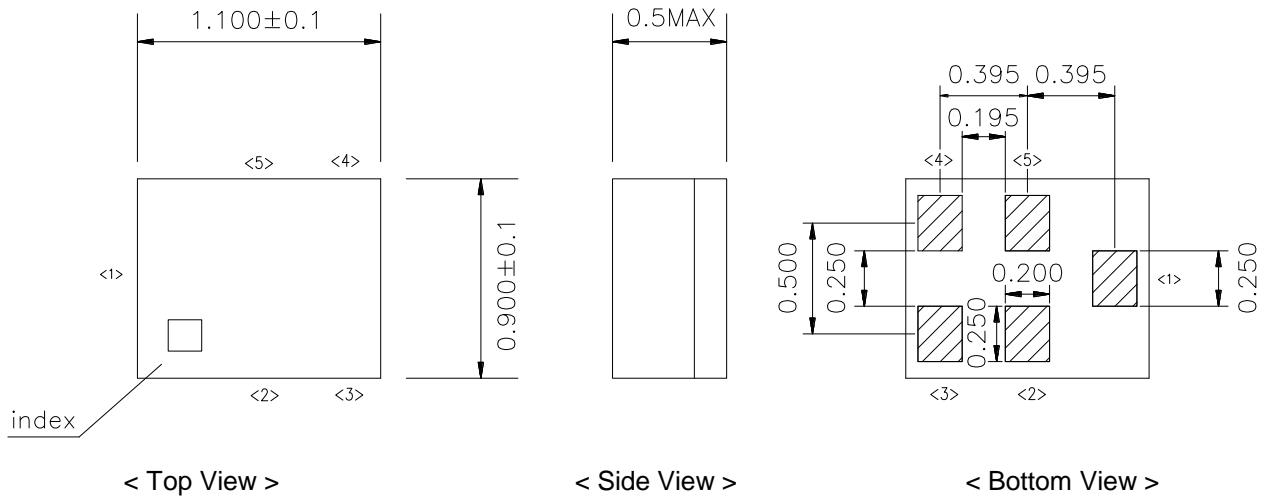


MSL1

\*Pb Free part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	W-LAN	DATE	May 19, 2016
Part Number	F6HG2G441EG65	Version 2.0bA	Final

### Dimensions



Unit : mm

### Pin Configuration

Pin No.	Symbol	Function
1	IN	Input
2	GND	Ground
3	GND	Ground
4	OUT	Output
5	GND	Ground

**Figure 1. Dimensions and Pin assignment**

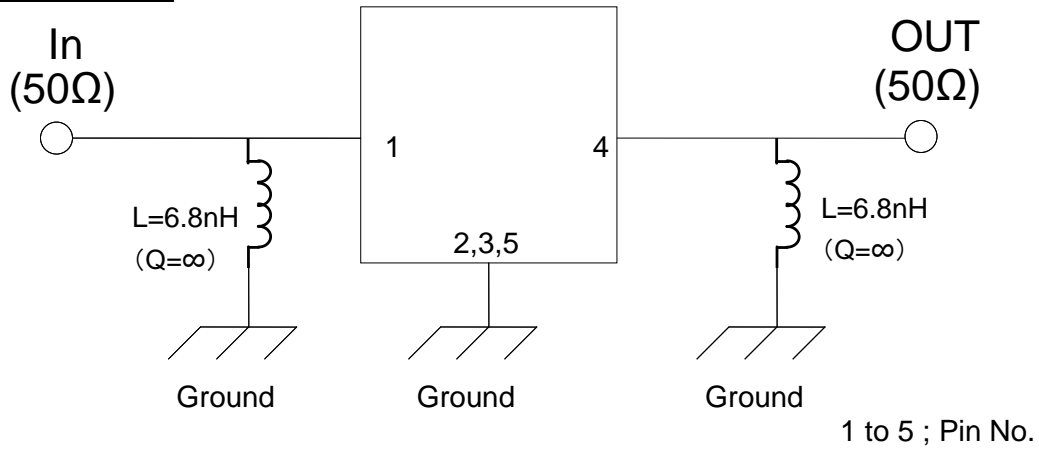


MSL1

\*Pb Free part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	W-LAN	DATE	May 19, 2016
Part Number	F6HG2G441EG65	Version 2.0bA	Final

