

ASSP Mobile Communication Systems**Piezoelectric SAW BPF
(1000 to 2500 MHz)****F6 Series (L2 type)****■ DESCRIPTION**

The F6 series of SAW band pass filters apply to the frequency range 1000 to 2500 MHz.

The SAW filters are fabricated on a lithium tantalate (LiTaO_3) substrate, producing filters with a wide frequency bandwidth, low insertion loss in passband and superior stability due to the high electromechanical coupling coefficient of the material.

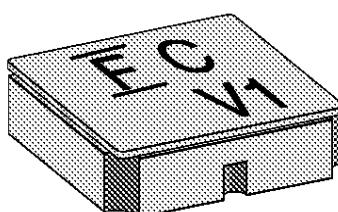
Fujitsu's leading techniques for making filter pattern designs realized this high frequency filter.

The F6 series filters are housed in a small surface mount package. Moreover, the impedance in the passband is 50Ω , and so applications require no external matching circuits.

The F6 series SAW filters are suitable for interstage RF filter in mobile communications systems in the sub microwave frequency band. Standard devices are available for PCS, DCS1800, and 2.4 GHz wireless LAN systems.

■ FEATURES

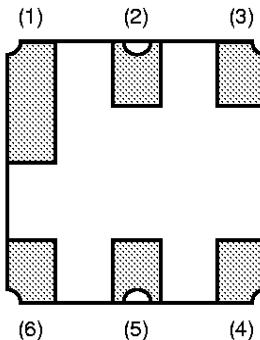
- High frequency filters
- Low insertion loss
- Ultra compact and light package (3.0 mm sq.)
- External matching circuits are not required.
- Surface mount package (SMT)
- Wide variety of standard devices for worldwide mobile communication systems

■ PACKAGE

F6 Series (L2 type)

■ PIN ASSIGNMENT

(BOTTOM VIEW)



■ PIN DESCRIPTION

Pin No.	Pin name	Description
1	GND	Ground
2	IN	Input
3	GND	Ground
4	GND	Ground
5	OUT	Output
6	GND	Ground

■ ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value		Unit
		Min.	Max.	
Operating temperature	T _a	-30	+85	°C
Storage temperature	T _{stg}	-40	+100	°C
Maximum input level	P _{IN}	Refer to electrical characteristics		

WARNING: Semiconductor devices can be permanently damaged by application of stress (voltage, current, temperature, etc.) in excess of absolute maximum ratings. Do not exceed these ratings.

F6 Series (L2 type)

■ RECOMMENDED OPERATING CONDITIONS (See WARNING)

Parameter	Symbol	Value		Unit
		Min.	Max.	
Operating temperature	T _a	-30 *	+85 *	°C

* : Standard Rating for Wireless LAN Systems is 0 to +60°C.

WARNING: Recommended operating conditions are normal operating ranges for the semiconductor device. All the device's electrical characteristics are warranted when operated within these ranges.

Always use semiconductor devices within the recommended operating conditions. Operation outside these ranges may adversely affect reliability and could result in device failure.

No warranty is made with respect to uses, operating conditions, or combinations not represented on the data sheet. Users considering application outside the listed conditions are advised to contact their FUJITSU representative beforehand.

■ STANDARD FREQUENCIES

System	Center freq. (MHz)	Band width	Part symbol	Part number	Remarks	
GPS	1575.42	2	6	FAR-F6CE-1G5754-L2UA		
PCN	Tx	1747.5	75	A	FAR-F6CE-1G7475-L2YA	
	Rx	1842.5	75	B	FAR-F6CE-1G8425-L2YB	
US-PCS	Tx	1880.0	60	C	FAR-F6CE-1G8800-L2XA	
		1880.0	60	c	FAR-F6CE-1G8800-L2XZ	High Att. type
		1880.0	60	g	FAR-F6CE-1G8800-L2XJ	High Att. at Rx band
	Rx	1960.0	60	D	FAR-F6CE-1G9600-L2XB	
		1960.0	60	f	FAR-F6CE-1G9600-L2XY	High Att. type
K-PCS	Tx	1750.0	60	A	FAR-F6CE-1G7475-L2YAC	
		1730.0	40	K	FAR-F6CE-1G7300-L2TC	
		1765.0	30	S	FAR-F6CE-1G7650-L2TA	
	Rx	1840.0	60	B	FAR-F6CE-1G8425-L2YBC	
		1820.0	40	W	FAR-F6CE-1G8200-L2TD	
		1855.0	30	T	FAR-F6CE-1G8550-L2TB	
Wireless LAN	2448.5	97	E	FAR-F6CE-2G4500-L2WA		
	2484.0	26	P	FAR-F6CE-2G4840-L2WC	For Japan	
	2441.8	83	L	FAR-F6CE-2G4418-L2WD	For Europe, USA	

F6 Series (L2 type)

17. Wireless-LAN 83.5 MHz Band Width (For Europe, USA)

Part number: FAR-F6CE-2G4418-L2WD

(Ta = 0 to +60°C)

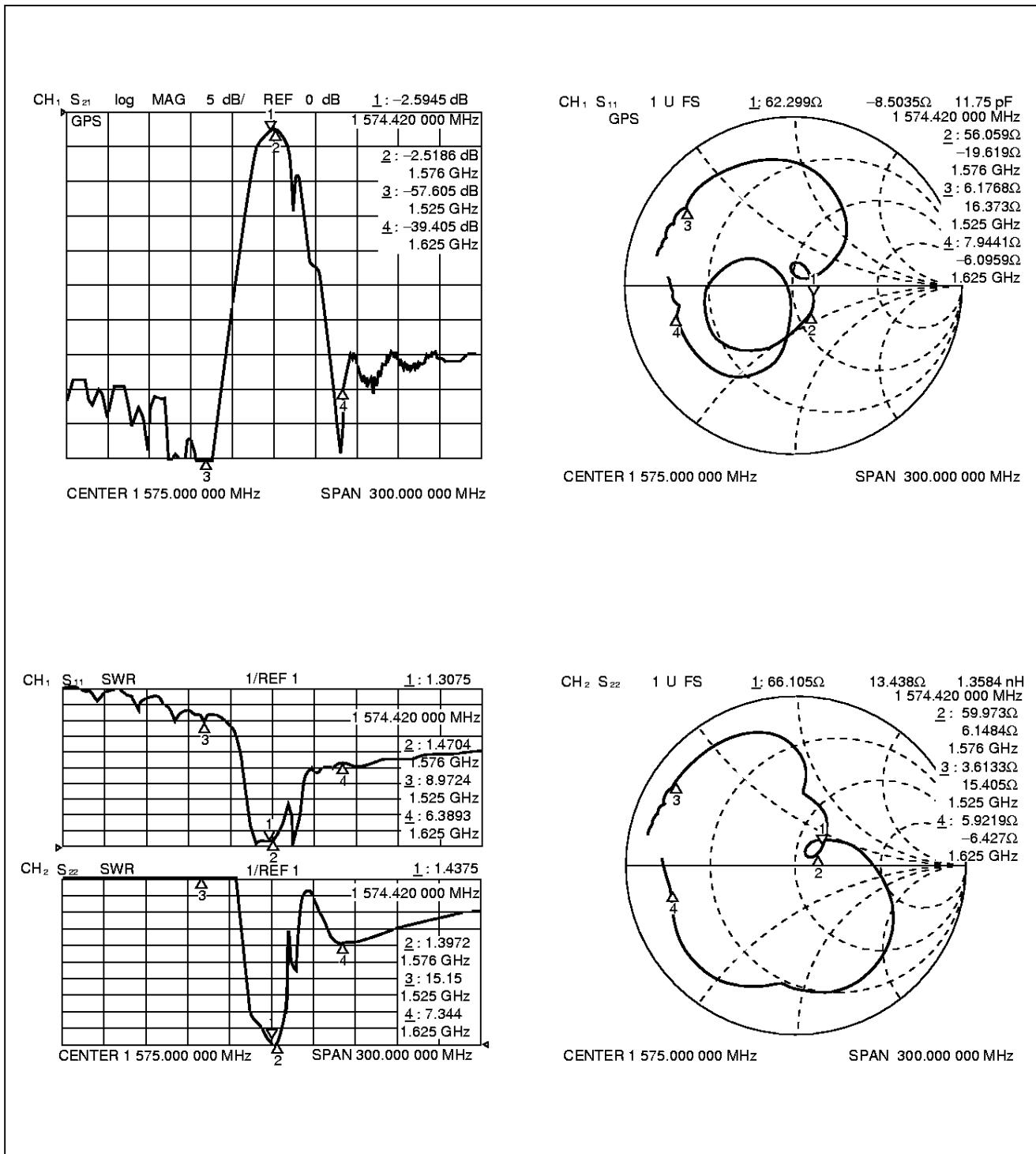
Parameter	Symbol	Conditions	Value			Unit	Remarks
			Min.	Typ.	Max.		
Insertion loss	IL	2400 to 2483.5 MHz	—	3.2	4.5	dB	
In-band deviation	—	2400 to 2483.5 MHz	—	1.3	2.5	dB	
Absolute stopband attenuation	—	D.C. to 1700 MHz	20	22	—	dB	
	—	1800 to 2200 MHz	25	27	—	dB	
	—	2700 to 3100 MHz	30	33	—	dB	
	—	4800 to 5000 MHz	10	16	—	dB	
In-band VSWR	—	2400 to 2483.5 MHz	—	2.2	2.6	—	
Max. input power	P _{IN}	2400 to 2483.5 MHz	—	—	10	mW	

F6 Series (L2 type)

■ TYPICAL CHARACTERISTICS (STANDARD VERSION)

