Features

- High stability and reliability with good performance and no adjustment
- Narrow and sharp pass band characteristics. RoHS compatible
- Low insertion loss and deep stop band attenuation for interference
- Low – loss SAW filter for WIFI transmission
- Package size 1.4 mm *1.1 mm

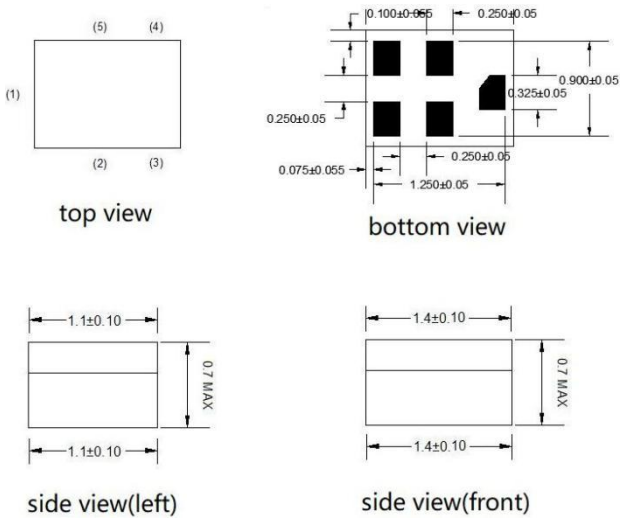
Electrical Specification

ITEM		Min.	Typ.	Max.	Unit
Insertion Loss	2401~2406 MHz		3.5	4.8	dB
Insertion Loss	2406~2411 MHz		3.0	3.3	dB
Insertion Loss	2411~2483 MHz		2.5	2.9	dB
Passband Ripple	2401~2483 MHz		1.5	3.9	dB
Passband Ripple	2406~2483 MHz		1.2	2.0	dB
VSWR	2401~2483 MHz		1.25	2.0	
Attenuation	10~1559.00 MHz	43	49		dB
Attenuation	1559.00~1606.00 MHz	42	48		dB
Attenuation	1606.00~1710.00 MHz	41	46		dB
Attenuation	1710.00~1785.00 MHz	40	46		dB
Attenuation	1785.00~1805.00 MHz	40	46		dB
Attenuation	1805.00~1880.00 MHz	40	45		dB
Attenuation	1850.00~1900.00 MHz	40	44		dB
Attenuation	2110.00~2170.00MHz	40	44		dB
Attenuation	2300.00~2320.00 MHz	45	54		dB
Attenuation	2320.00~2370.00 MHz	37	44		dB
Attenuation	2370.00~2380.00 MHz	10	42		dB
Attenuation	2570.00~2620.00 MHz	42	46		dB
Attenuation	2620.00~2690.00 MHz	40	44		dB
Attenuation	2690.00~6000.00 MHz	30	37		dB
Input / Output Impedance (Nominal)		50Ω//3.9nH			

Maximum Ratings

Rating	Symbol	Value	Unit
DC Voltage	V_{DC}	0	V
Input Power Level	P	15dBm CW, Ta=85°C, life time>10 years	dBm
		24dBm CW, Ta=85°C, pass band top frequency, test 2000 hours continuously ,electrical characters meet demand;	
		26dBm CW,Ta=85°C,pass band top frequency,test 2 hours continuously ,electrical characters meet demand;	
Operating Temperature Range	T_A	-30 ~ +85	°C
Storage Temperature Range	Tstg	-40 ~ +85	°C

