



# TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,  
Taoyuan, 324, Taiwan, R.O.C.

TEL: 886-3-4690038 FAX: 886-3-4697532

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## Product Specifications Approval Sheet


Product Description: Dual SAW Filter 390 / 420 MHz SMD 5X5 mm

TST Part No.: TE0115A

Customer Part No.: \_\_\_\_\_

Customer signature required
Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: \_\_\_\_\_ Bob Chau 

Approved by: \_\_\_\_\_ Francis Chen 

Date: \_\_\_\_\_ 7, 23, 2012

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the changes.



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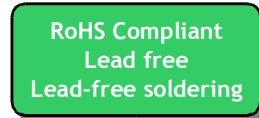
## Dual SAW Filter 390 / 420 MHz

MODEL NO.:TE0115A

REV. NO.:1

### A. MAXIMUM RATING of FILTER 1:

1. Input Power Level: 12 dBm
2. DC Voltage : 3V
3. Operating Temperature: -30°C to +85°C
4. Storage Temperature: -40°C to +85°C



**Electrostatic Sensitive Device (ESD)**

### B. ELECTRICAL CHARACTERISTICS of FILTER 1:

Item	Unit	Min.	Typ.	Max.	Note
<b>Center Frequency</b> <b>Fc</b>	MHz	-	390	-	-
<b>Insertion Loss</b> (380~400 MHz) <b>IL</b>	dB	-	2	3.3	-
<b>Amplitude Ripple</b> (380~400 MHz)	dB	-	0.7	2.3	-
<b>Return Loss</b> (380~400 MHz)	dB	8	10	-	-
<b>Attenuation</b> (Reference level from 0 dB)					
0.1 ~ 150 MHz	dB	35	52	-	-
190 ~ 275 MHz	dB	30	56	-	-
275 ~ 287 MHz	dB	33	56	-	-
304 ~ 335 MHz	dB	30	50	-	-
342 ~ 360 MHz	dB	20	40	-	-
418 ~ 440 MHz	dB	15	18	-	-
442 ~ 455 MHz	dB	25	47	-	-
456 ~ 531 MHz	dB	30	47	-	-
532 ~ 560 MHz	dB	33	40	-	-
570 ~ 600 MHz	dB	25	45	-	-
632 ~ 668 MHz	dB	35	45	-	-
684 ~ 1000 MHz	dB	27	37	-	-
<b>Temperature Coefficient of Frequency</b>	ppm/°C	-	-80	-	-

### C. MAXIMUM RATING of FILTER 2:

3. Input Power Level: 12 dBm
4. DC Voltage : 3V
3. Operating Temperature: -30°C to +85°C
5. Storage Temperature: -40°C to +85°C

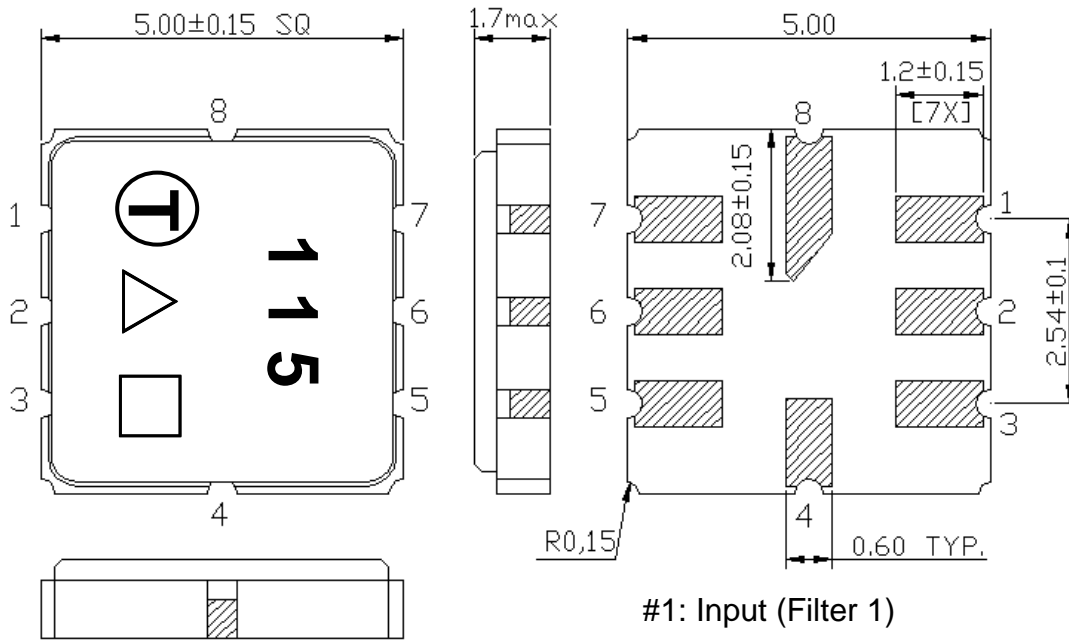


Electrostatic Sensitive Device (ESD)