### Evaluation Circuit



### Recommended foot print pattern

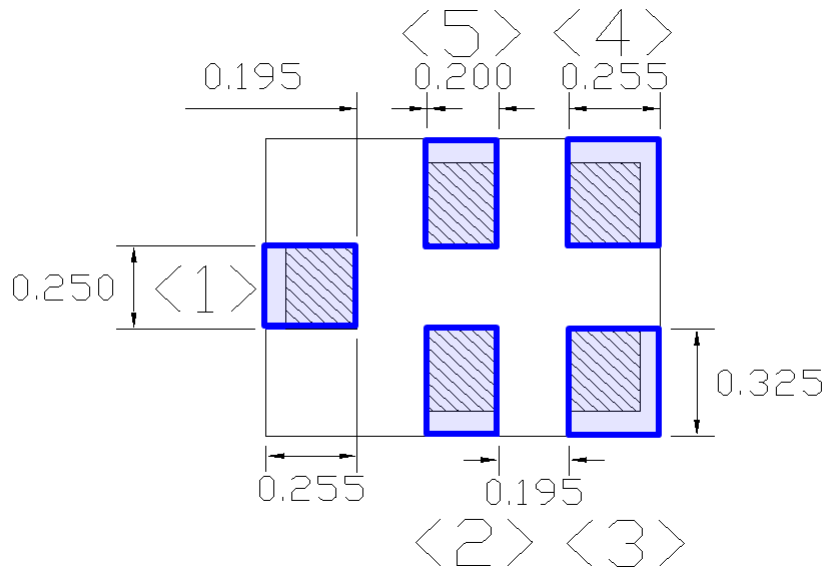


Figure 2. Recommended foot print pattern

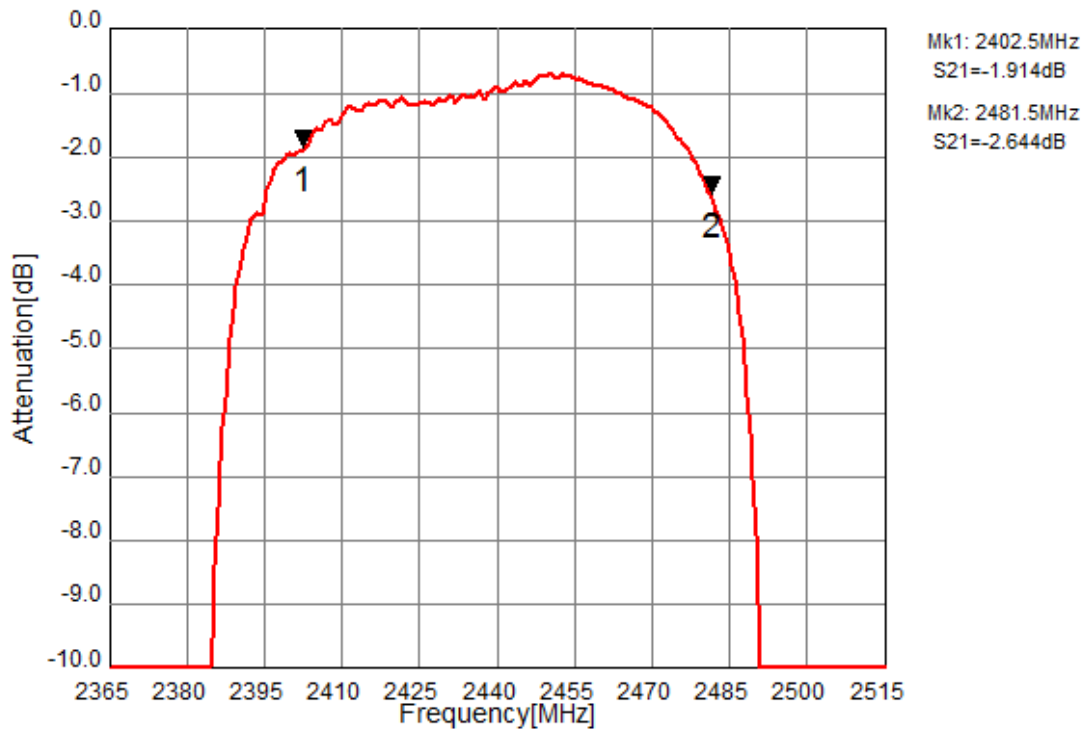
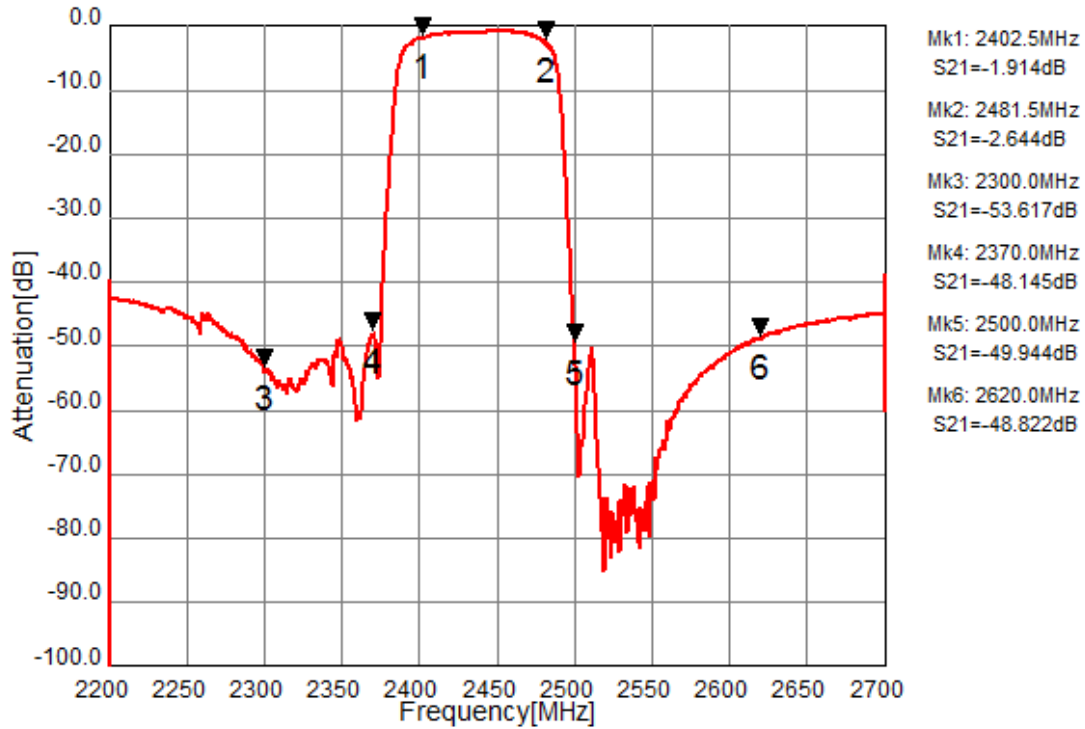


MSL1

\*Pb Free part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	W-LAN	DATE	May 19, 2016
Part Number	F6HG2G441EG65	Version 2.0bA	Final

## Passband



**Figure 3-1. Electrical Characteristics**

These data excludes loss that comes from the test board.



MSL1

\*Pb Free part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	W-LAN	DATE	May 19, 2016
Part Number	F6HG2G441EG65	Version 2.0bA	Final

