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
E-mail: tstsales@mail.taisaw.com Web: www.taisaw.com

Product Specifications Approval Sheet

Product Description: BAW Filter 2442MHz SMD 1.1X0.9 mm (BW=79MHz)

TST Part No.: TA2548A

Customer Part No.:_____

Customer signature required

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by:_____ Anne Chen

Approved by:_____ Andy Yu

Date:_____ 08.20.2019

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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BAW Filter MHz 2442MHz 79 MHz BW SMD1.1x0.9mm

MODEL NO.:TA2548A REV. NO.:1

A. MAXIMUM RATING:

RoHS Compliant
Lead free
Lead-free soldering

1. Input power : (2402.5~2481.5MHz)29dBm (Ta=+50℃,10000h,CW)
2. DC Voltage : 0V
3. Operating Temperature: -30℃ to +85℃
4. Storage Temperature: -30℃ to +85℃
5. Moisture Sensitivity Level: Level 1
6. ESD 50V(MM) 100V(HBM)

Electrostatic **S**ensitive **D**evice (**ESD**)

B. ELECTRICAL CHARACTERISTICS:

Terminating source impedance : Zs = 50//8.2nH(Q=∞) Ω

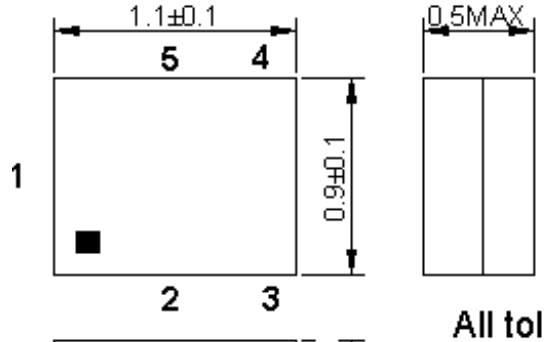
Terminating load impedance : Z_L = 50//8.2nH(Q=∞) Ω

Item		Unit	Min.	Typ.	Max.	Remarks
Center Frequency	**Fc**	MHz	-	2442	-	-
Insertion Loss (2402.5~2421.5MHz)	**IL**	dB(*1)(*2)	-	1.7	2.3	-
Insertion Loss (2407.5~2426.5MHz)	**IL**	dB(*1)(*2)		1.3	1.9	-
Insertion Loss (2412.5~2466.5MHz)	**IL**	dB(*1)(*2)		1.3	1.8	-
Insertion Loss (2452.5~2471.5MHz)	**IL**	dB(*1)(*2)		1.3	1.8	-
Insertion Loss (2457.5~2476.5MHz)	**IL**	dB(*1)(*2)		1.3	2.0	-
Insertion Loss (2462.5~2481.5MHz)	**IL**	dB(*1)(*2)		1.5	2.4	-
Amplitude ripple(2402.5~2481.5MHz)		dB(*2)	-	0.7	2.0	-
VSWR (2402.5~2481.5MHz)			-	1.5	2.0	-

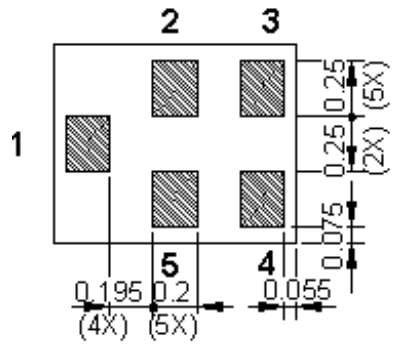
Item	Unit	Min.	Typ.	Max.	Remarks
Attenuation (reference level from 0 dB)					
699~ 960 MHz	dB	35	44	-	-
1425 ~ 2170 MHz	dB	35	39		
2300 ~ 2370 MHz	dB(*3)	46	49	-	-
2370 ~ 2380 MHz	dB(*3)	20	46		
2496 ~ 2500 MHz	dB(*3)	10			-30 to+20°C
	dB(*3)	20	39		+20 to+85°C
2500 ~ 2505 MHz	dB(*3)	23		-	-30 to-10°C
	dB(*3)	30	61		-10 to+25°C
	dB(*3)	42			+25 to+85°C
2505 ~ 2570 MHz	dB(*3)	47		-	-30 to-20°C
	dB(*3)	50	52		-20 to+85°C
2505 ~ 2690 MHz	dB(*3)	41	44		
4900 ~ 5805 MHz	dB	30	43	-	-
7200 ~ 7500 MHz	dB	30	39		

(*1) Specification of insertion loss excludes loss that comes from the test board.
(*2) The integrated loss over any 19MHz channel width.
(*3) The integrated loss over any 5MHz channel width.
(*4) DC resistance at all ports might be less than 100MΩ at operating temperatures.