### D. ELECTRICAL CHARACTERISTICS of FILTER 2:

Item	Unit	Min.	Typ.	Max.	Note	
<b>Center Frequency</b> <b>Fc</b>	MHz	-	420	-	-	
<b>Insertion Loss</b> (410~430 MHz) <b>IL</b>	dB	-	2.2	3.3	-	
<b>Amplitude Ripple</b> (410~430 MHz)	dB	-	0.7	2.2	-	
<b>Return Loss</b> (410~430 MHz)	dB	8.5	9	-	-	
<b>Attenuation</b> (Reference level from 0 dB)						
0.1 ~ 150 MHz	dB	35	52	-	-	
204 ~ 216 MHz	dB	30	60	-	-	
246 ~ 270 MHz	dB	30	58	-	-	
272 ~ 301 MHz	dB	35	56	-	-	
328 ~ 344 MHz	dB	30	52	-	-	
345 ~ 360 MHz	dB	25	49	-	-	
369 ~ 387 MHz	dB	18	43	-	-	
451 ~ 473 MHz	dB	18	20	-	-	
477 ~ 491 MHz	dB	25	48	-	-	
492 ~ 516 MHz	dB	30	45	-	-	
532 ~ 573 MHz	dB	30	44	-	-	
557 ~ 577 MHz	dB	38	46	-	-	
574 ~ 602 MHz	dB	33	45	-	-	
602 ~ 1000 MHz	dB	27	38	-	-	
<b>Temperature Coefficient of Frequency</b>	ppm/°C	-	-80	-	-	

**E.OUTLINE DRAWING:**



- #1: Input (Filter 1)
  - #3: Input (Filter 2)
  - #5: Output (Filter 2)
  - #7: Output (Filter 1)
  - #2,6 : To be grounded
  - #4,8: Case ground
- Unit: mm

△ : Product / Year Code

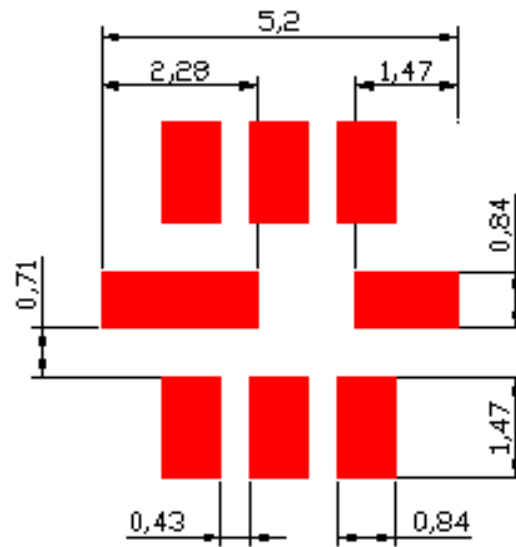
Year	2009 2013	2010 2014	2011 2015	2012 2016
Product Code	E	e	Ē	e

□ : Date Code (Follow the table from planner each year)