1. GPS

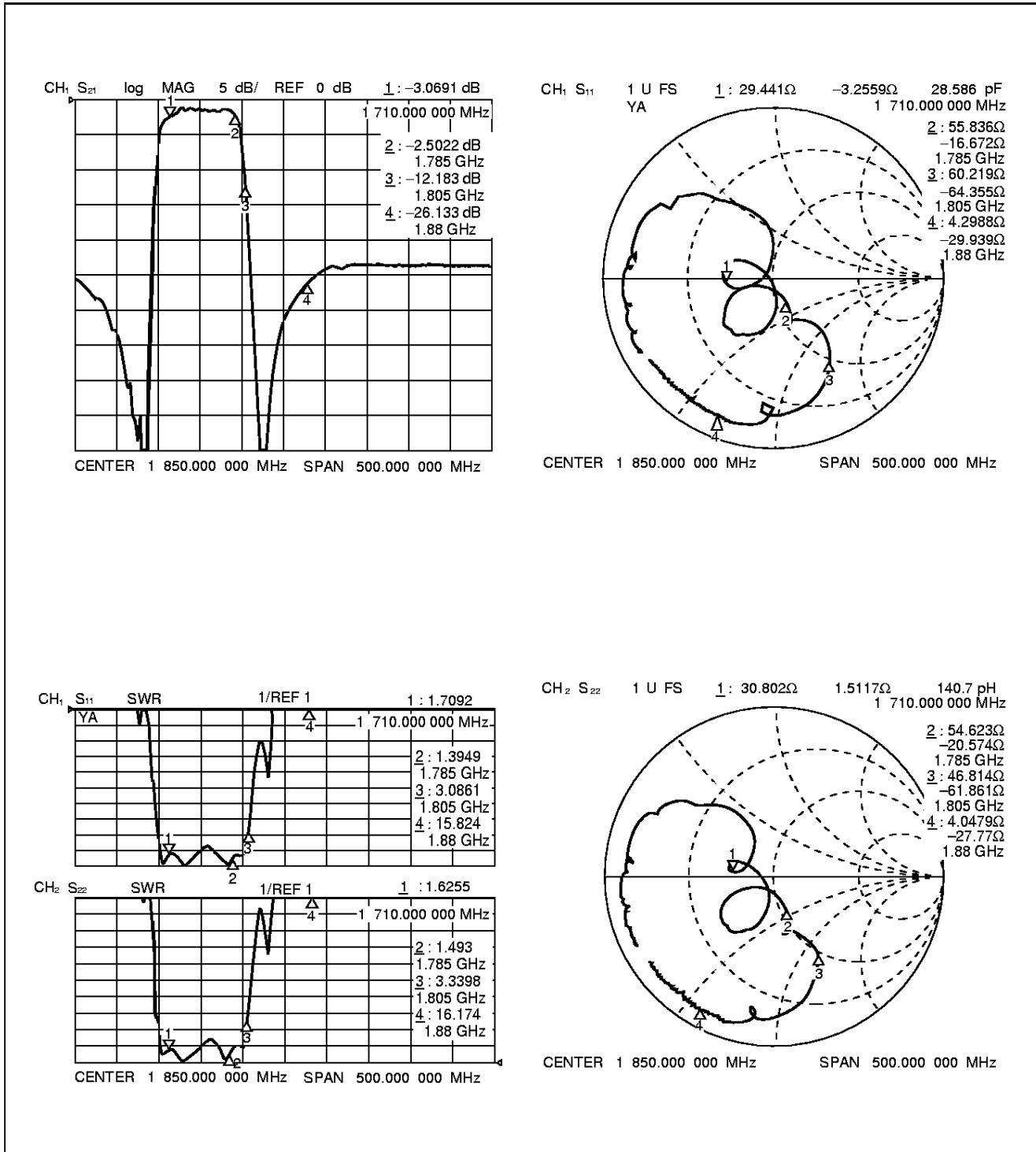
Part number: FAR-F6CE-1G5754-L2UA



F6 Series (L2 type)

2. PCN (Tx)

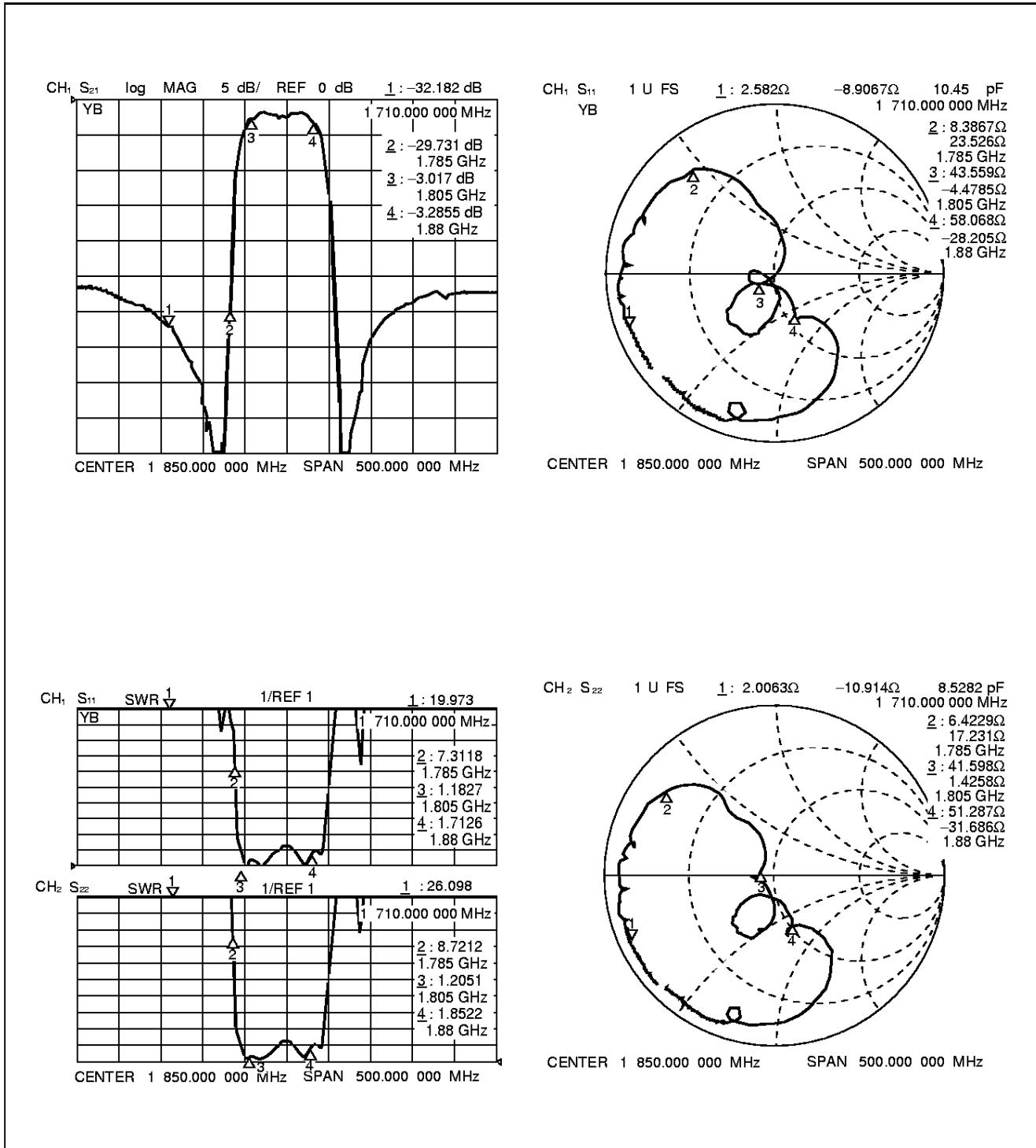
Part number: FAR-F6CE-1G7475-L2YA



F6 Series (L2 type)

3. PCN (Rx)

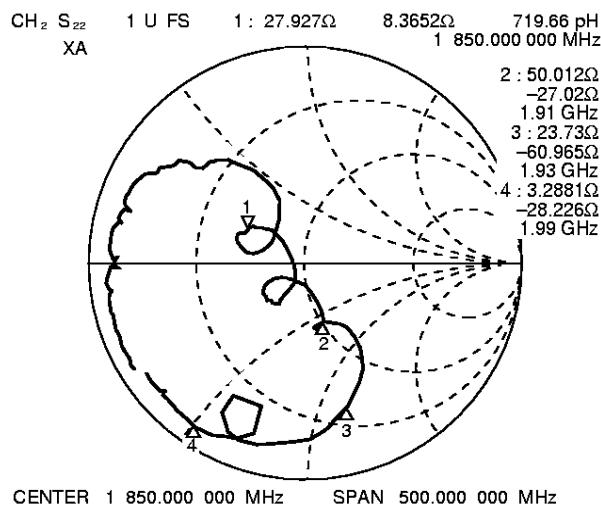
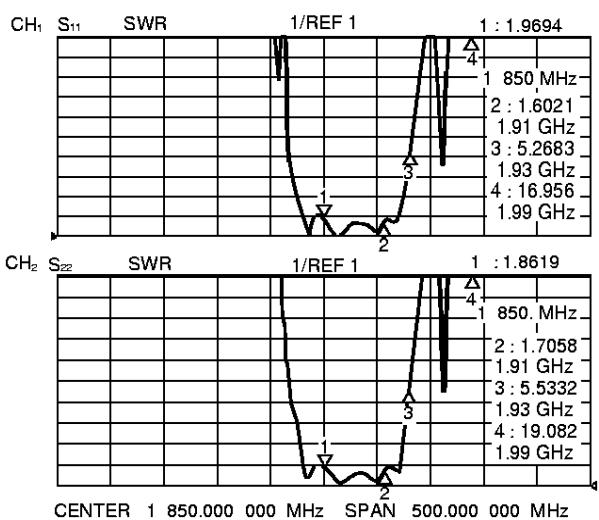
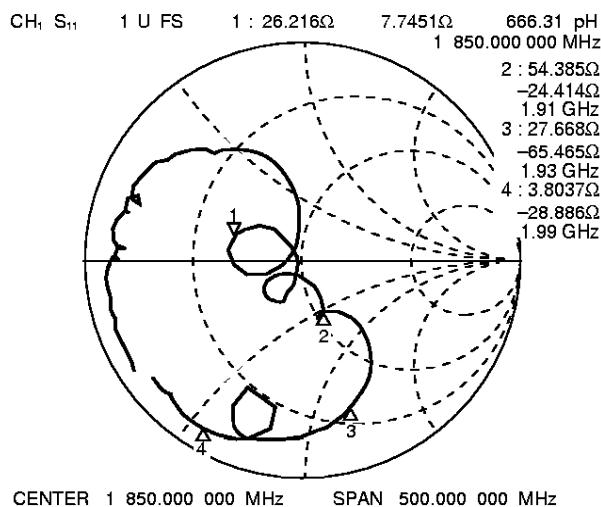
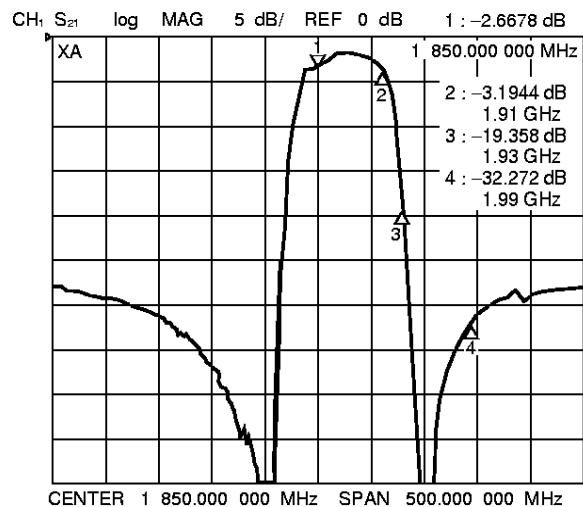
Part number: FAR-F6CE-1G8425-L2YB



F6 Series (L2 type)