C.OUTLINE DRAWING:



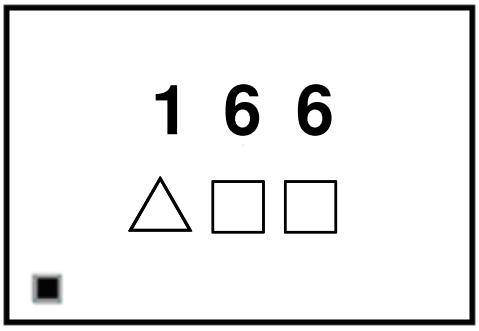
All tolerances are +/-0.05 mm unless otherwise specified
Coplanarity : 0.1 mm max.
1 to 5 : Pin No.
Unit : mm



Pin Configuration

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

Marking

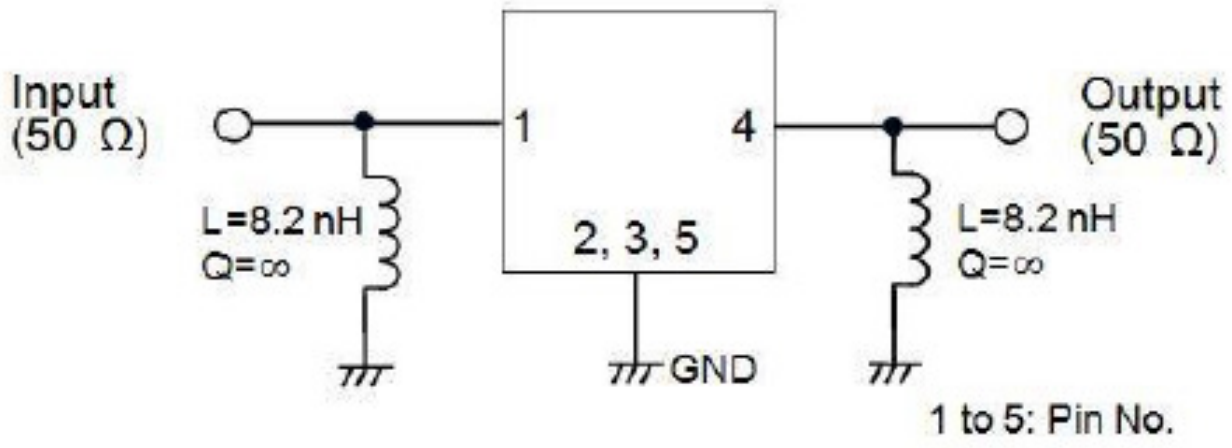


Marking name : 166
△ : Date Code
□ □ : Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

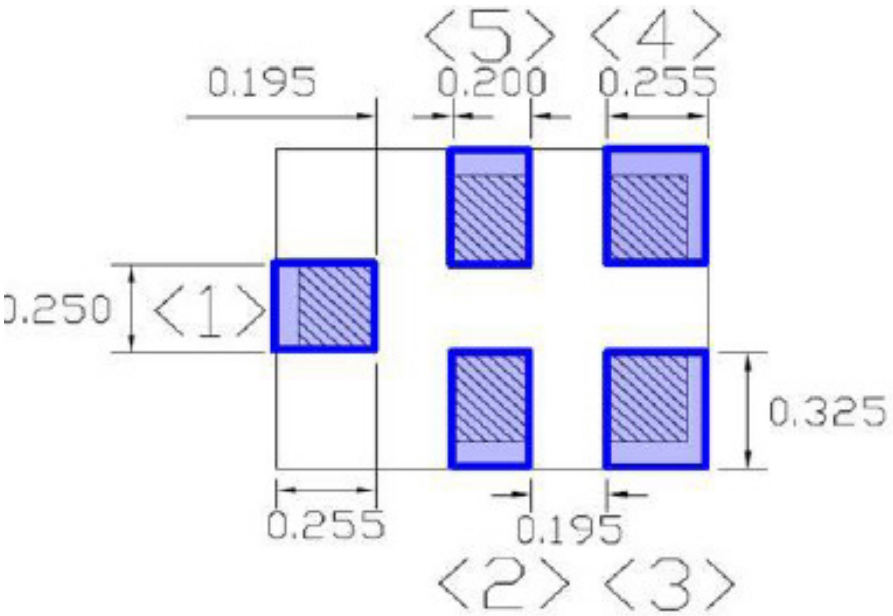
Product date Code (EIAJ)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017 / 2021	A	B	C	D	E	F	G	H	J	K	L	M
2018 / 2022	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019 / 2023	a	b	c	d	e	f	g	h	j	k	l	m
2020 / 2024	n	p	q	r	s	t	u	v	w	x	y	z