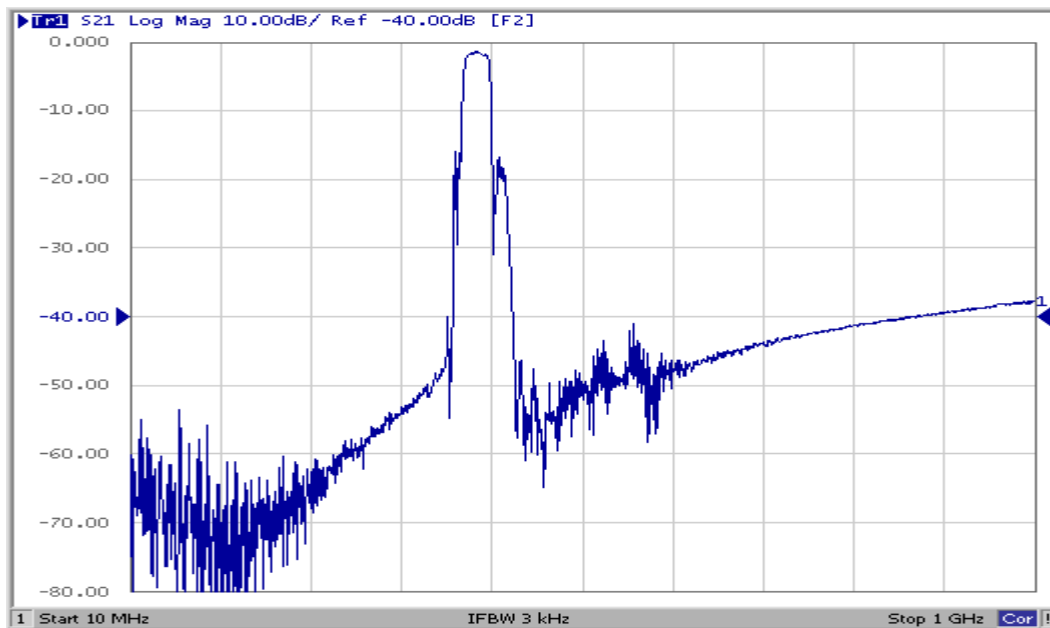
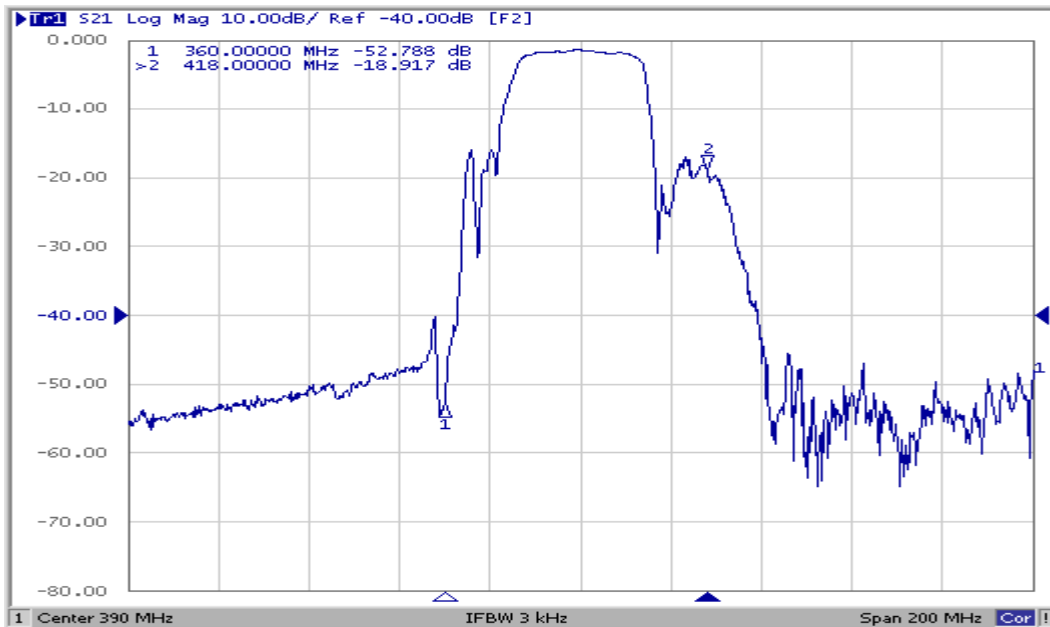
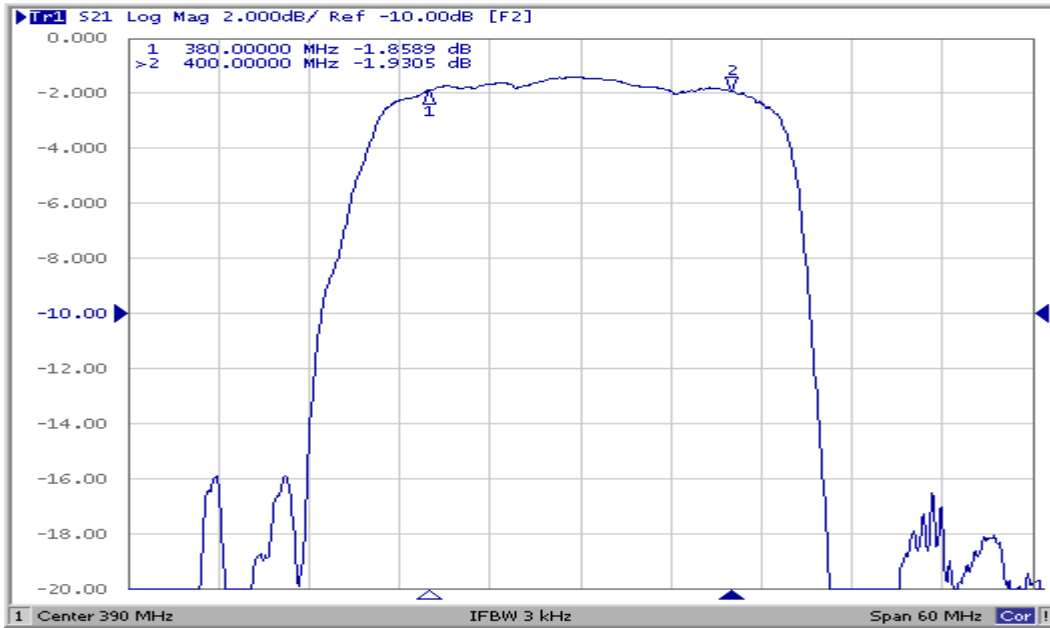
Date Code Table