4. US-PCS (Tx)

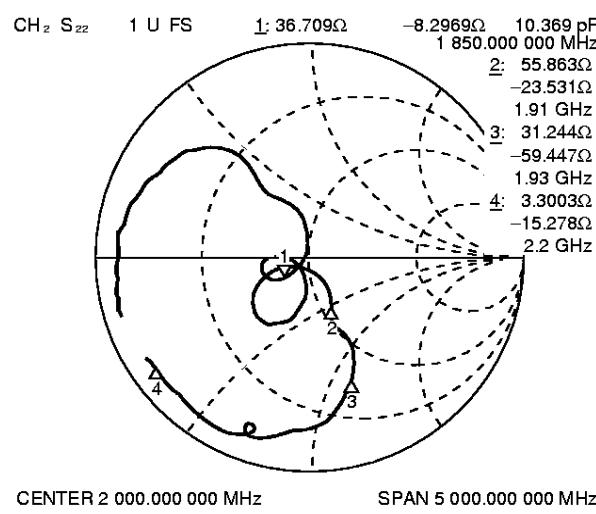
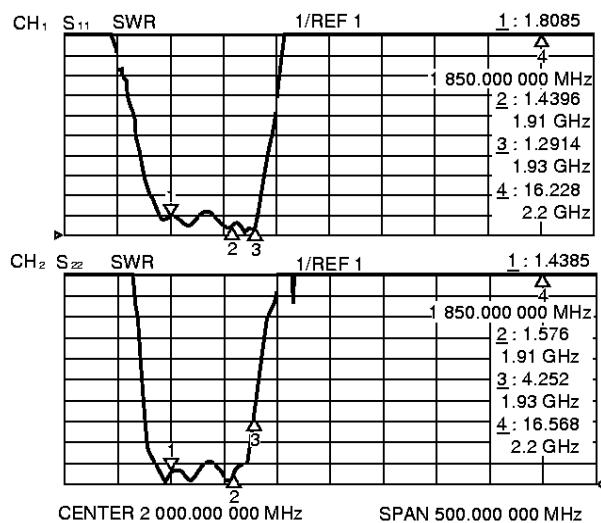
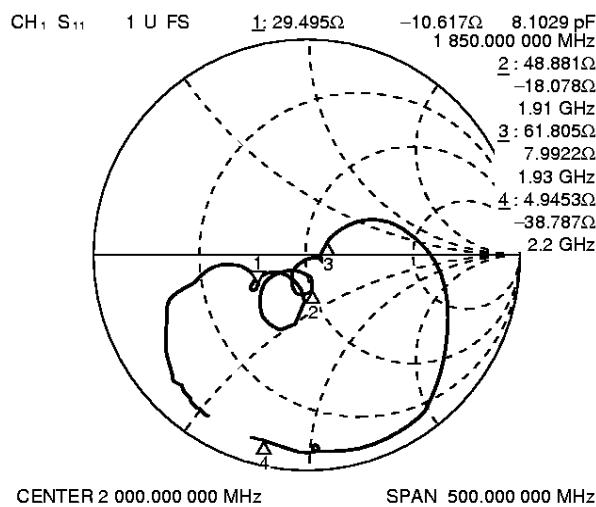
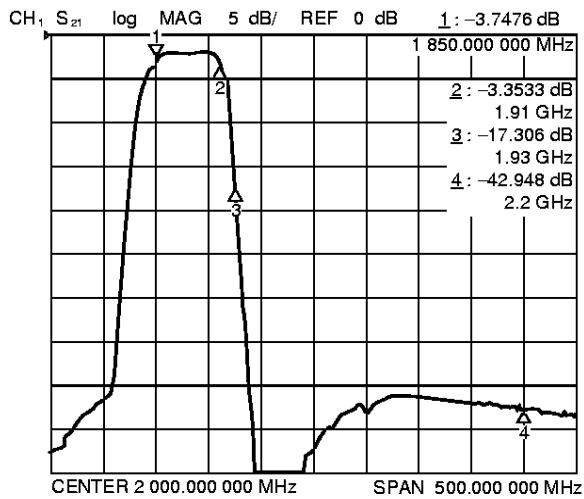
Part number: FAR-F6CE-1G8800-L2XA



F6 Series (L2 type)

5. US-PCS (Tx) High Attenuation type

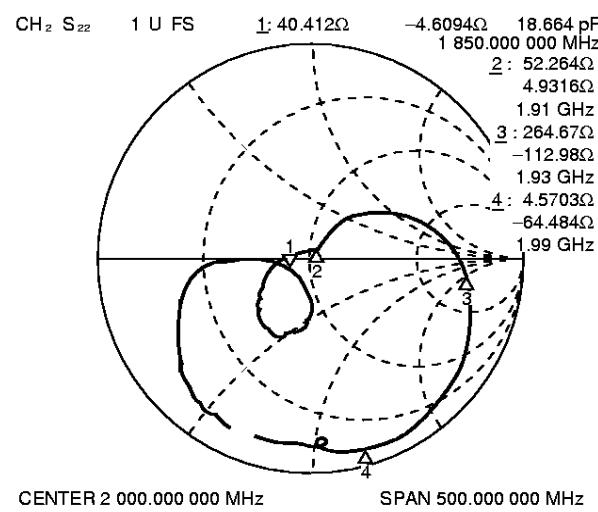
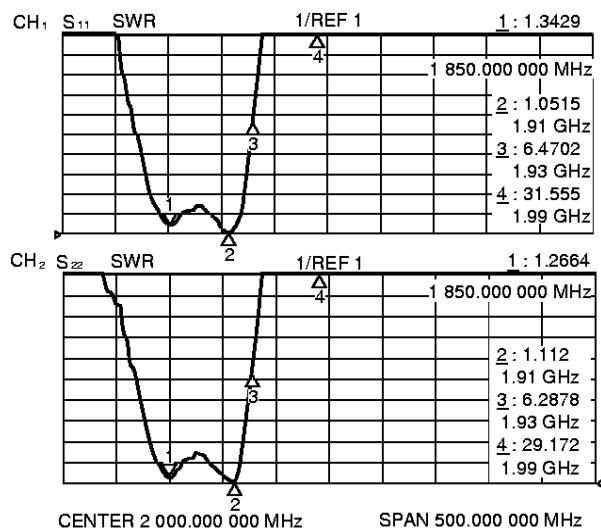
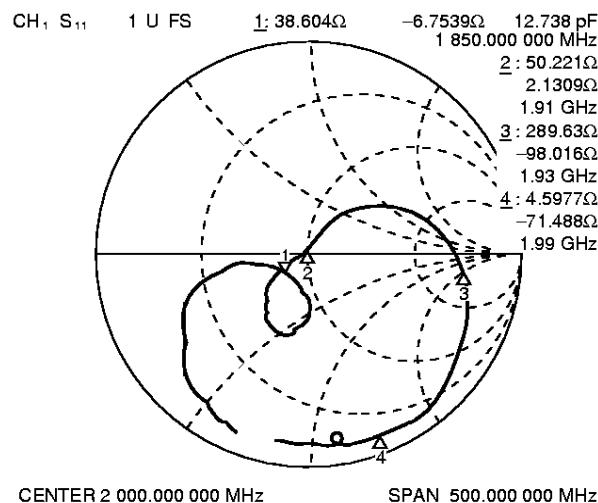
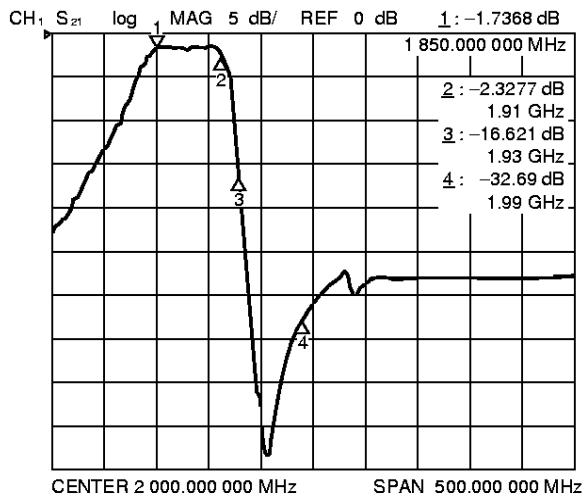
Part number: FAR-F6CE-1G8800-L2XZ



F6 Series (L2 type)

6. US-PCS (Tx) High Attenuation at Rx band type

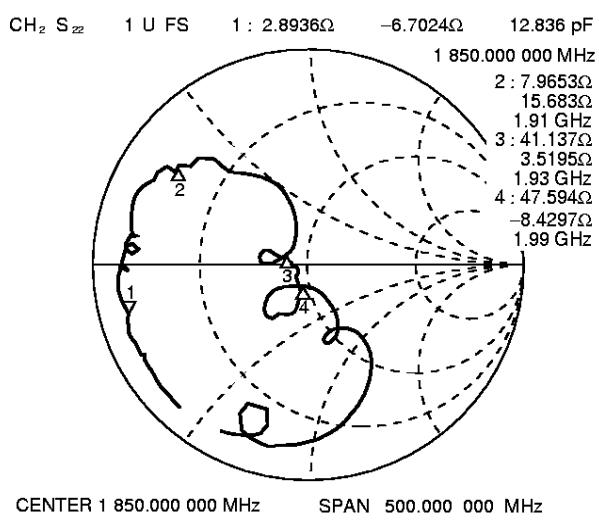
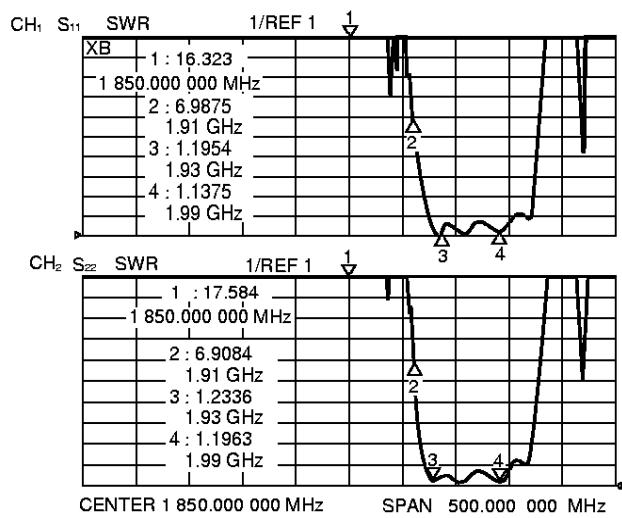
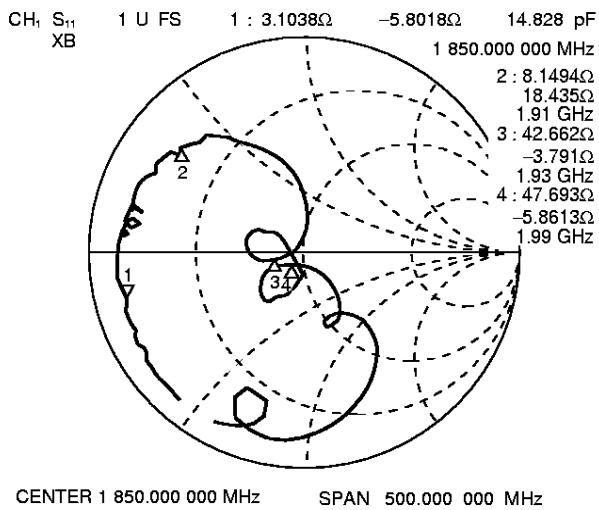
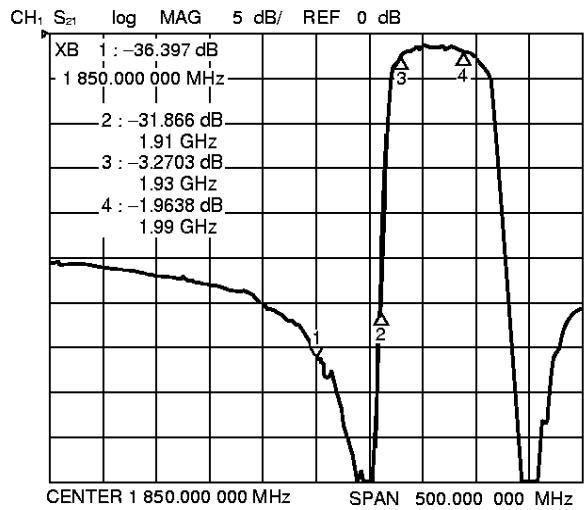
Part number: FAR-F6CE-1G8800-L2XJ