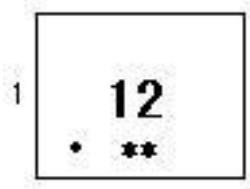
Outline Drawing



Pin Configuration

PIN#	Description
1	Input
4	Output
2,3,5	Ground

Marking



Top View, Laser Marking

"12": Part Number
"." Dot marking, indicates input

"1": Terminal 1

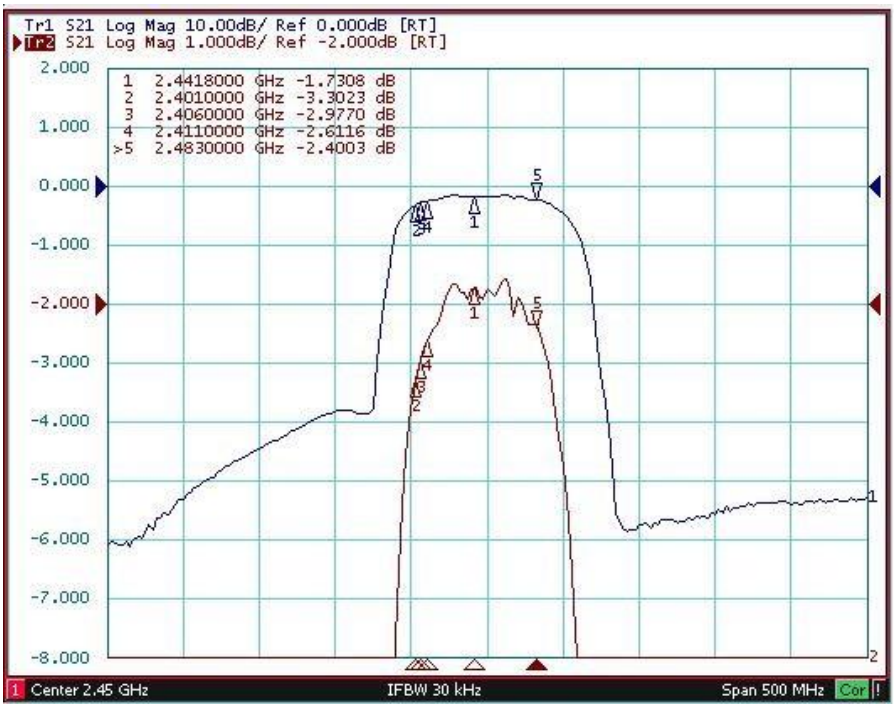
The first "*": Month Code (The code shown below varies in a 4-year-cycle)

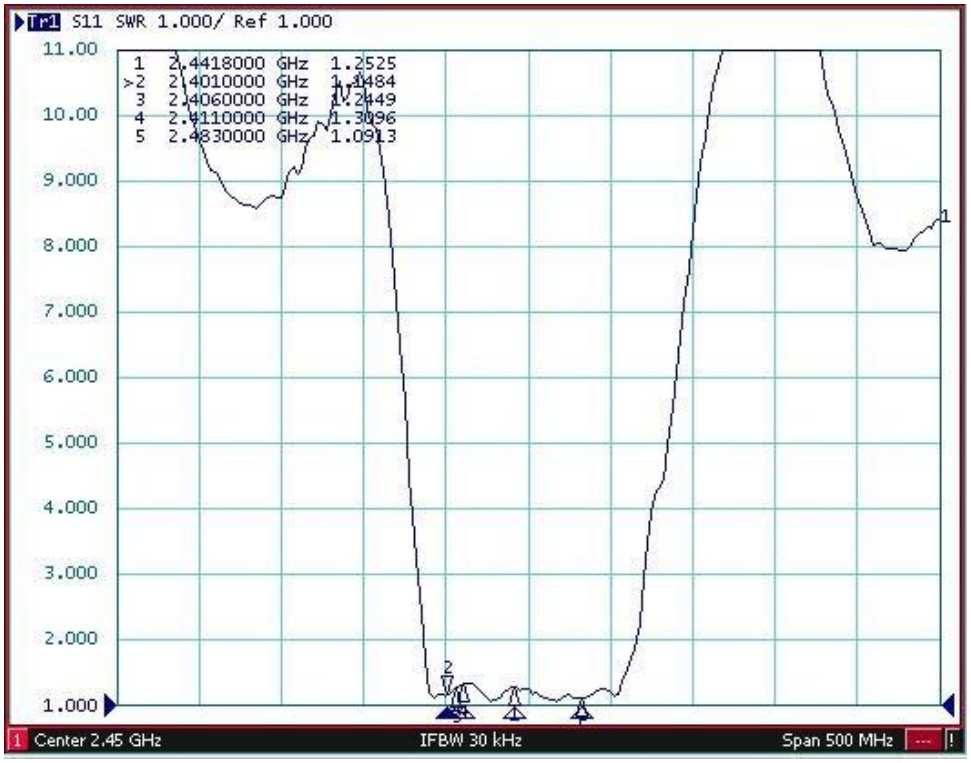
Month	1	2	3	4	5	6	7	8	9	10	11	12
2016/2020	n	p	q	r	s	t	u	v	w	x	y	z
2017/2021	A	B	C	D	E	F	G	H	J	K	L	M
2018/2022	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019/2023	a	b	c	d	e	f	g	h	i	j	k	m