## Input Port

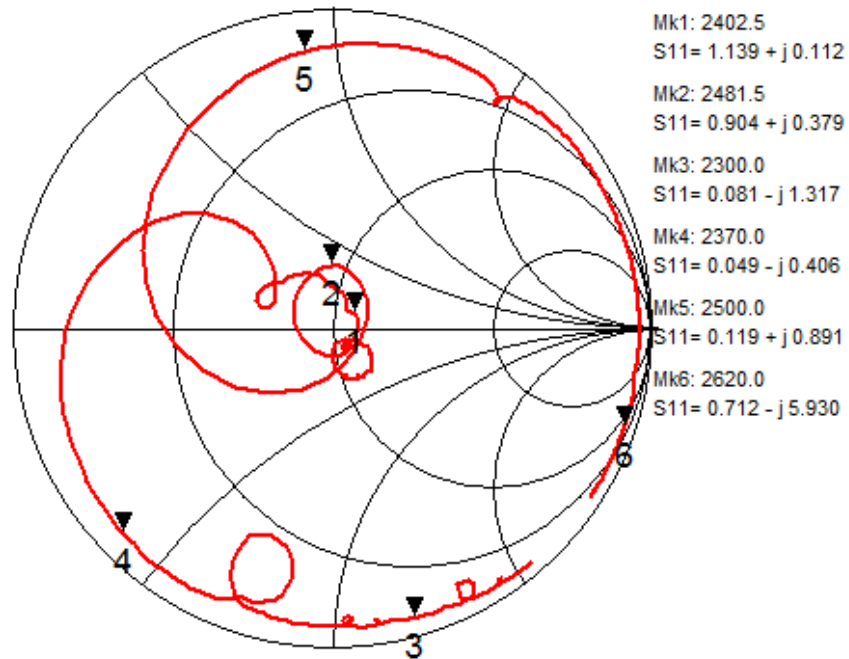
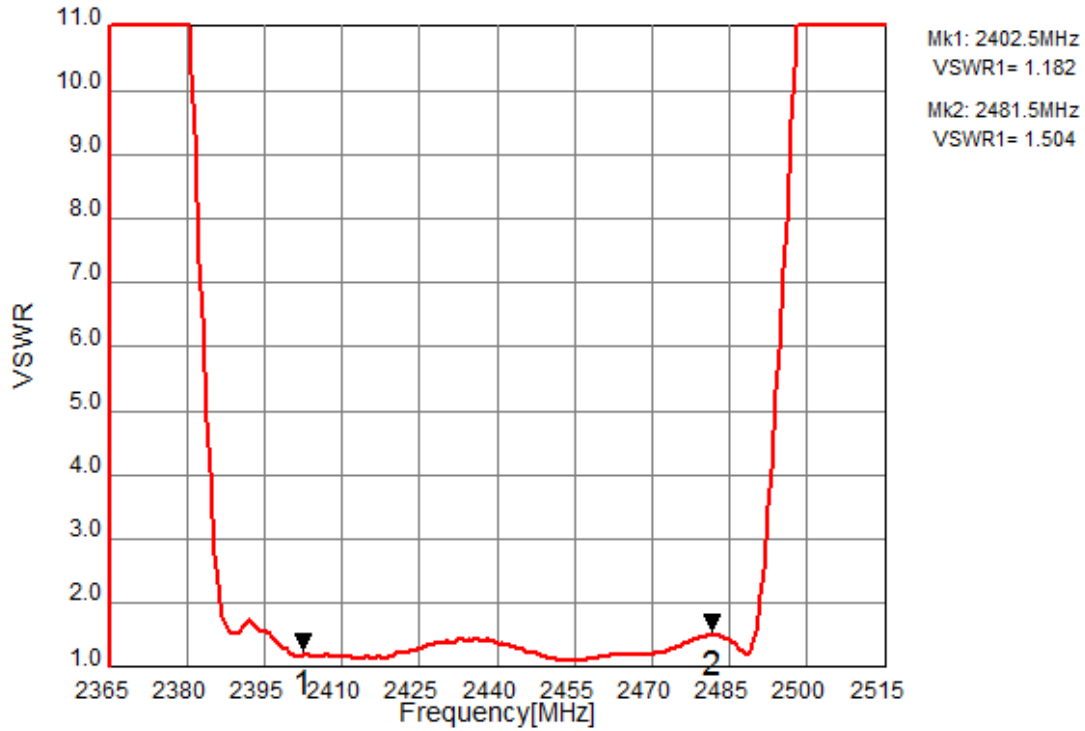


Figure 3-2. Electrical Characteristics



MSL1

\*Pb Free part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	W-LAN	DATE	May 19, 2016
Part Number	F6HG2G441EG65	Version 2.0bA	Final