F6 Series (L2 type)

7. US-PCS (Rx)

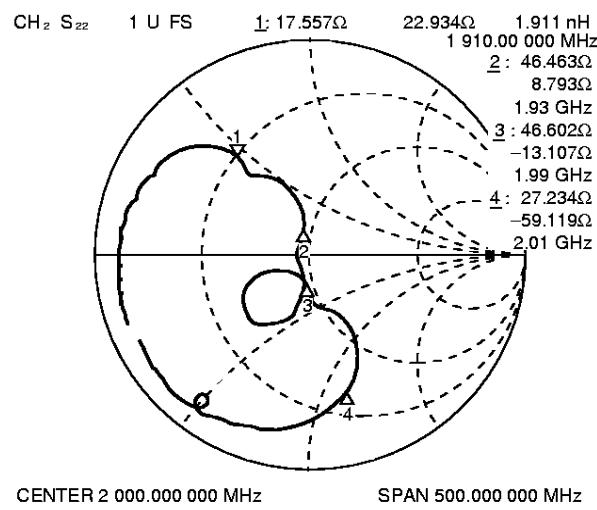
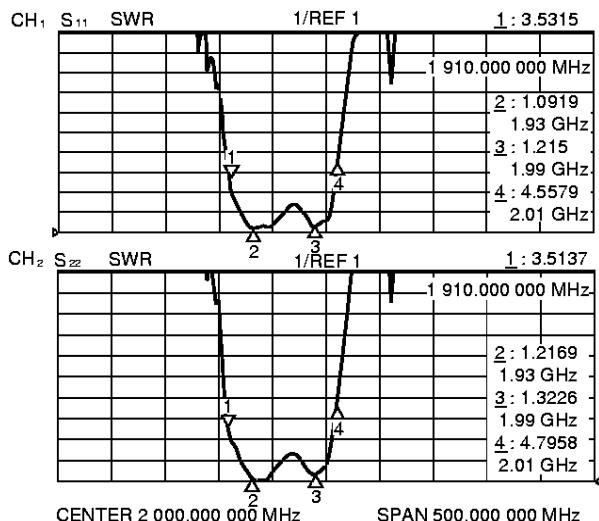
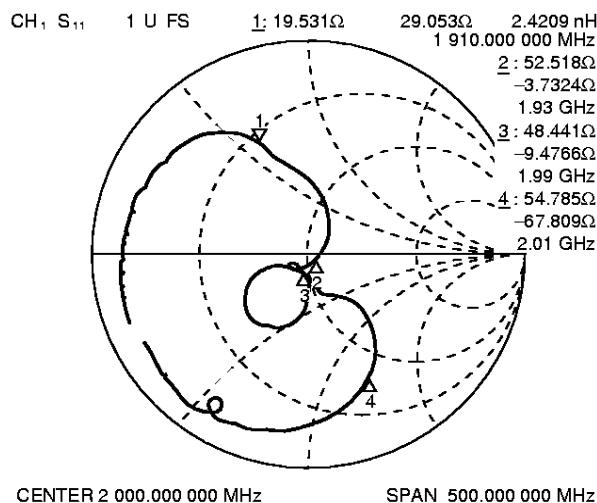
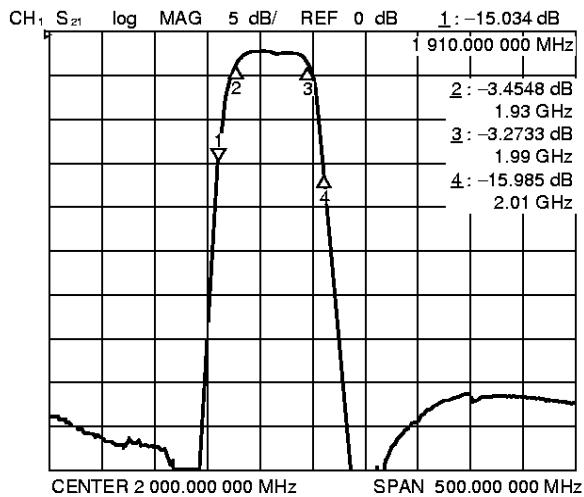
Part number: FAR-F6CE-1G9600-L2XB



F6 Series (L2 type)

8. US-PCS (Rx) High Attenuation type

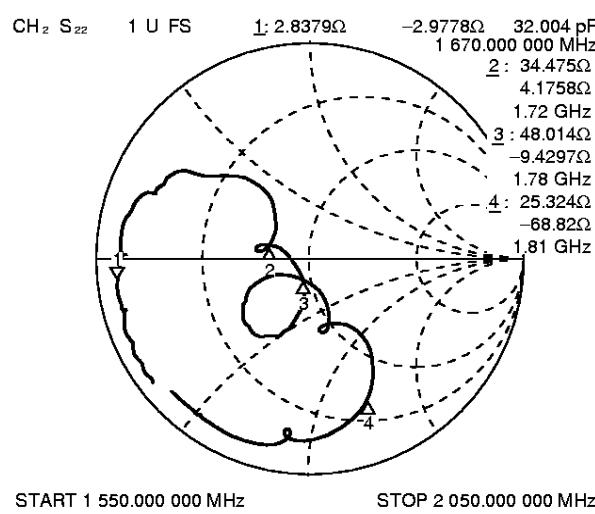
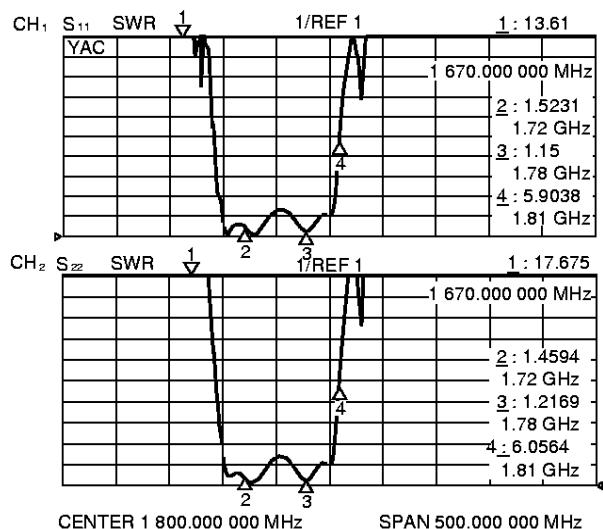
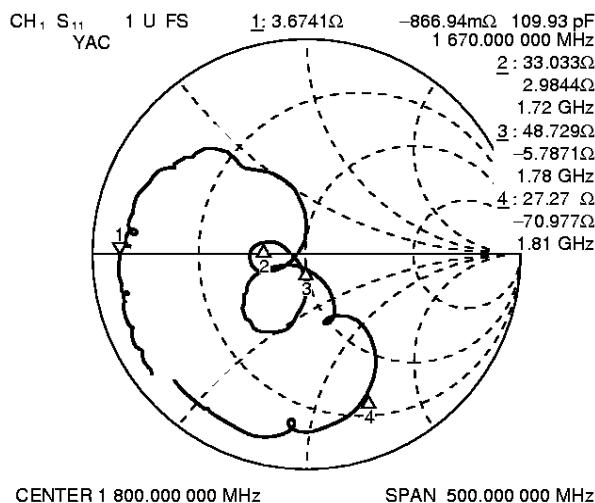
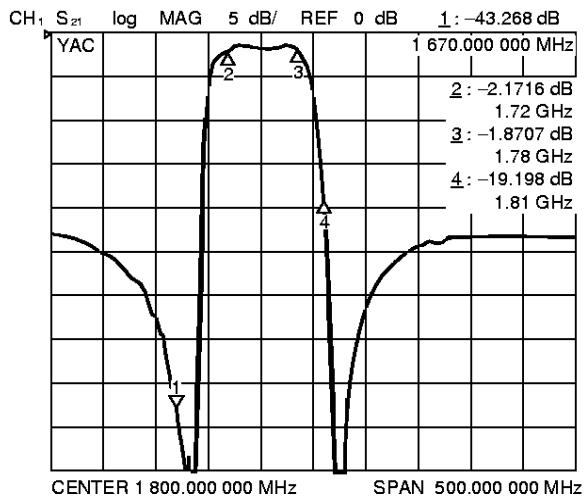
Part number: FAR-F6CE-1G9600-L2XY



F6 Series (L2 type)

9. Korea-PCS (Tx) 60 MHz Band Width

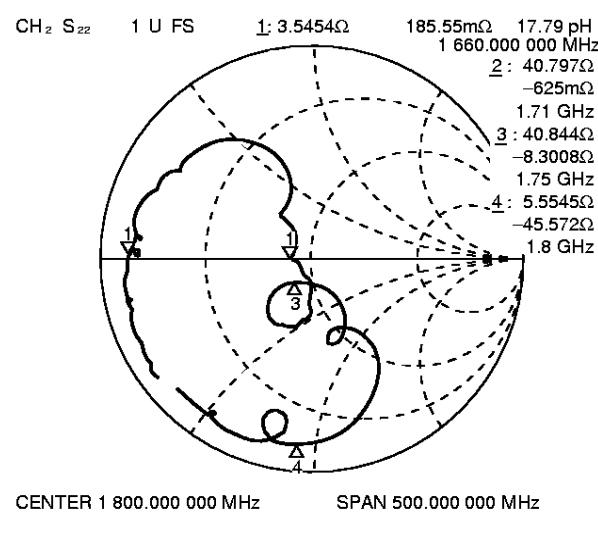
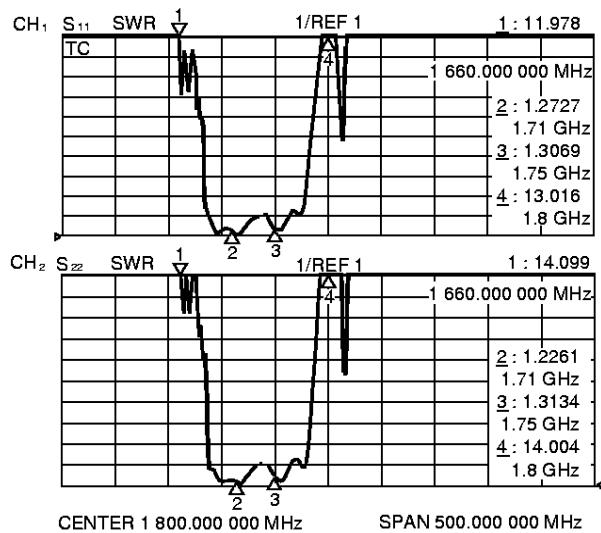
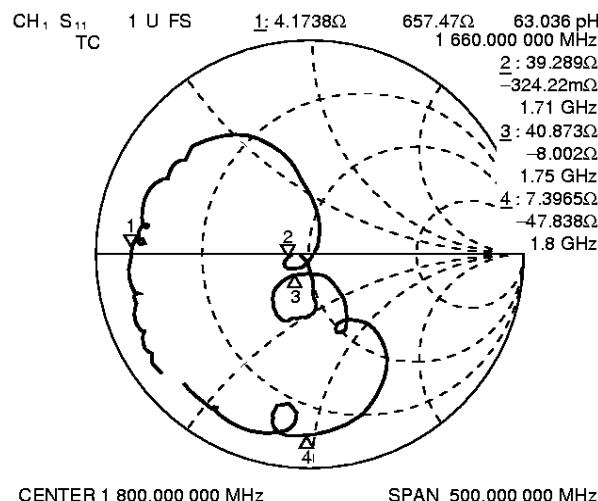
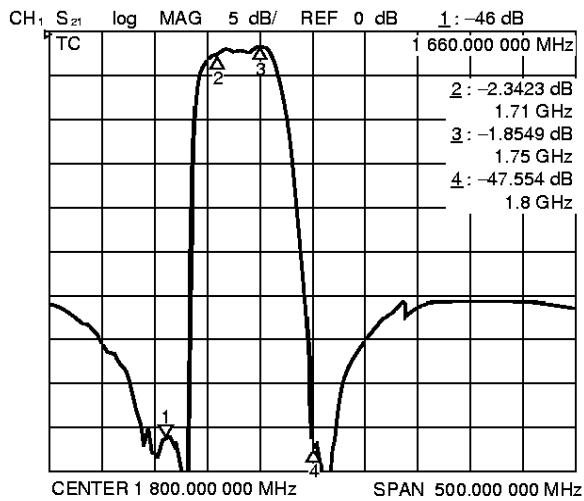
Part number: FAR-F6CE-1G7475-L2YAC



