



SAW BANDPASS FILTER

PART NO.: ACTFG012-2442SA-1411

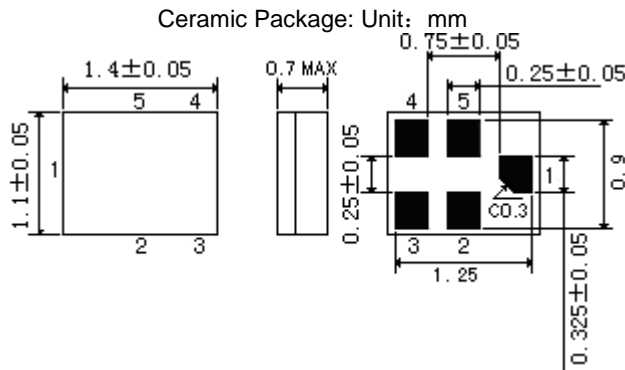
Product Type:		Customer:
SAW Filter		
Description:		Customer Part NO.:
SAW filter for WiFi, Unbalanced		
		Issued Date:

Features

SAW filter for WIFI.

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

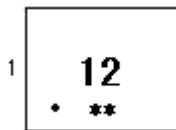
Package Dimensions



Pin Configuration

1	Input
4	Output
2,3,5	Ground

Marking



Top View, Laser Marking

"12": Part number

"1": Terminal1

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

data	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
code	A	B	C	D	E	F	G	H	J	K	
data	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	
code	L	M	N	P	Q	R	S	T	U	V	
data	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
code	W	X	Y	Z	a	b	d	e	f	g	h

Maximum Ratings

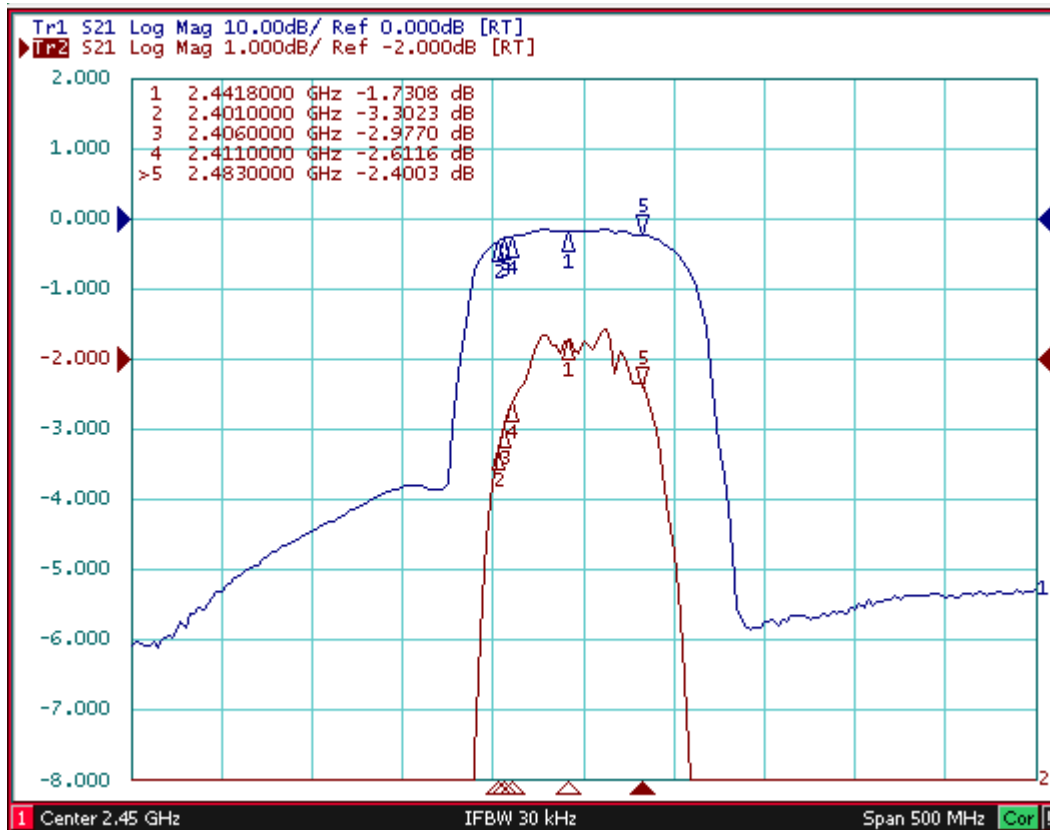
Rating		Value	Unit
Input Power Level	P	15dBm CW, $T_a=85^\circ\text{C}$, life time>10 years	
		24dBm CW, $T_a=85^\circ\text{C}$, pass band top frequency, test 2000 hours continuously ,electrical characters meet demand;	
		26dBm CW, $T_a=85^\circ\text{C}$, pass band top frequency, test 2 hours continuously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