D. Evaluation Circuit

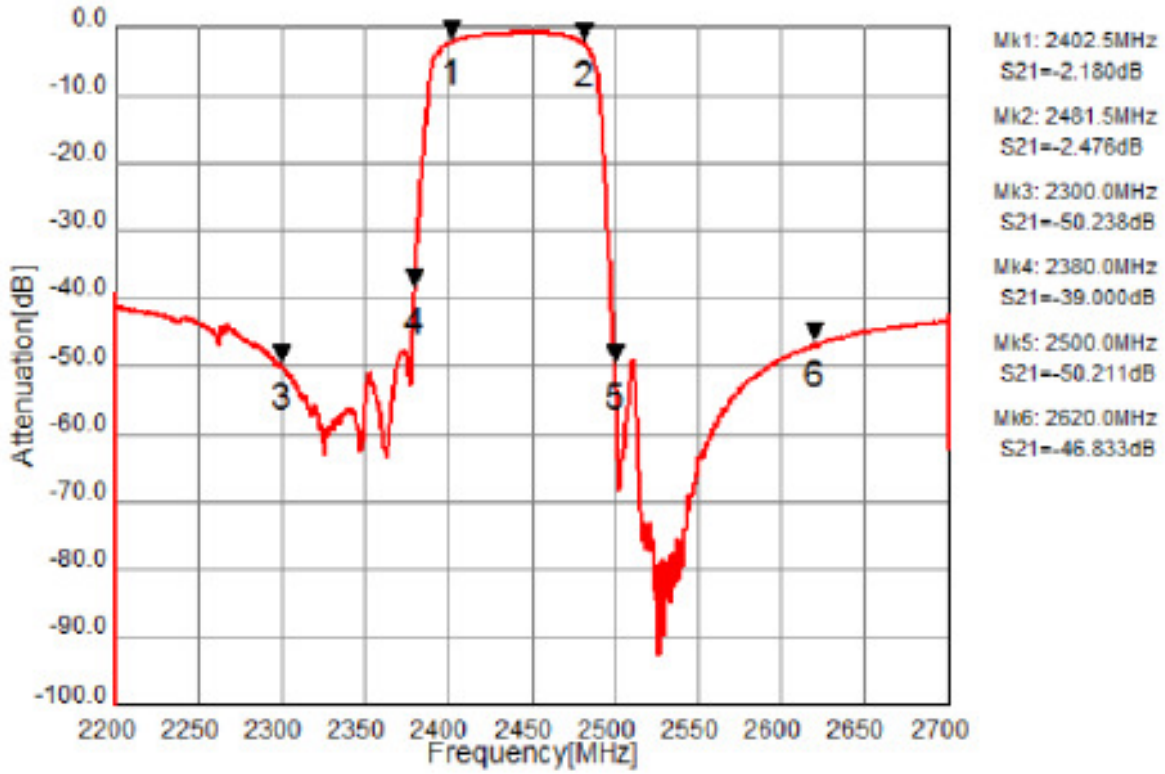


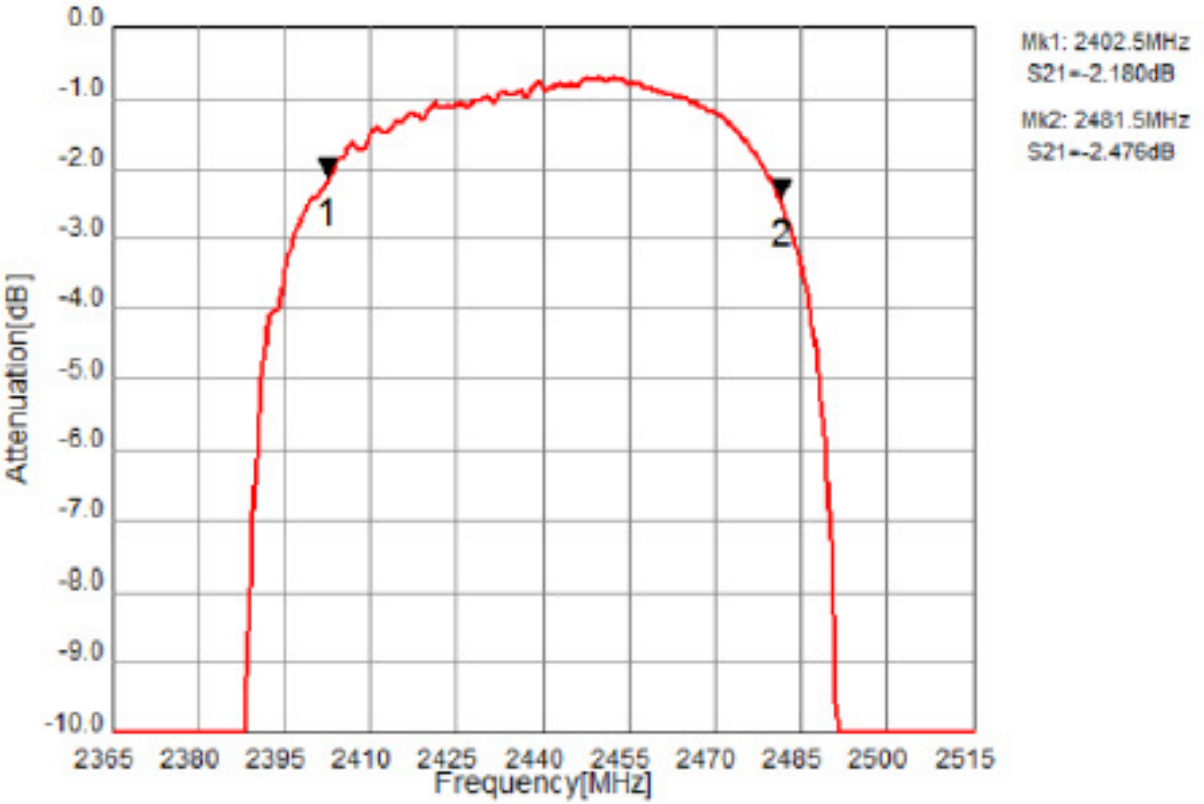