WK01	WK02	WK03	WK04	WK05	WK06	WK07	WK08	WK09	WK10	WK11	WK12	WK13
A	B	C	D	E	F	G	H	I	J	K	L	M
WK14	WK15	WK16	WK17	WK18	WK19	WK20	WK21	WK22	WK23	WK24	WK25	WK26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
WK27	WK28	WK29	WK30	WK31	WK32	WK33	WK34	WK35	WK36	WK37	WK38	WK39
a	b	c	d	e	f	g	h	i	j	k	l	m
WK40	WK41	WK42	WK43	WK44	WK45	WK46	WK47	WK48	WK49	WK50	WK51	WK52
n	o	p	q	r	s	t	u	v	w	x	y	z

F. PCB Footprint:

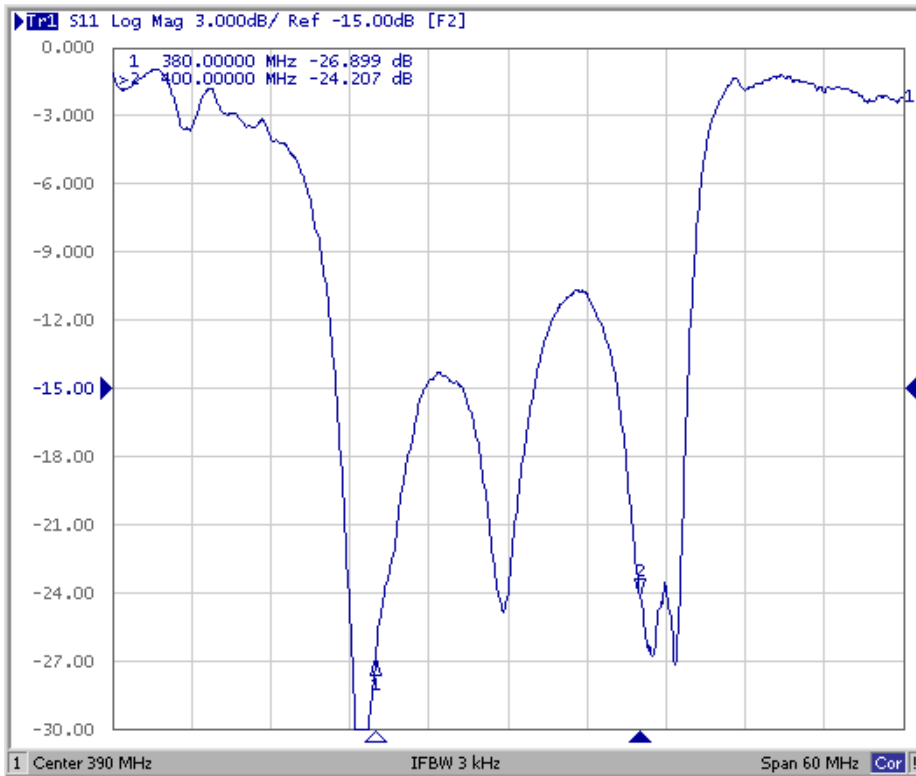