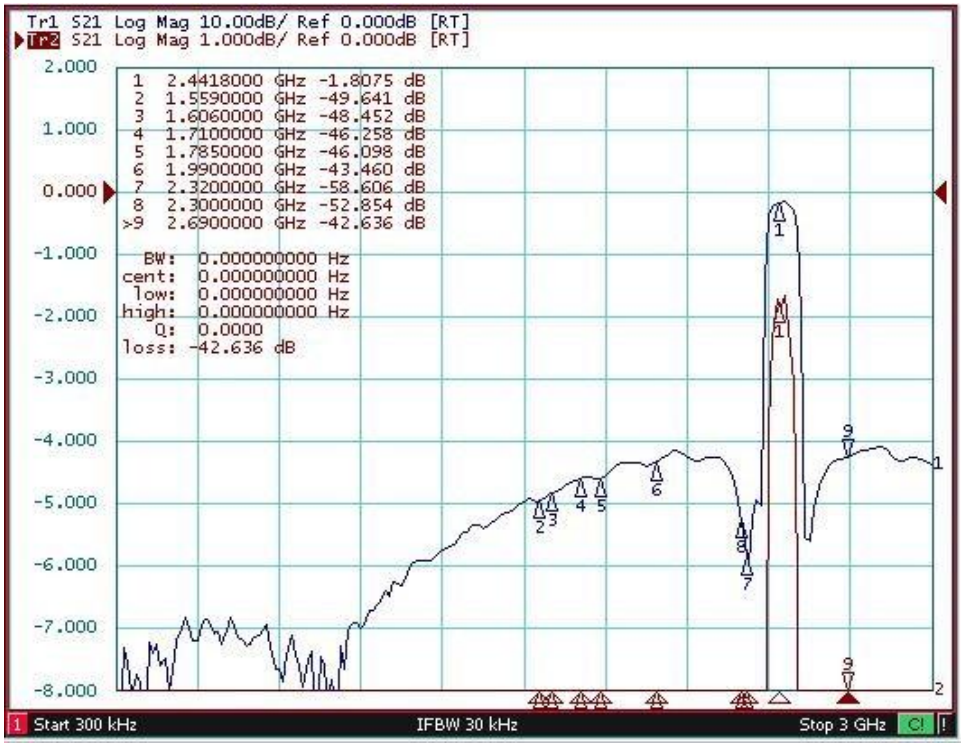
The second "*": Date Code

Date	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
Code	A	B	C	D	E	F	G	H	J	K	
Date	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	
Code	L	M	N	P	Q	R	S	T	U	V	
Date	21st	22nd	23rd	24th	25th	26th	27th	28th	19th	30th	31st
Code	W	X	Y	Z	a	b	d	e	f	g	h

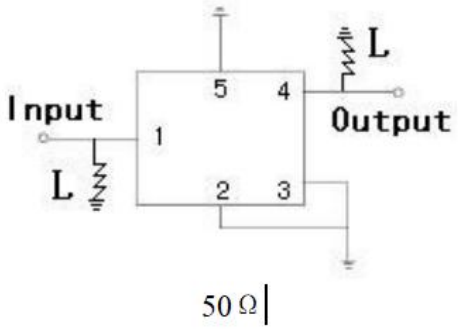
Typical Frequency Response




Tr1 S11 SWR 1.000/ Ref 1.000
1 2.4418000 GHz 1.2525
>2 2.4010000 GHz 1.1484
3 2.4060000 GHz 1.2449
4 2.4110000 GHz 1.3096
5 2.4830000 GHz 1.0913
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Center 2.45 GHz
IFBW 30 kHz
Span 500 MHz