E. PCB Footprint:



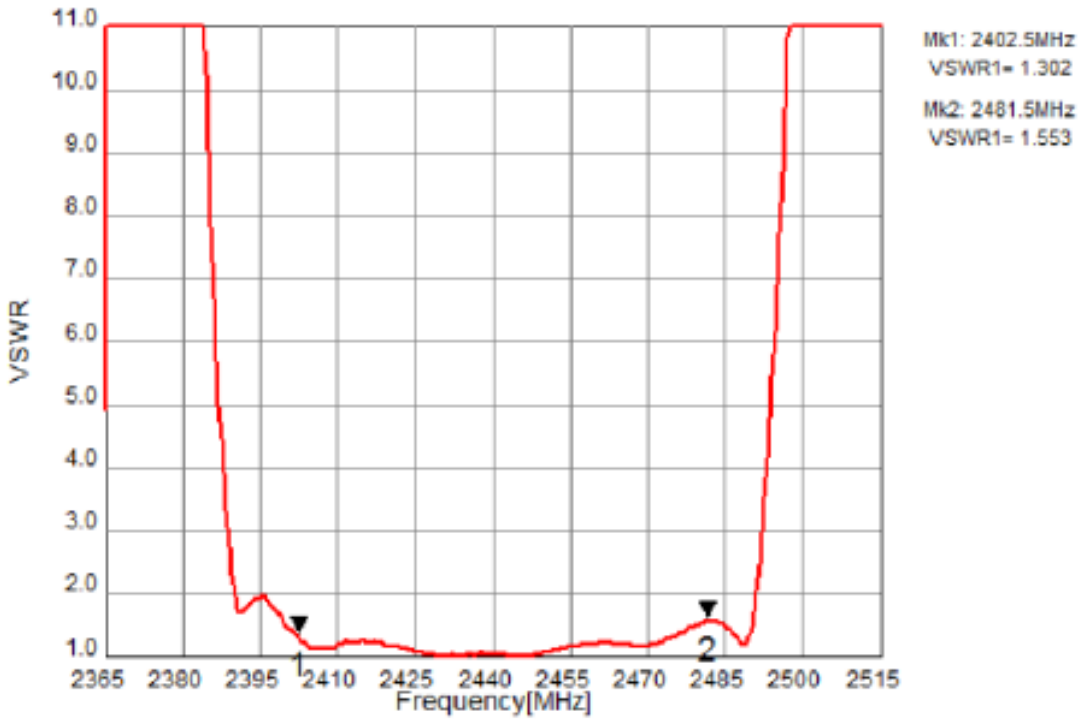
F. Frequency Characteristics :