Electrical Characteristics:

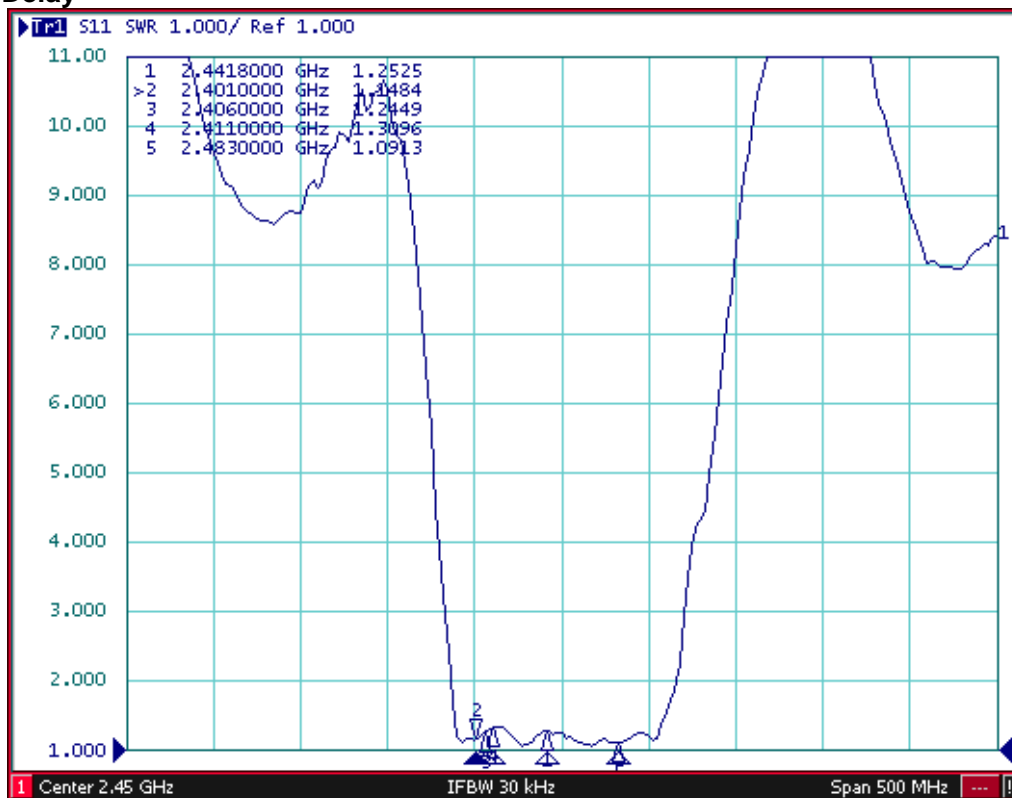
Item		Minimum	Typical	Maximum	Unit	
Insertion Loss	IL					
		2401 ... 2406 MHz		3.5	4.8	dB
		2406 ... 2411 MHz		3.0	3.3	dB
	2411 2483 MHz		2.5	2.9	dB	
Passband Ripple	Pr					
		2401 ... 2483 MHz		1.5	3.9	dB
	2406 ... 2483 MHz		1.2	2.0	dB	
VSWR	V_{swr}					
		2401 ... 2483 MHz		1.25	2.0	
Absolute Attenuation	α					
		10 1559.00 MHz	43	49		dB
		1559.00 1606.00 MHz	42	48		dB
		1606.00 1710.00 MHz	41	46		dB
		1710.00 1785.00 MHz	40	46		dB
		1785.00 1805.00 MHz	40	46		dB
		1805.00 1880.00 MHz	40	45		dB
		1850.00 1900.00 MHz	40	44		dB
		2110.00 2170.00MHz	40	44		dB
		2300.00 2320.00 MHz	45	54		dB
		2320.00 2370.00 MHz	37	44		dB
		2370.002380.00 MHz	10	42		dB
		2570.00 2620.00 MHz	42	46		dB
		2620.00 2690.00 MHz	40	44		dB
		2690.006000.00 MHz	30	37		dB
Input / Output Impedance (Nominal)		50 Ω //3.9nH				