Tr1 S21 Log Mag 10.00dB/ Ref 0.000dB [RT]
Tr2 S21 Log Mag 1.000dB/ Ref 0.000dB [RT]
1 2.4418000 GHz -1.8075 dB
2 1.5590000 GHz -49.641 dB
3 1.6060000 GHz -48.452 dB
4 1.7100000 GHz -46.258 dB
5 1.7850000 GHz -46.098 dB
6 1.9900000 GHz -43.460 dB
7 2.3200000 GHz -58.606 dB
8 2.3000000 GHz -52.854 dB
>9 2.6900000 GHz -42.636 dB
BW: 0.000000000 Hz
cent: 0.000000000 Hz
low: 0.000000000 Hz
high: 0.000000000 Hz
Q: 0.0000
loss: -42.636 dB
2.000
1.000
0.000
-1.000
-2.000
-3.000
-4.000
-5.000
-6.000
-7.000
-8.000
1 Start 300 kHz
IFBW 30 kHz
Stop 3 GHz

Test Circuit



L=3.9 nH

Stability Characteristics

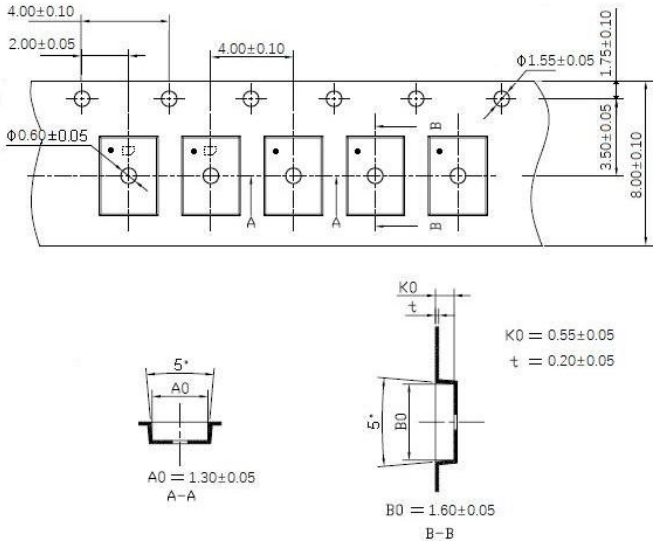
ITEM	Test Item	STD Reference	Test Conditions			per lot
Preconditioning		JESD22-A113	1) Temperature Cycling, 5 cycles -40℃ to 85℃; 2) Bake, 24 hrs @85±5℃; Moisture Soak, Soak time and conditions per IPC/JEDEC J-STD-020 based on device MSL level; Reflow, 3 reflow cycles; Drying, Room ambient temperature.			All behind
1	Temperature Cycling	JESD22-A104	-40℃ / +85℃,5℃/min,15min dwell,<1 min transfer time,500cycles			3*25 pcs
2	High Temperature Storage	JESD22-A103	Temperature = 85℃, 1000 hours.			3*25 pcs
3	Temperature Humidity no bias	JEDEC Std A101-B	85°C 85%RH	240 hours		3*25 pcs
4	Human Body Mode ESD	JESD22-A114	Ta=25℃, ≥100V			3 pcs
5	Charge Device Mode ESD	JESD22-C101	Ta=25℃, ≥100V			3 pcs
6	Solderability	JESD22-B102	Wetting: 245℃, 5s.			22 pcs
7	Drop Test	JESD22-B111	1500 Gs, 0.5 half-sine pulse.	millisecond	duration	20 pcs
8	Mechanical Shock	JESD-47	Shock pulse of 1500g with pulse duration of 0.5+/-0.1msec (X ,Y & Z); 5 shocks per axis.			3*25 pcs

Remarks

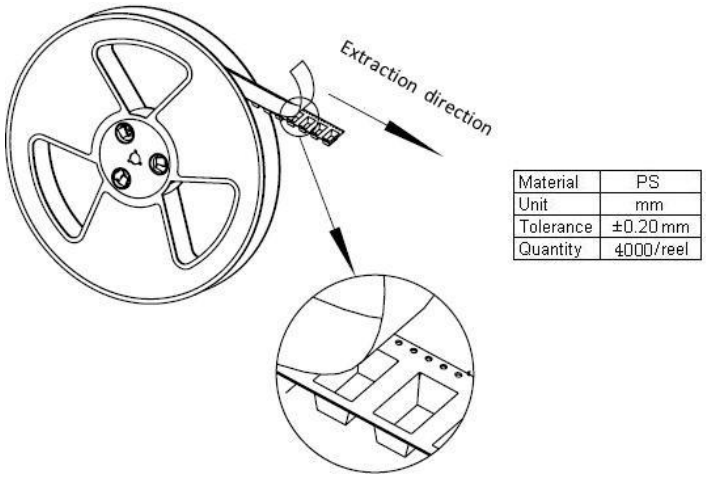
- SAW devices should not be used in any type of fluid such as water, oil, organic solvent, etc.
- Be certain not to apply voltage exceeding the rated voltage of components.
- Do not operate outside the recommended operating temperature range of components.
- Sudden change of temperature shall be avoided, deterioration of the characteristics can occur.
- Be careful of soldering temperature and duration of components when soldering.
- Do not place soldering iron on the body of components.
- Be careful not to subject the terminals or leads of components to excessive force.
- SAW devices are electrostatic sensitive. Please avoid static voltage during operation and storage.
- Ultrasonic cleaning shall be avoided. Ultrasonic vibration may cause destruction of components.