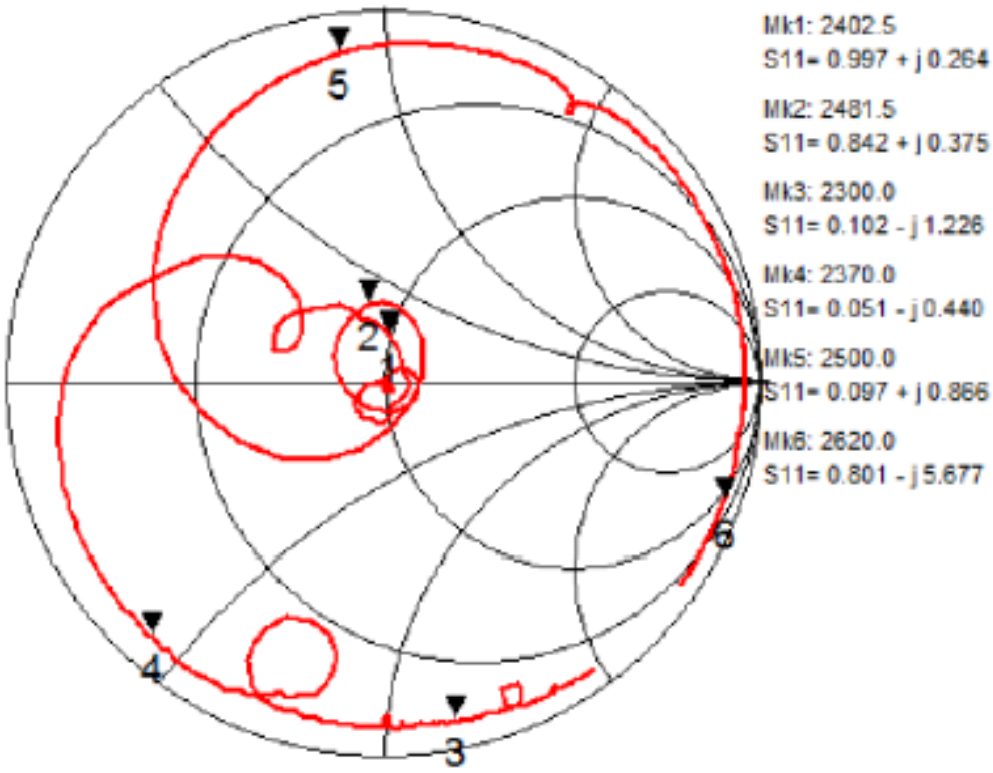
Passband



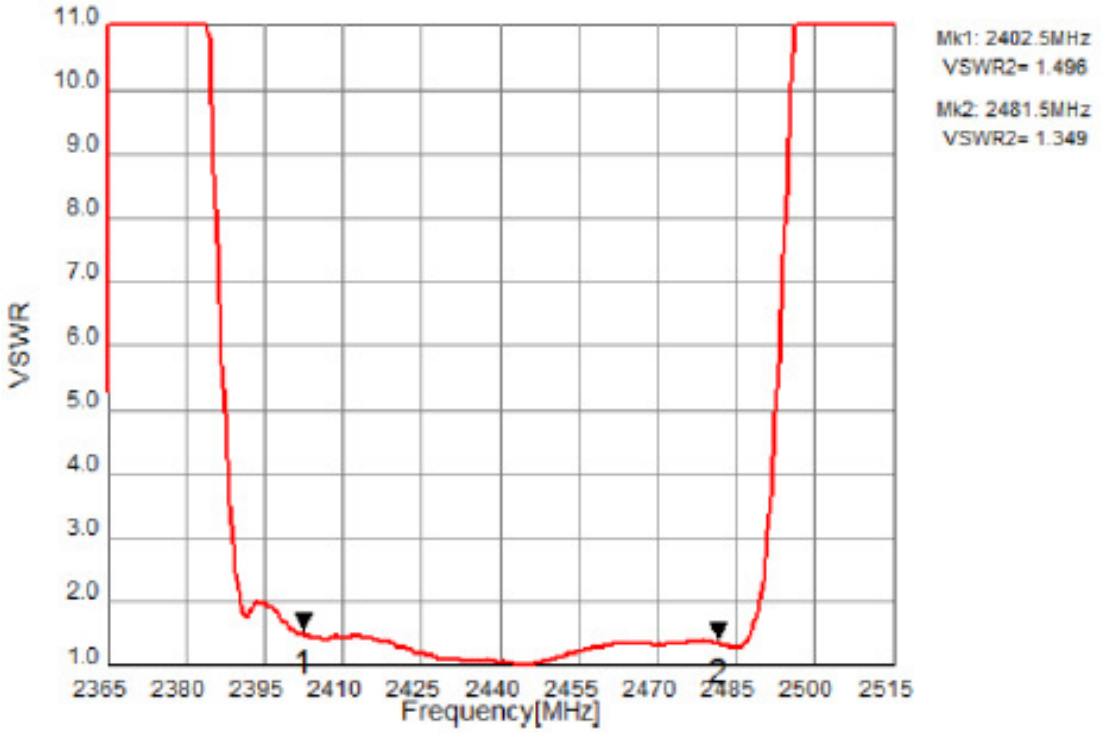


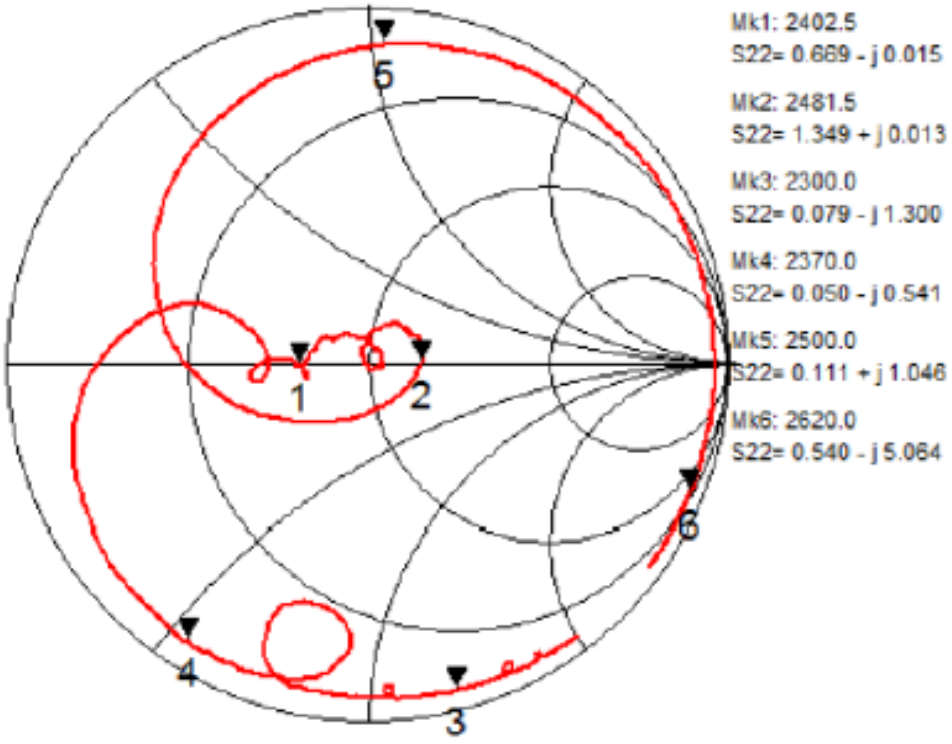
Input Port


Mk1: 2402.5MHz
VSWR1= 1.302
Mk2: 2481.5MHz
VSWR1= 1.553
VSWR
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
2365 2380 2395 2410 2425 2440 2455 2470 2485 2500 2515
Frequency[MHz]
1
2