## G. Frequency Characteristics : ( Filter 1 )

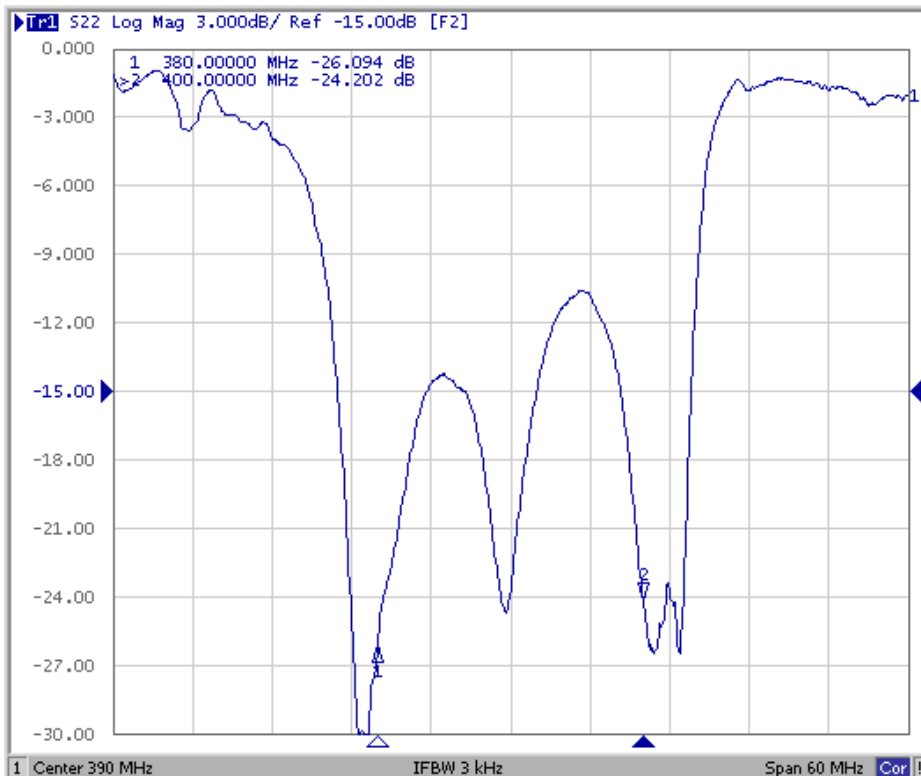


# Reflection Functions : ( Filter 1 )

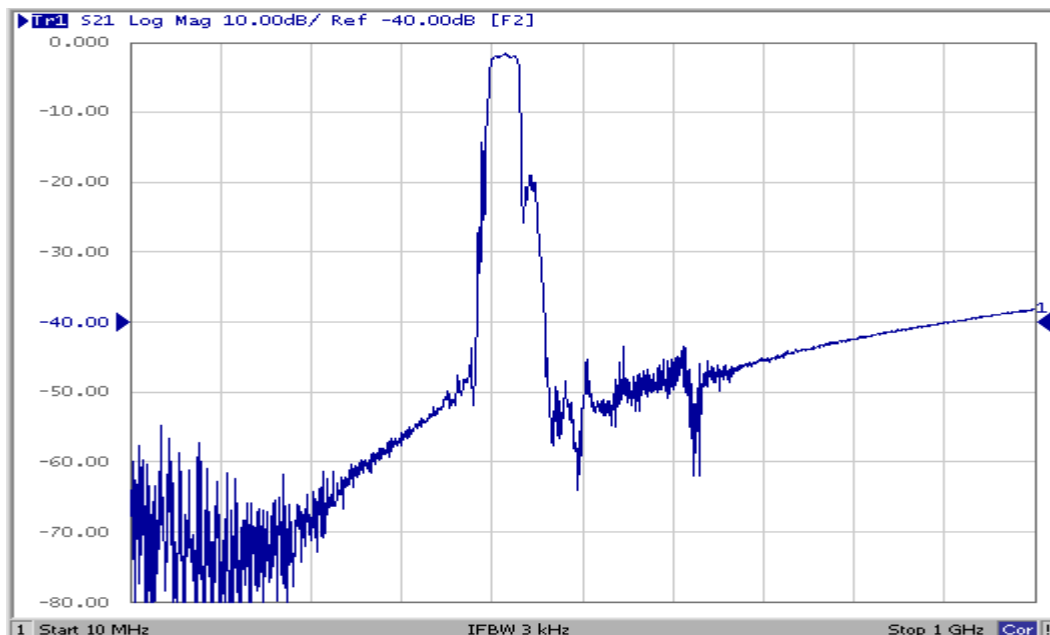
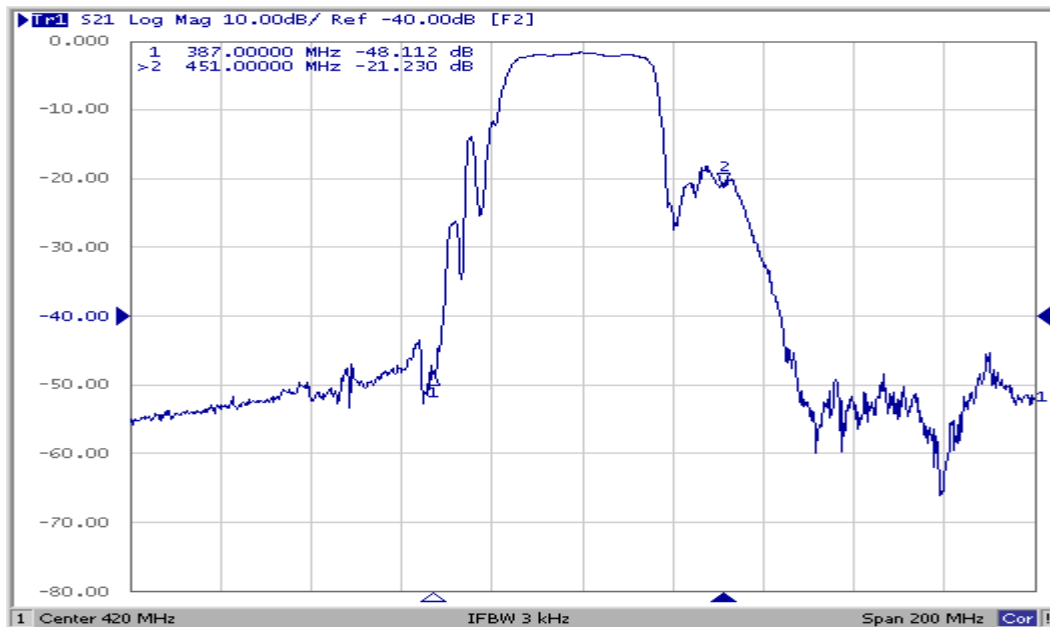
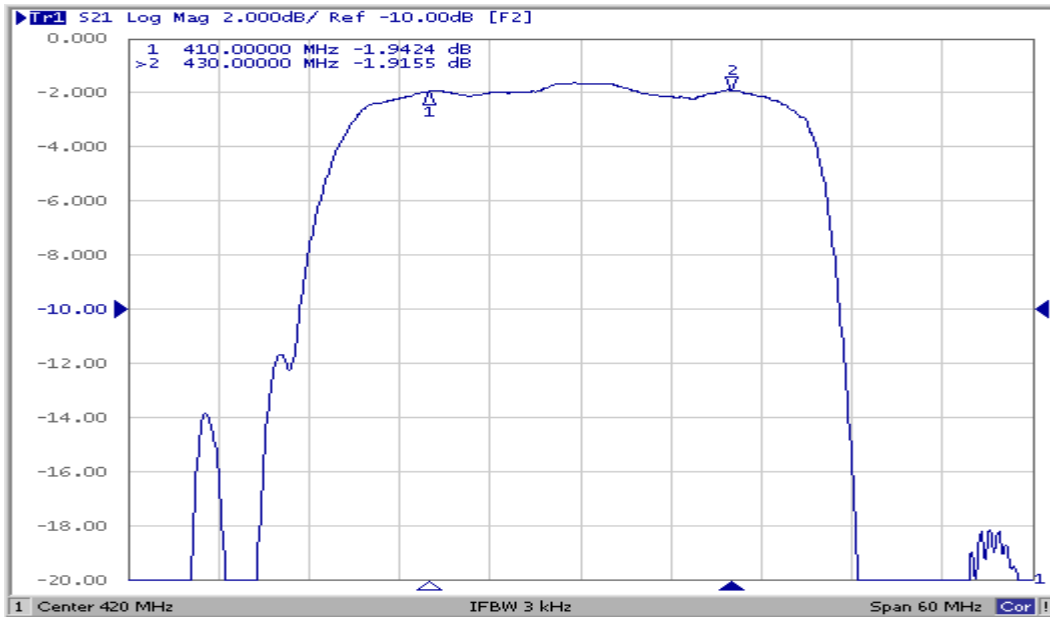
## S11