F6 Series (L2 type)

10. Korea-PCS (Tx) Lower 40 MHz Band Width

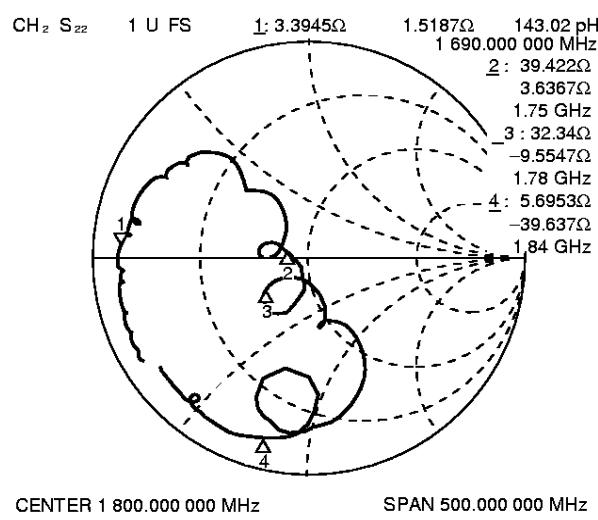
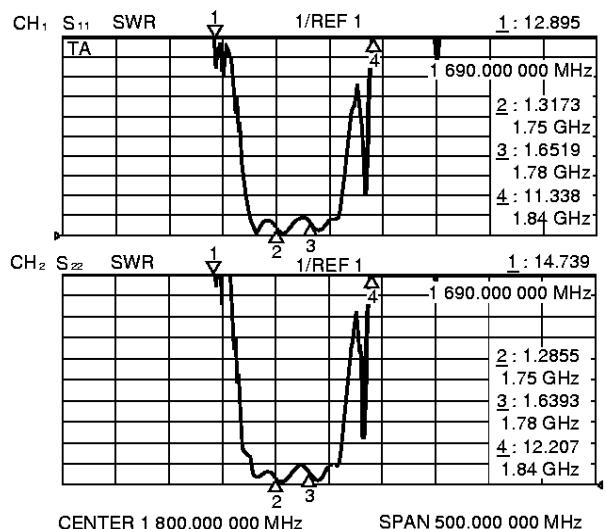
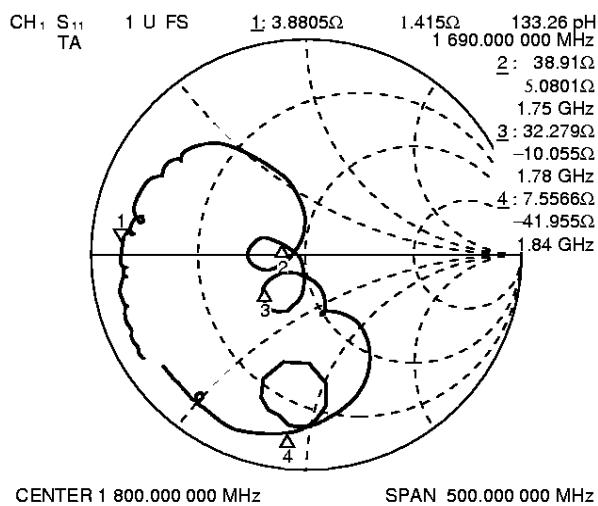
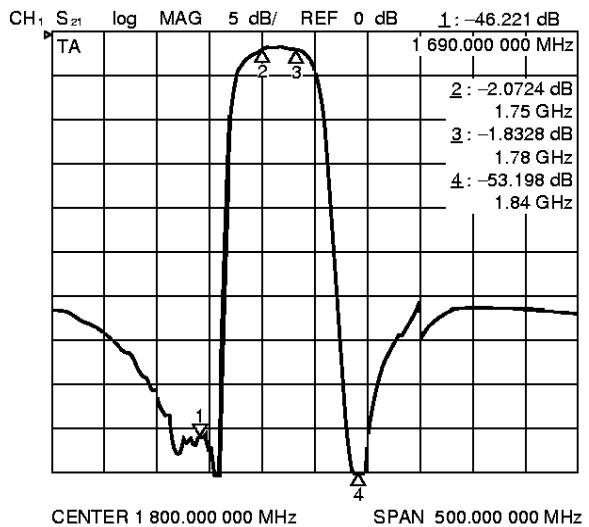
Part number: FAR-F6CE-1G7300-L2TC



F6 Series (L2 type)

11. Korea-PCS (Tx) Upper 30 MHz Band Width

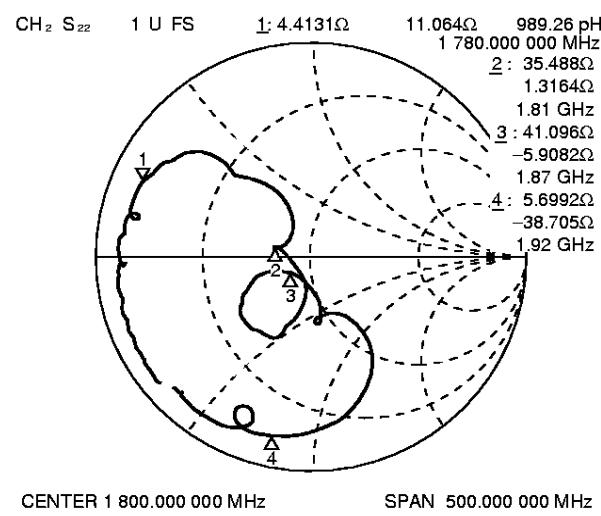
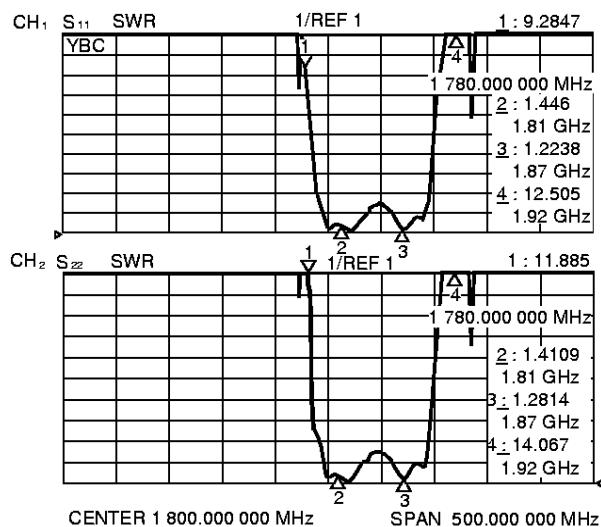
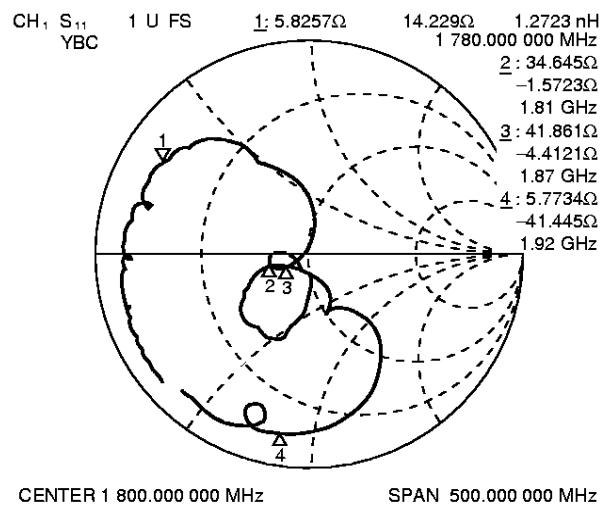
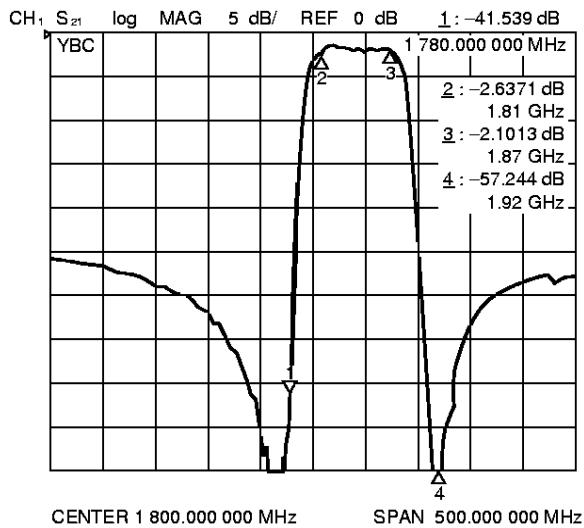
Part number: FAR-F6CE-1G7650-L2TA



F6 Series (L2 type)