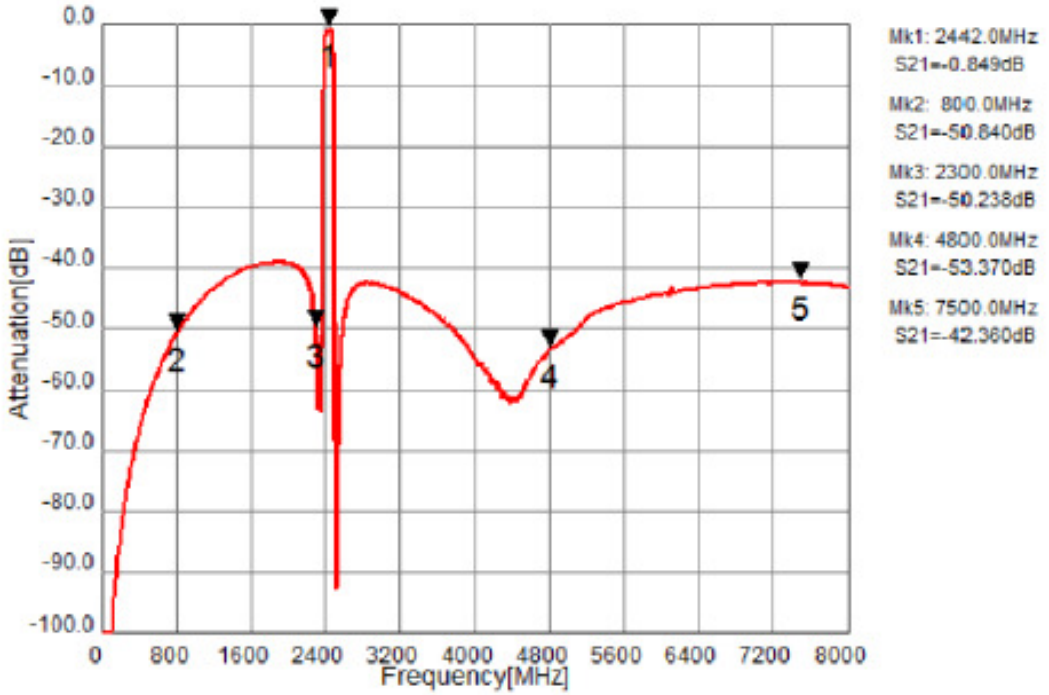

Mk1: 2402.5
S11= 0.997 + j 0.264
Mk2: 2481.5
S11= 0.842 + j 0.375
Mk3: 2300.0
S11= 0.102 - j 1.226
Mk4: 2370.0
S11= 0.051 - j 0.440
Mk5: 2500.0
S11= 0.097 + j 0.866
Mk6: 2620.0
S11= 0.801 - j 5.677
1
2
3
4
5
6

Output Port


11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
VSWR
2365 2380 2395 2410 2425 2440 2455 2470 2485 2500 2515
Frequency[MHz]
1
2
Mk1: 2402.5MHz
VSWR2= 1.496
Mk2: 2481.5MHz
VSWR2= 1.349


1
2
3
4
5
6
Mk1: 2402.5
S22= 0.689 - j 0.015
Mk2: 2481.5
S22= 1.349 + j 0.013
Mk3: 2300.0
S22= 0.079 - j 1.300
Mk4: 2370.0
S22= 0.050 - j 0.541
Mk5: 2500.0
S22= 0.111 + j 1.046
Mk6: 2620.0
S22= 0.540 - j 5.064