## Output Port

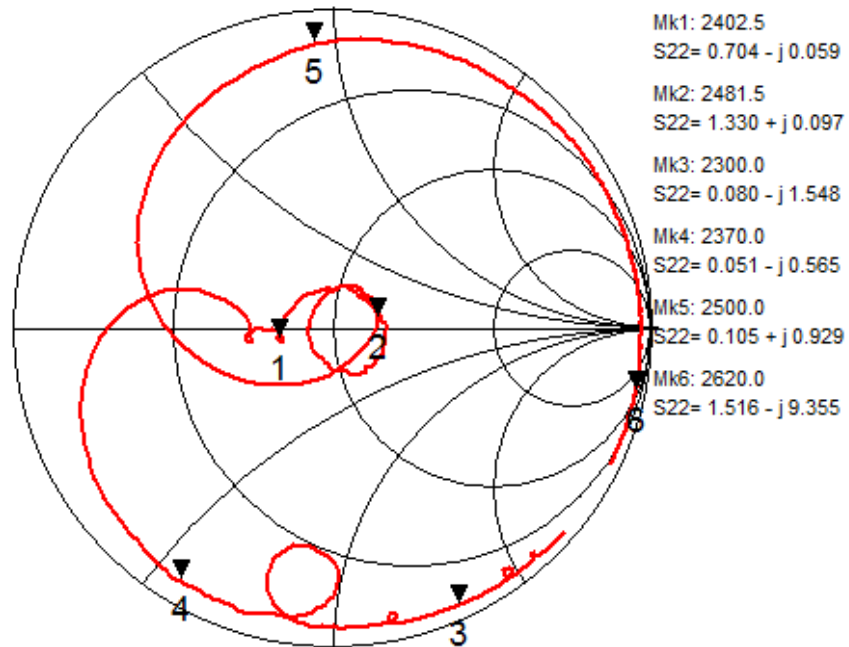
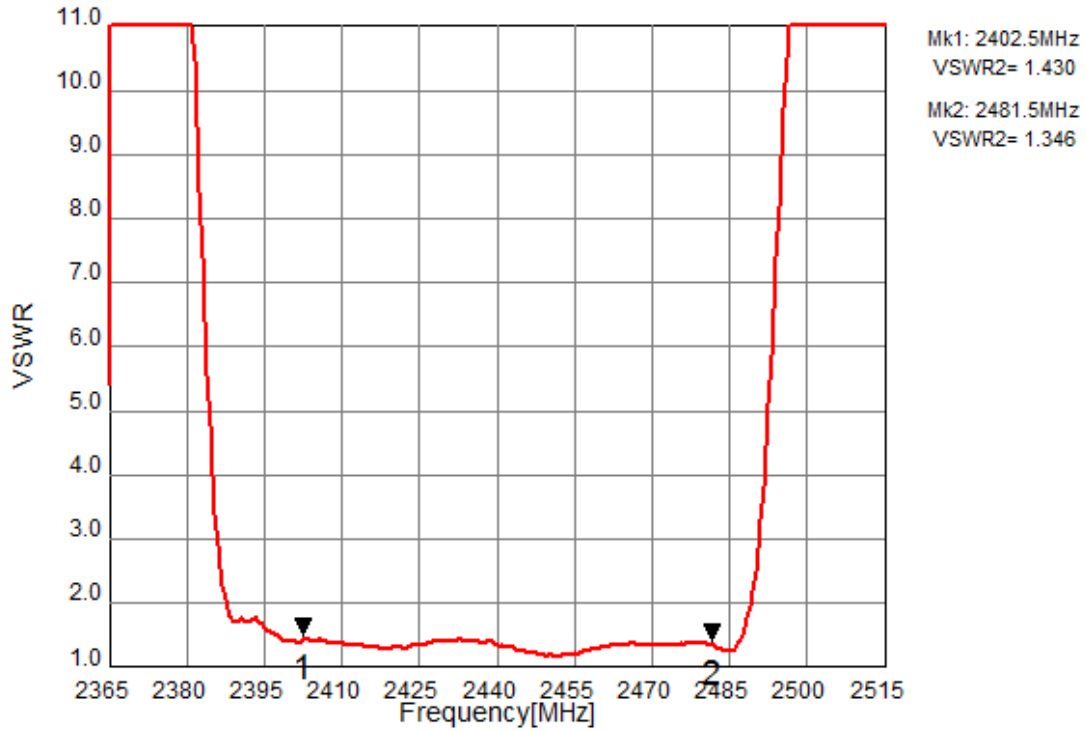