12. Korea-PCS (Rx) 60 MHz Band Width

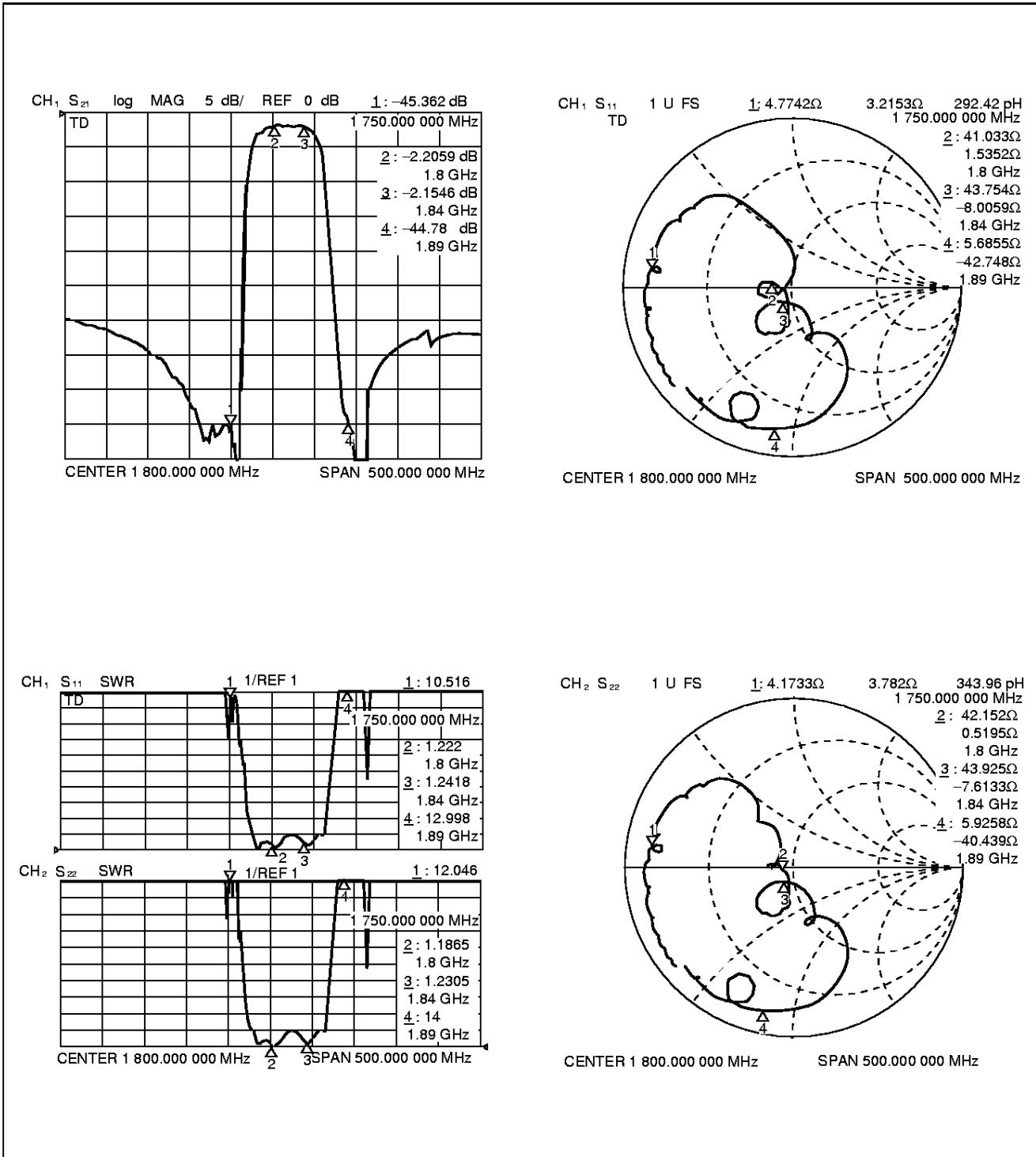
Part number: FAR-F6CE-1G8425-L2YBC



F6 Series (L2 type)

13. Korea-PCS (Rx) Lower 40 MHz Band Width

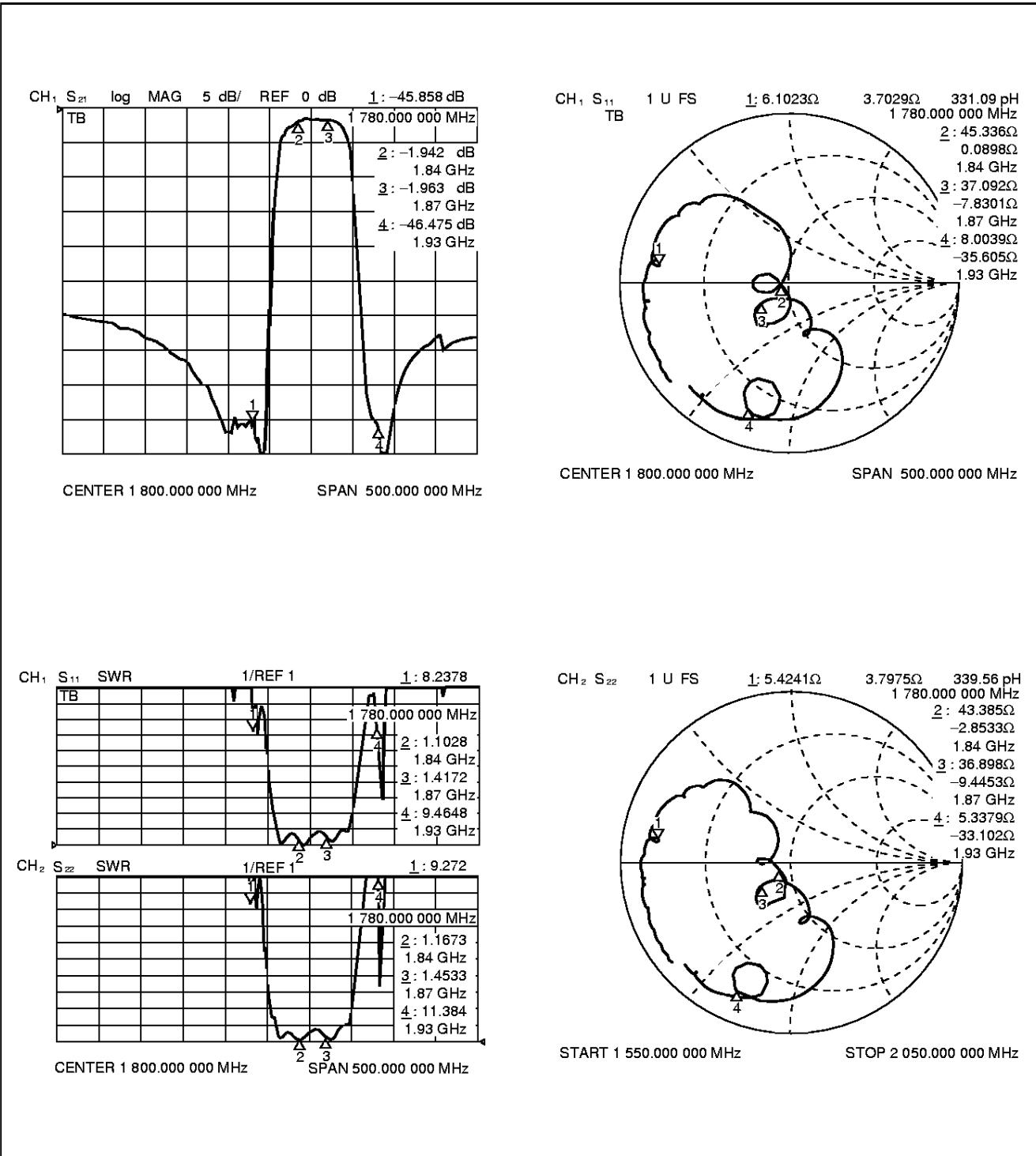
Part number: FAR-F6CE-1G8200-L2TD



F6 Series (L2 type)

14. Korea-PCS (Rx) Upper 30 MHz Band Width

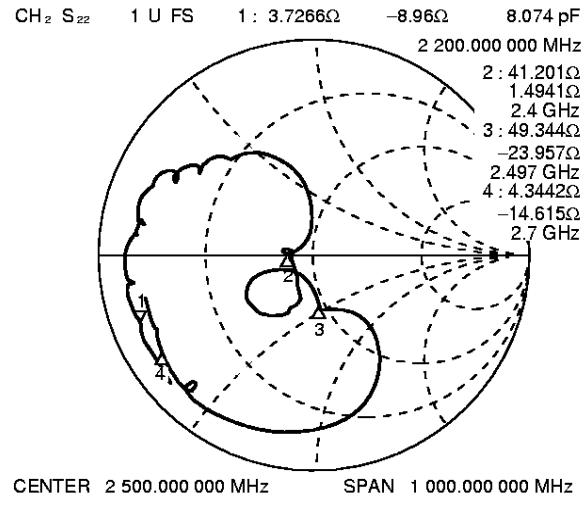
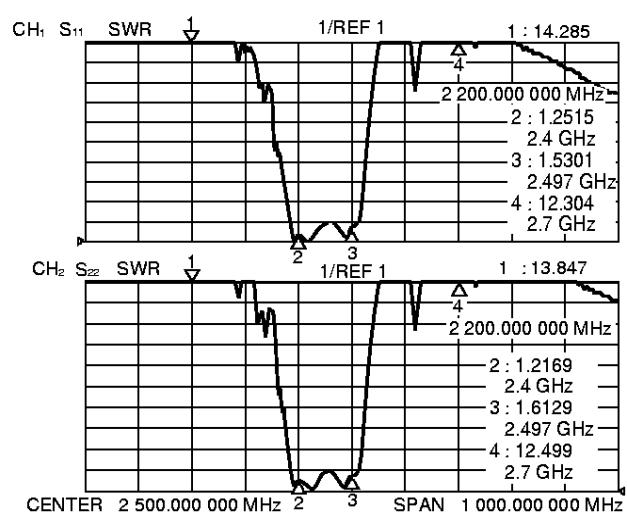
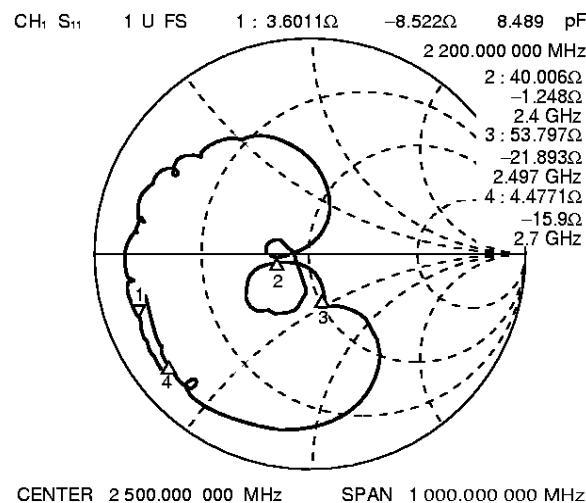
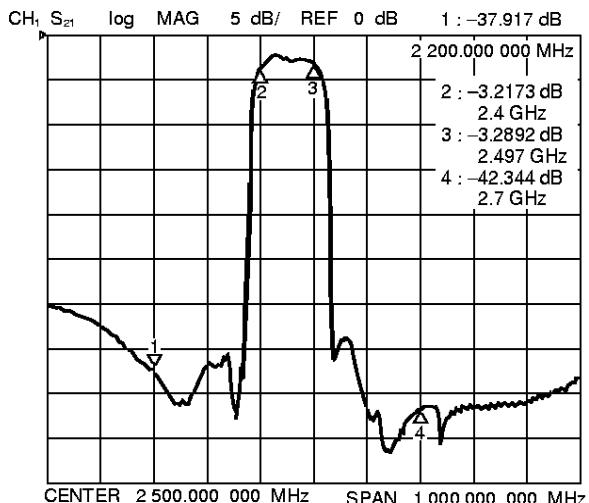
Part number: FAR-F6CE-1G8550-L2TB



F6 Series (L2 type)