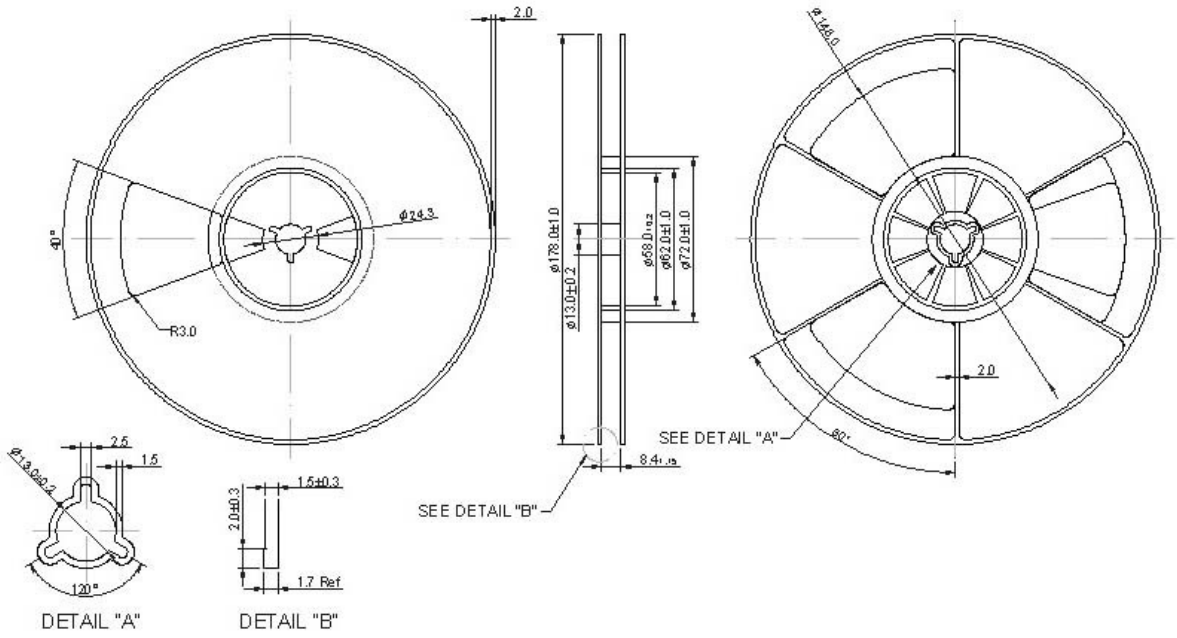
Wide span


0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100.0
Attenuation[dB]
0
800
1600
2400
3200
4000
4800
5600
6400
7200
8000
Frequency[MHz]
1
2
3
4
5
Mk1: 2442.0MHz
S21=-0.849dB
Mk2: 800.0MHz
S21=-50.840dB
Mk3: 2300.0MHz
S21=-50.238dB
Mk4: 4800.0MHz
S21=-53.370dB
Mk5: 7500.0MHz
S21=-42.360dB

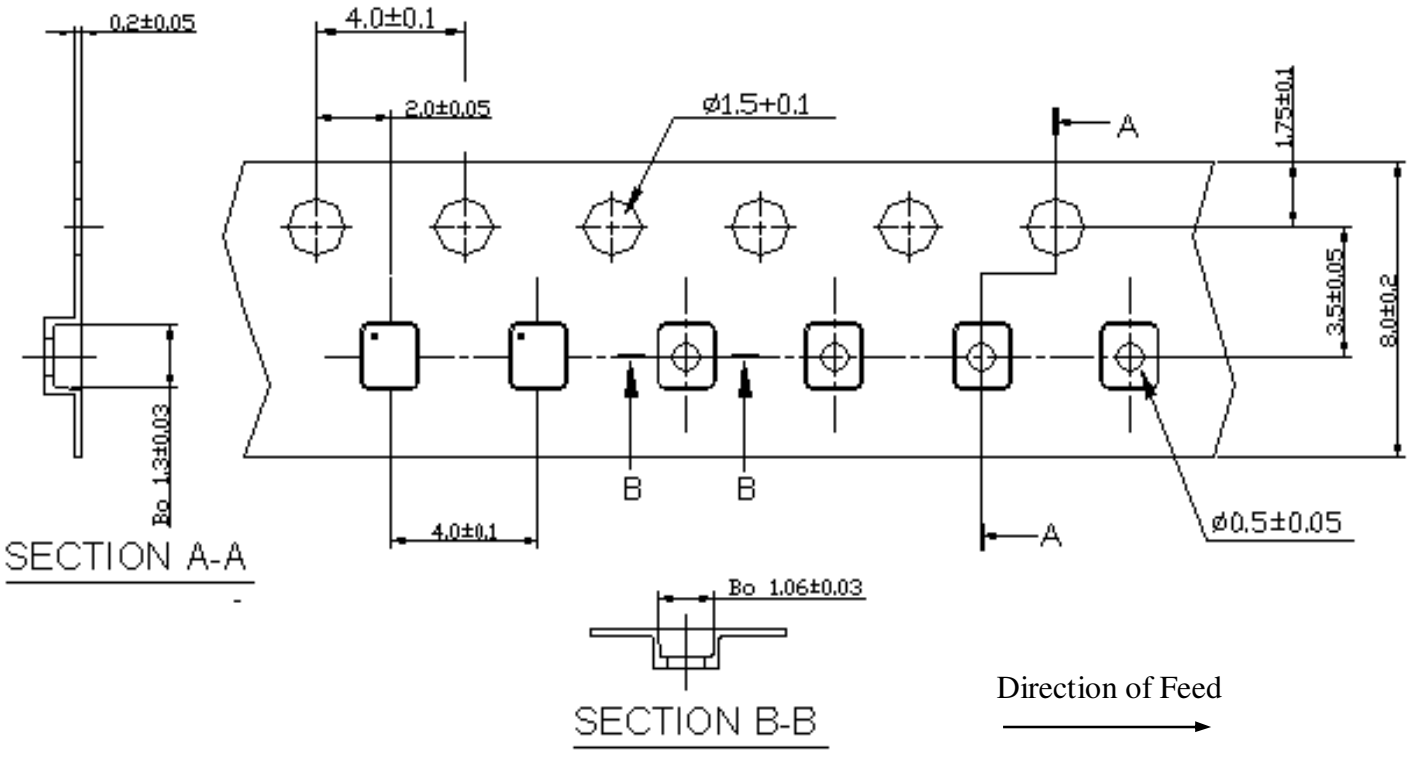
G. PACKING:

1. REEL DIMENSION

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



2.TAPE DIMENSION



H. RECOMMENDED REFLOW PROFILE :

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