## S22



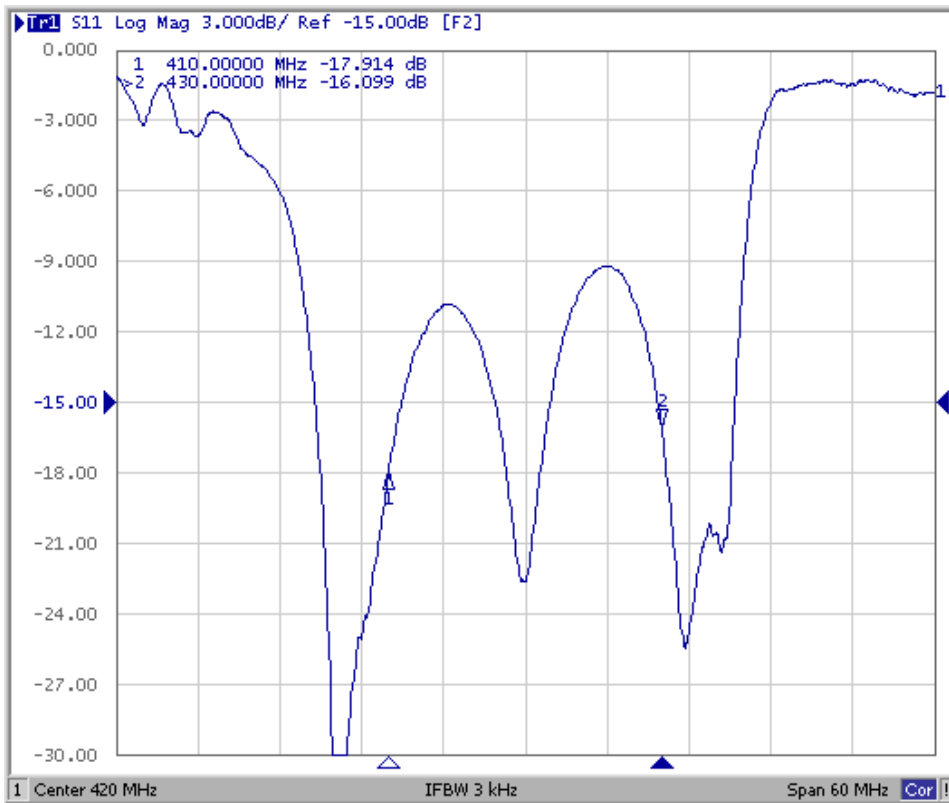
## H. Frequency Characteristics : ( Filter 2 )