15. Wireless-LAN 97 MHz Band Width

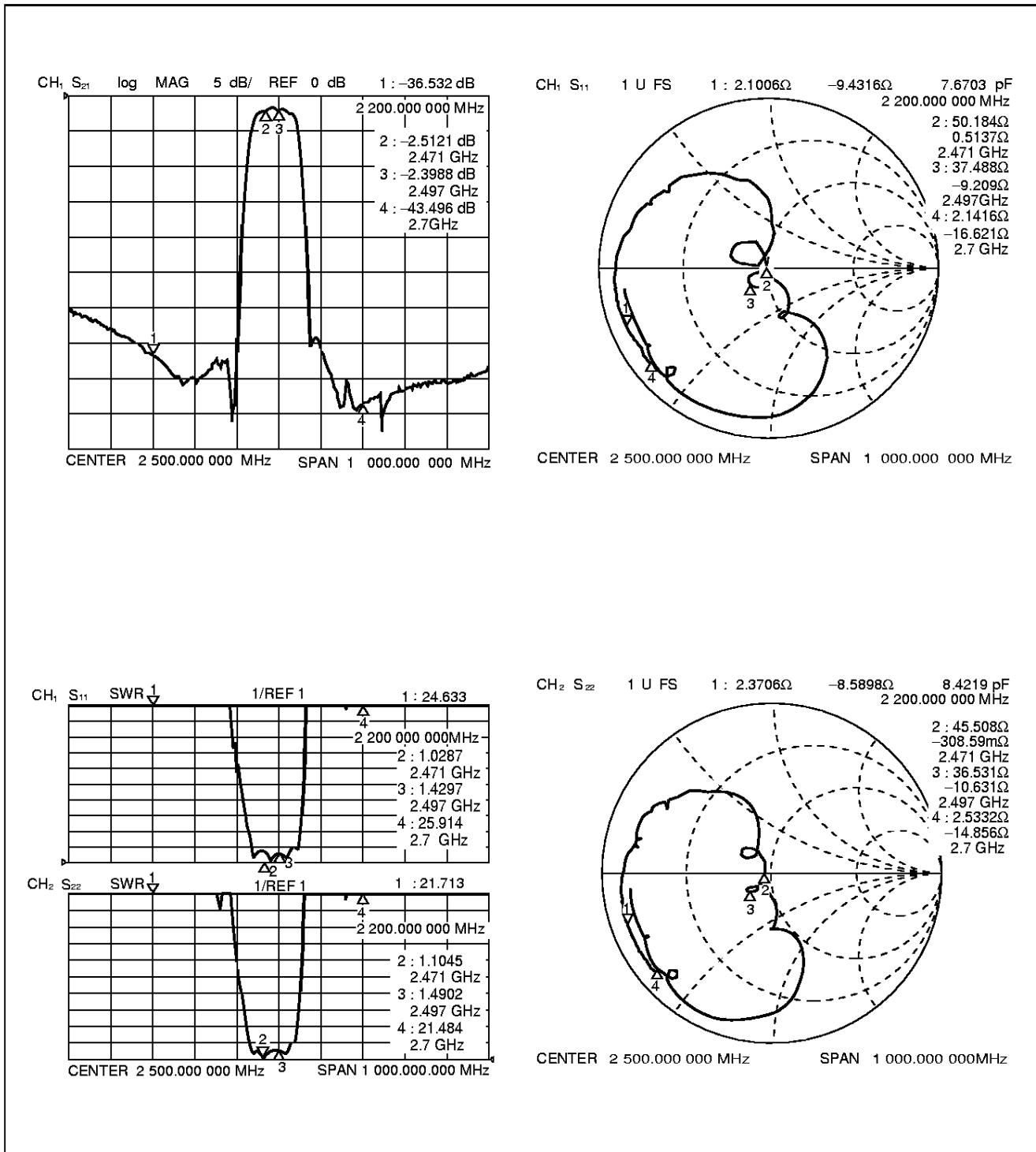
Part number: FAR-F6CE-2G4500-L2WA



F6 Series (L2 type)

16. Wireless-LAN 26 MHz Band Width (For Japan)

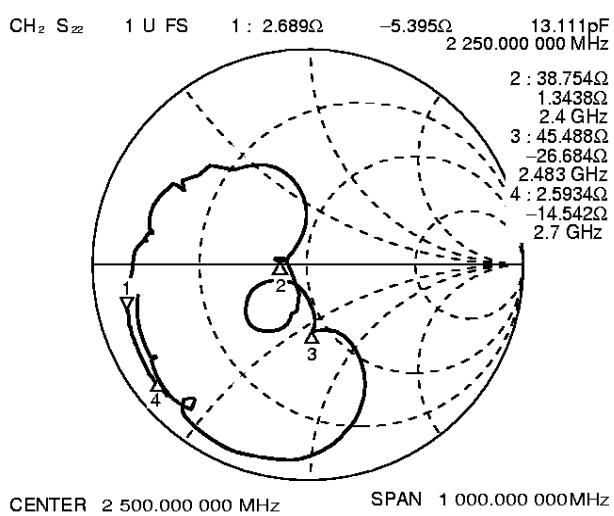
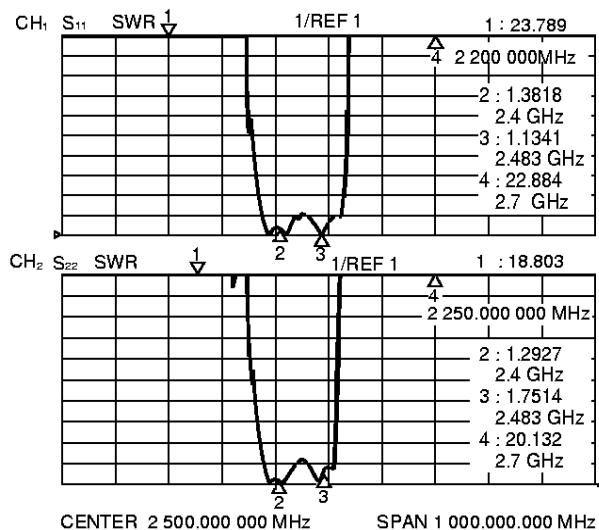
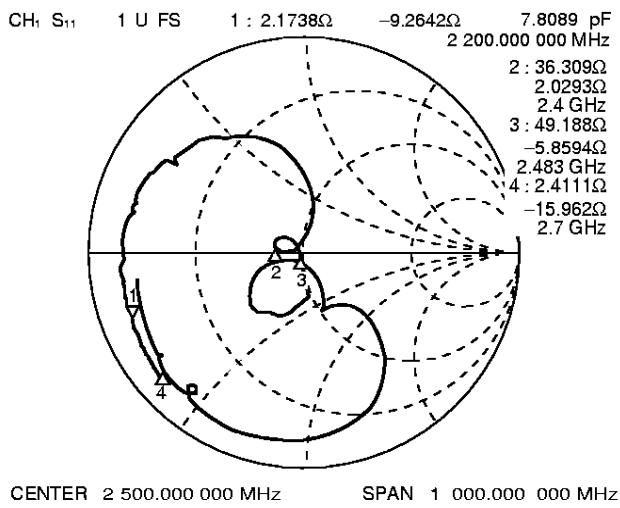
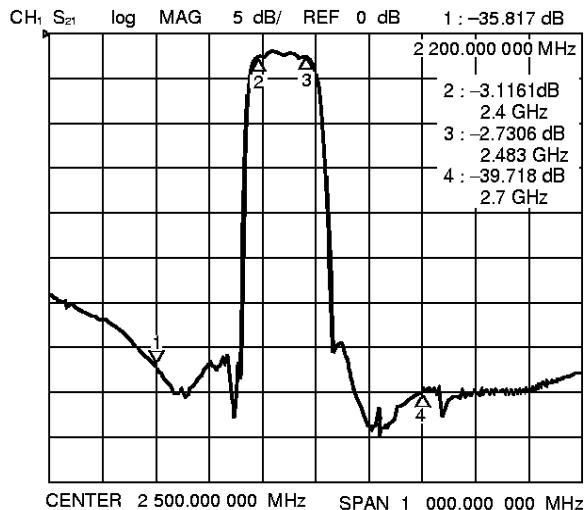
Part number: FAR-F6CE-2G4840-L2WC



F6 Series (L2 type)

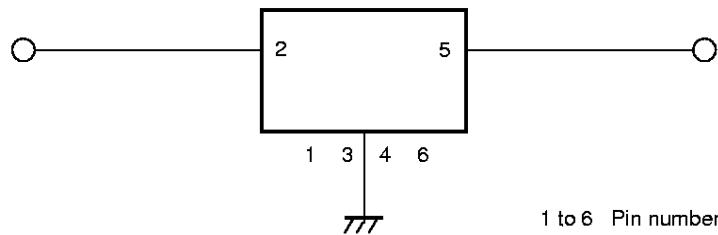
17. Wireless-LAN 83.5 MHz Band Width (For Europe, USA)

Part number: FAR-F6CE-2G4418-L2WD



F6 Series (L2 type)

■ MEASURMENT CIRCUIT



■ PART NUMBER DESIGNATION

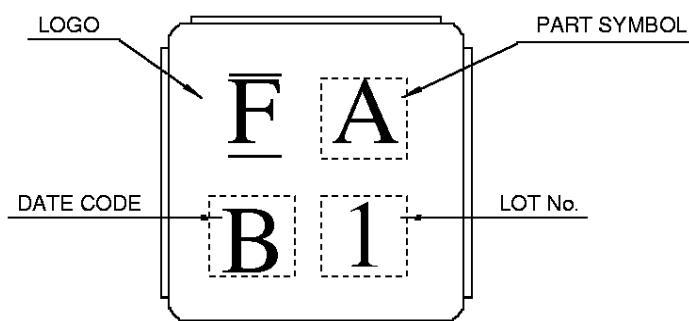
[Designation example]

FAR-F6CE-□□□□□□-L2□□-□

(1) (2) (3) (4)