Figure 3-3. Electrical Characteristics

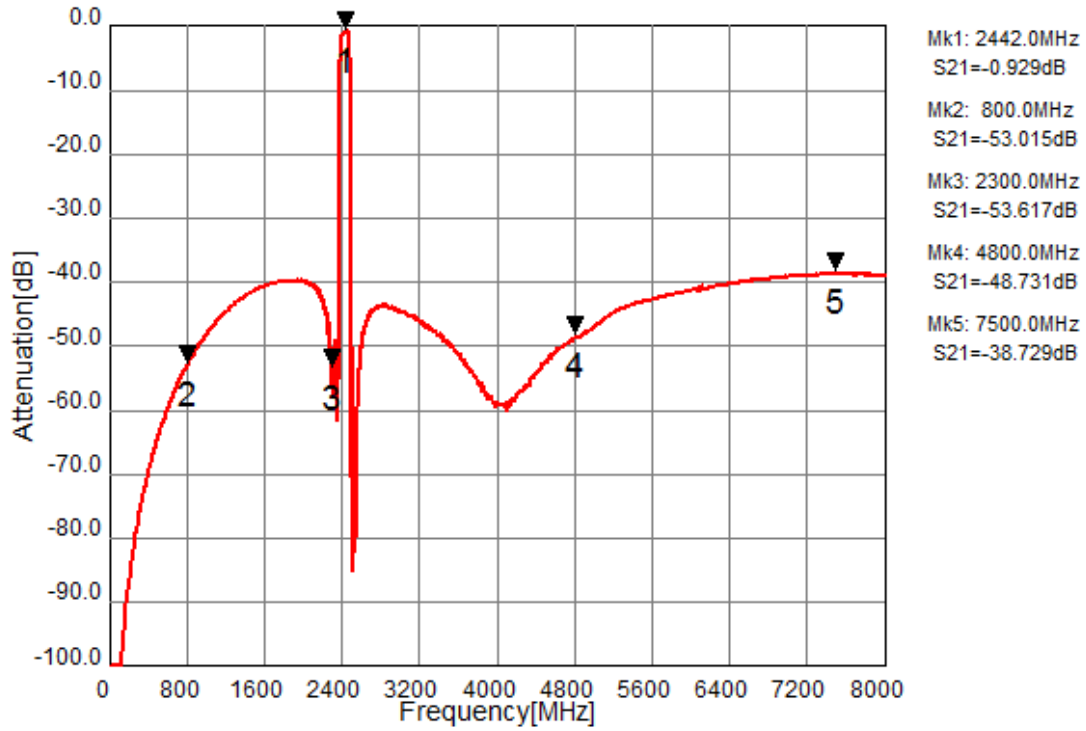


MSL1

\*Pb Free part

Customer Name	Standard Specification	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	W-LAN	DATE	May 19, 2016
Part Number	F6HG2G441EG65	Version 2.0bA	Final

## Wideband



**Figure 3-4. Electrical Characteristics**





MSL1

\*Pb Free part

Customer Name	<b>Standard Specification</b>	TAIYO YUDEN Mobile Technology Co.,Ltd.	
System	W-LAN	DATE	May 19, 2016
Part Number	F6HG2G441EG65	Version 2.0bA	Final

## Ordering Code

Ordering Code	Packing	Reel size	Status
F6HG2G441EG65-J	Tape & Reel	5,000 pcs.	MP
F6HG2G441EG65-JA	Tape & Reel	less than 5000 pcs.	MP
F6HG2G441EG65-Y	Tape & Reel	15,000 pcs.	MP
F6HG2G441EG65-YA	Tape & Reel	less than 15,000 pcs.	MP
F6HG2G441EG65-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.