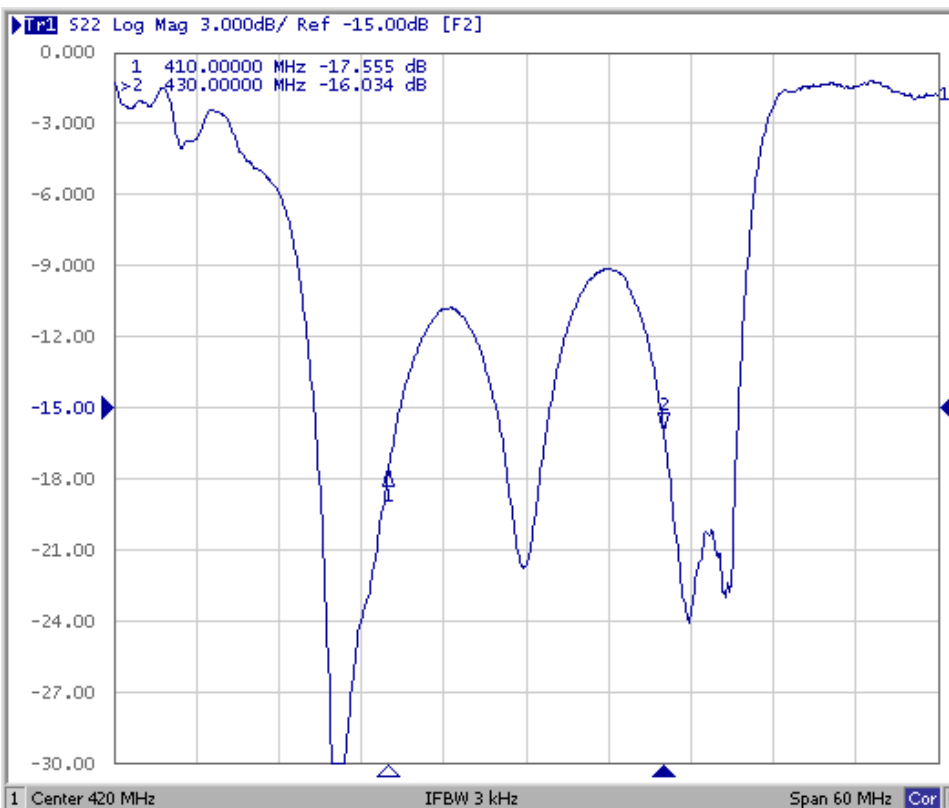


# Reflection Functions : ( Filter 2 )

## S11



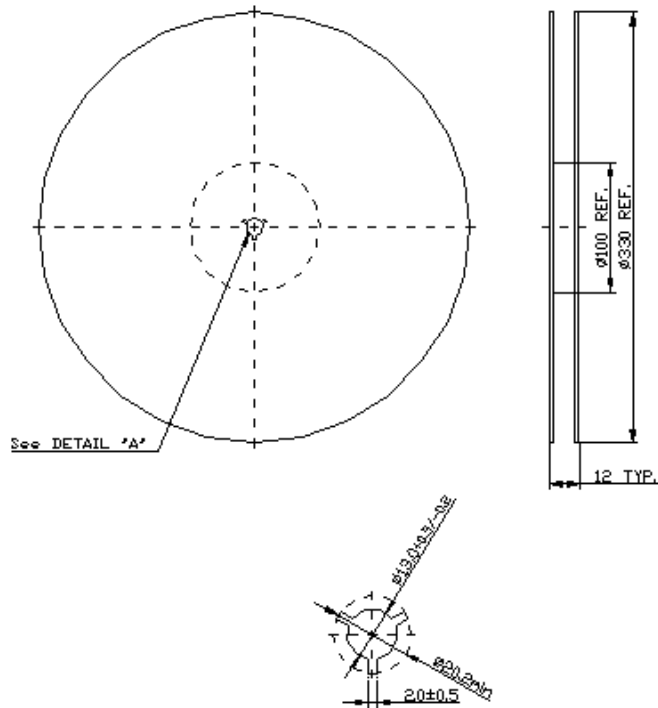
## S22



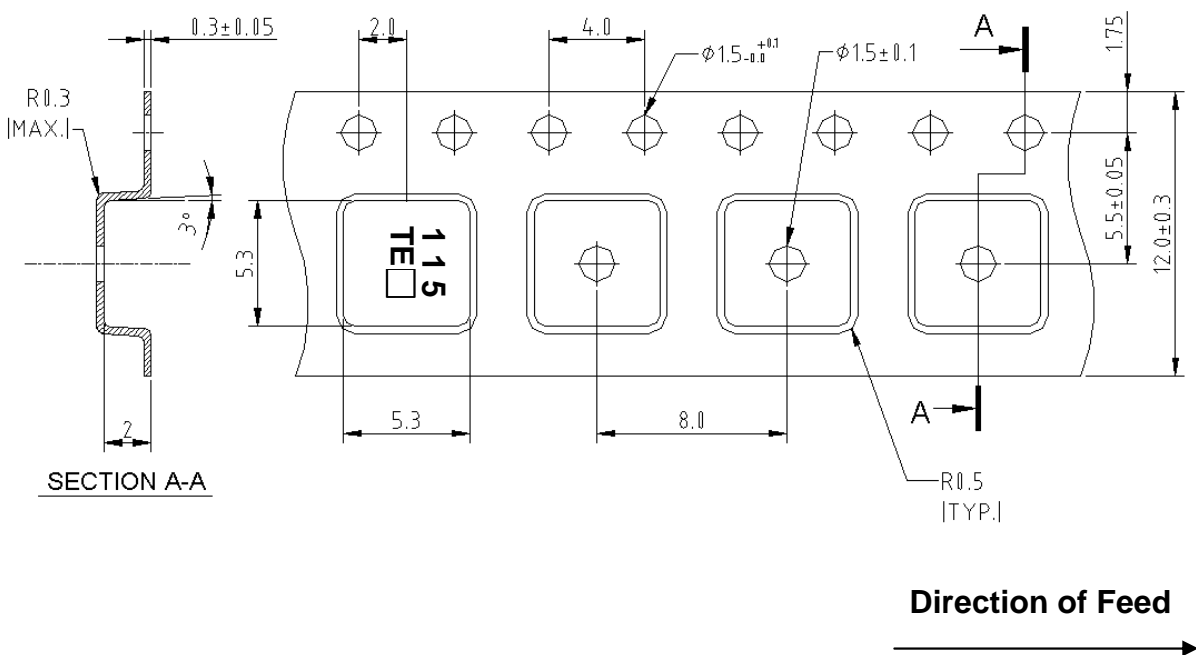
**I. PACKING:**

**1. REEL DIMENSION**

(Please refer to FR-75D10 for packing quantity )



**2. TAPE DIMENSION**



## J. RECOMMENDED REFLOW PROFILE :

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 245~260°C peak (min. 10sec).
4. Time : 2 times.