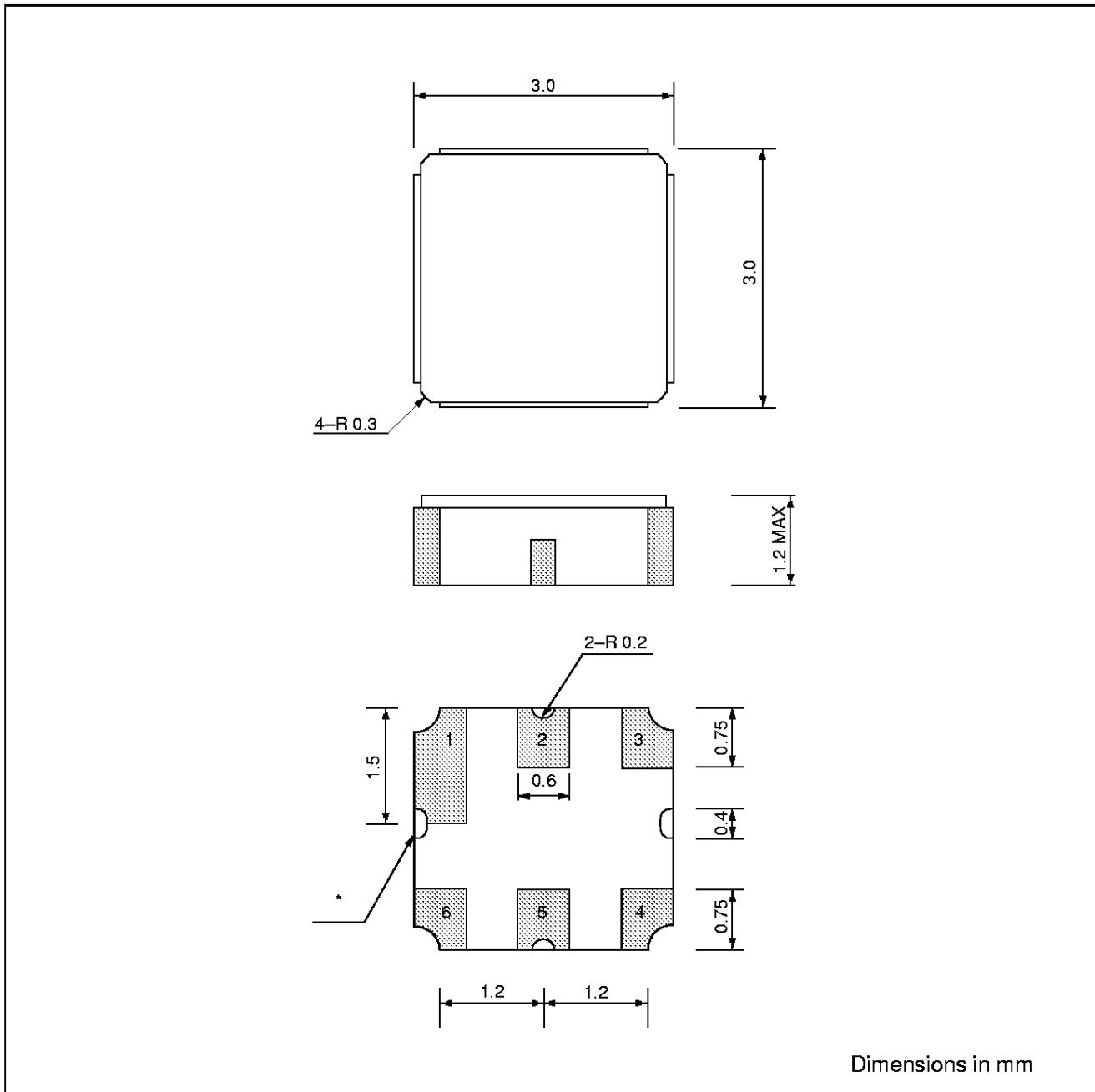
- (1) Package designation : E: 3.0 mm sq. × 1.2 mm (height)
- (2) Frequency designation : Specify the nominal frequency in six alphanumeric characters.
Enter G (for GHz) at the decimal point.
Refer to standard frequencies.
[Example] 1.8800 GHz ⇒ 1G8800
- (3) Serial number : Specify a characters from WA to ZZ.
Refer to standard frequencies.
- (4) Packing (Reeled tape) : W : 1000 pcs/reel
V : 3000 pcs/reel
U : 5000 pcs/reel

■ MARKING



F6 Series (L2 type)

■ PACKAGE DIMENSIONS

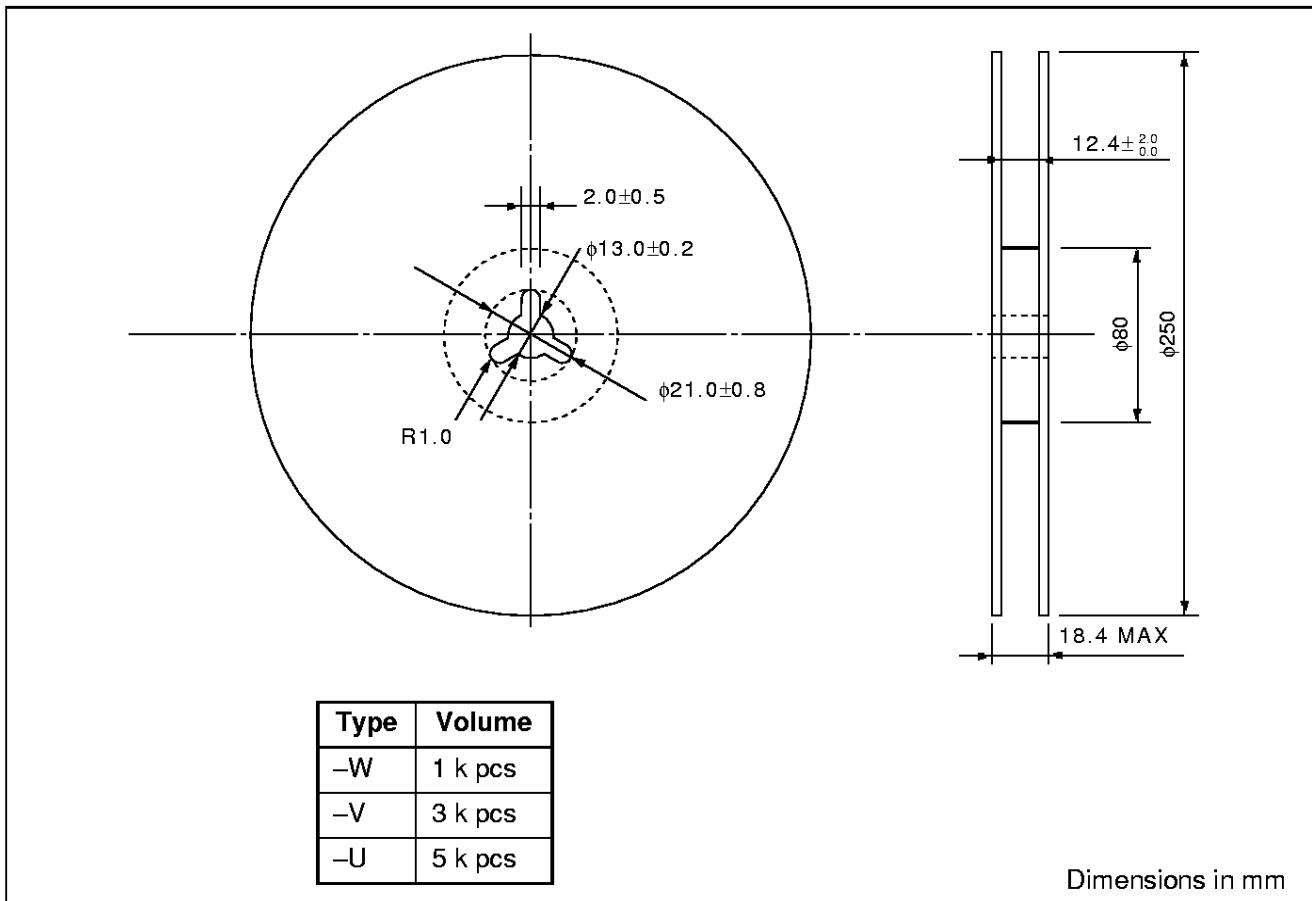


* : Two types of package are available.
One of them has this castration, the other one doesn't have it.

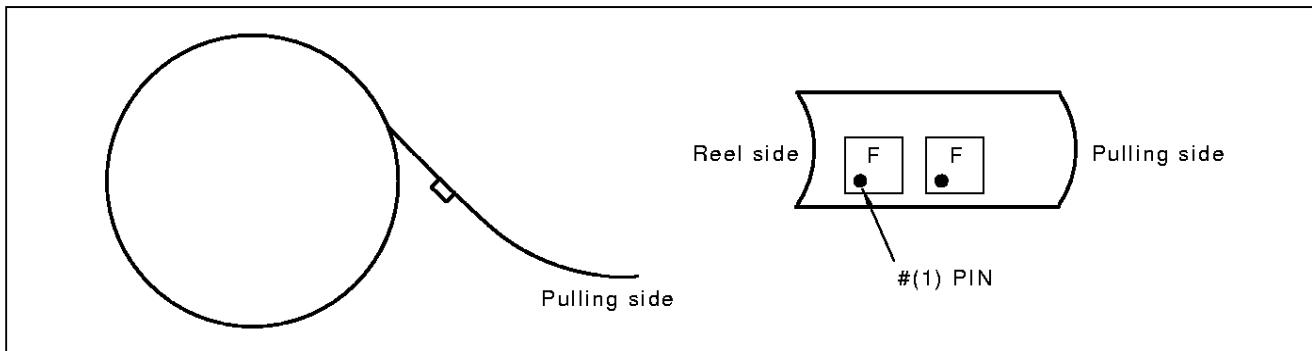
F6 Series (L2 type)

■ PACKING: Reel type

(1) Reel dimensions

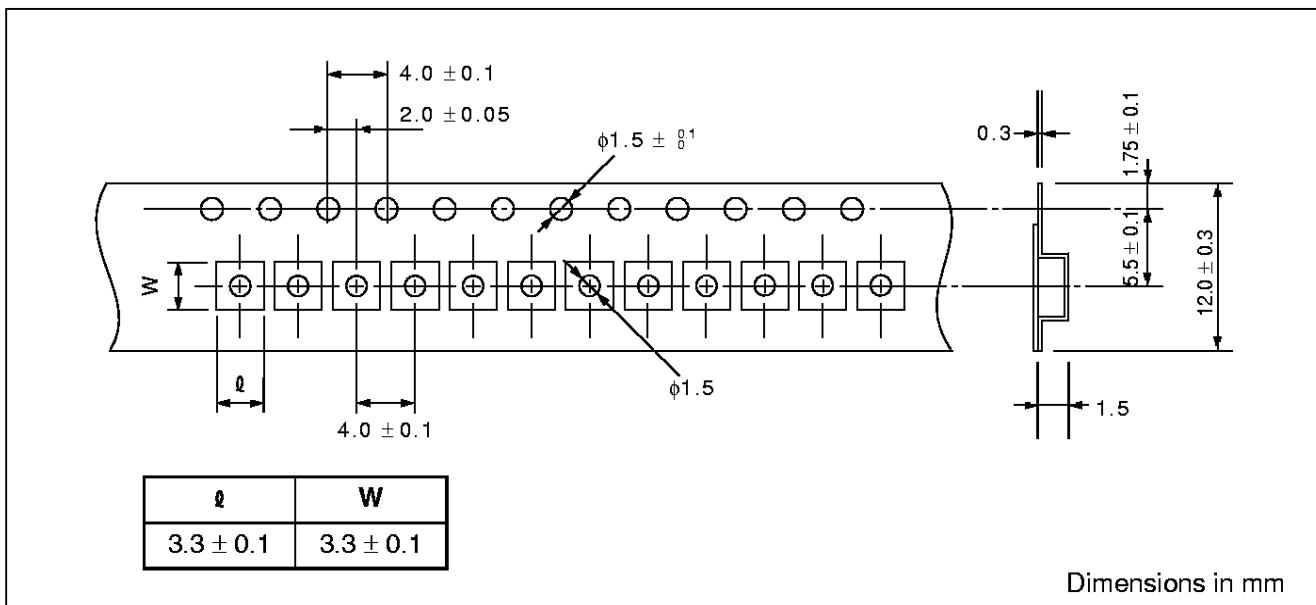


(2) Packing style



F6 Series (L2 type)

(3) Tape dimensions



F6 Series (L2 type)

FUJITSU LIMITED

For further information please contact:

Japan

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 Nakahara-ku, Kawasaki-shi
 Kanagawa 211-8588, Japan
 Tel: (044) 754-3763
 Fax: (044) 754-3329

<http://www.fujitsu.co.jp/>

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Mon. - Fri.: 7 am - 5 pm (PST)
 Tel: (800) 866-8608
 Fax: (408) 922-9179

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