Packing Information

Carrier Tape



Reel Dimensions

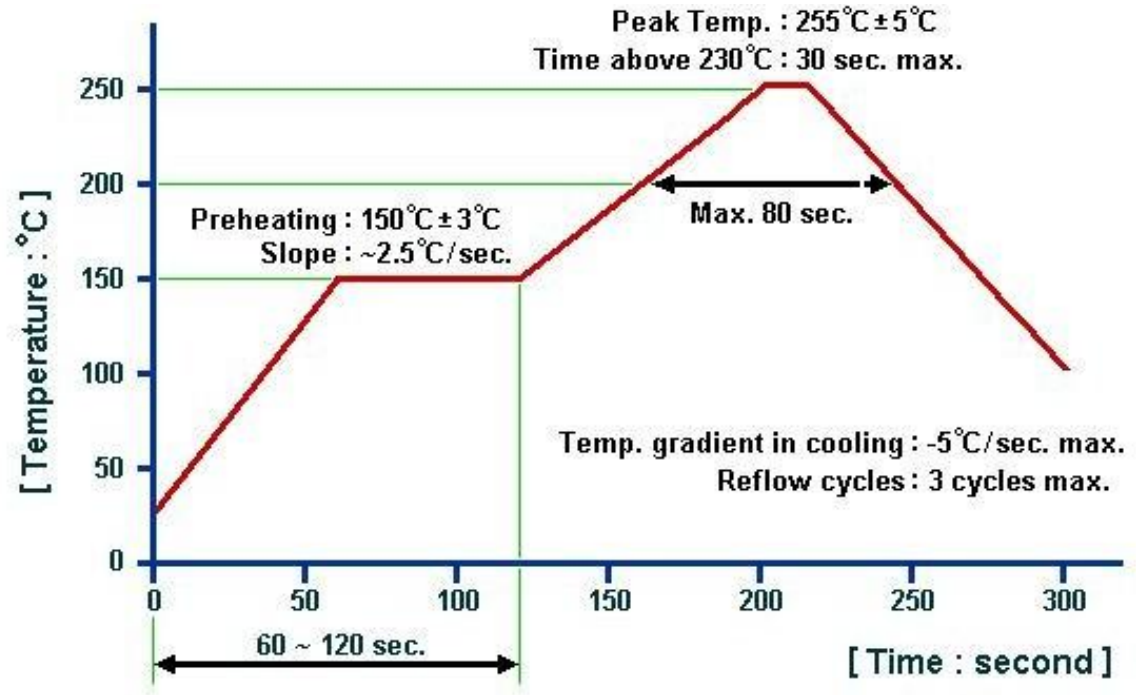


Material	PS
Unit	mm
Tolerance	±0.20 mm
Quantity	4000/reel

Outer Packing

Type	Quantity	Dimension	Description	Weight
Carton Box I	40000	240×210×285mm	anti-static plastic bag & carton box 1 reel / bag 10 bags / box (40000pcs)	1.86kg
Carton Box II	120000	470×310×285mm	30 bags / box (120000pcs)	5.64kg

Recommended Soldering Profile



Remarks:

1. The specifications of this device are subject to change or obsolescence without notice.
2. Typically, equipment utilizing this device requires emissions testing and government approval, which is the responsibility of the equipment manufacturer.
3. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) per se, not for applications, processes and circuits implemented within components or assemblies.
4. For questions on technology, prices and delivery, please contact our sales offices or e-mail sales@sainty-tech.com.