Typical Frequency Response

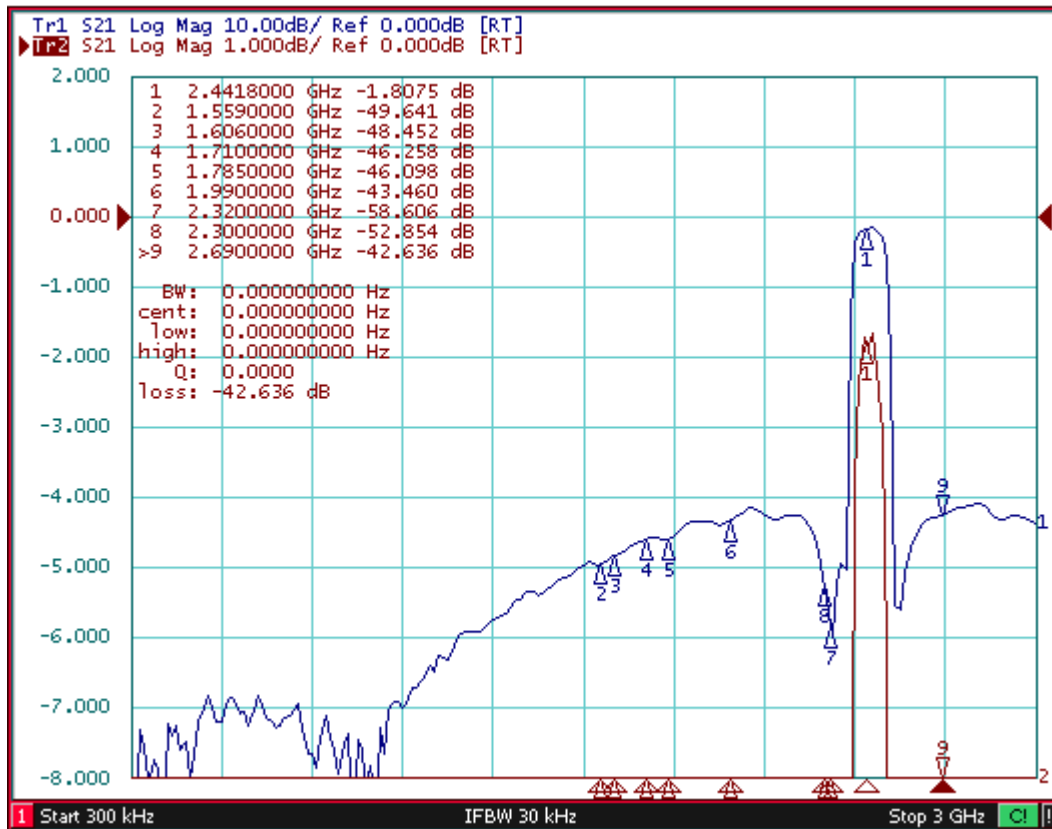
S21



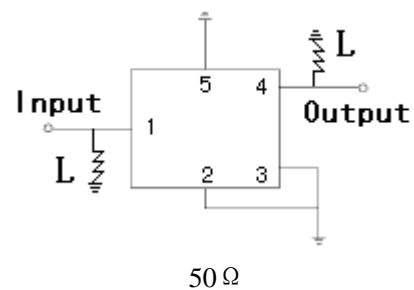
S11 Group Delay



Far side



Test Circuit



L=3.9 nH



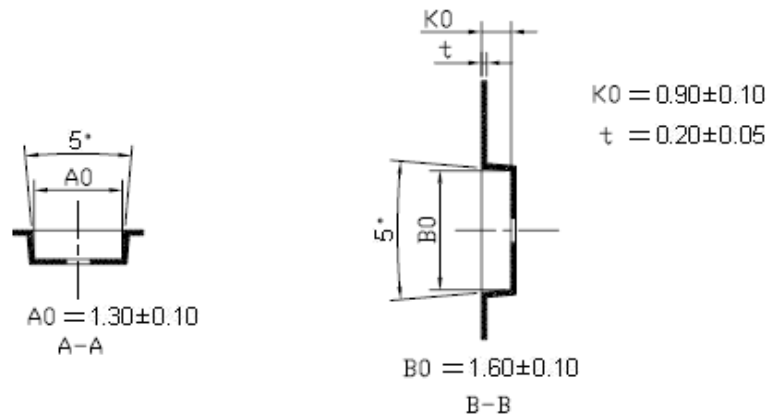
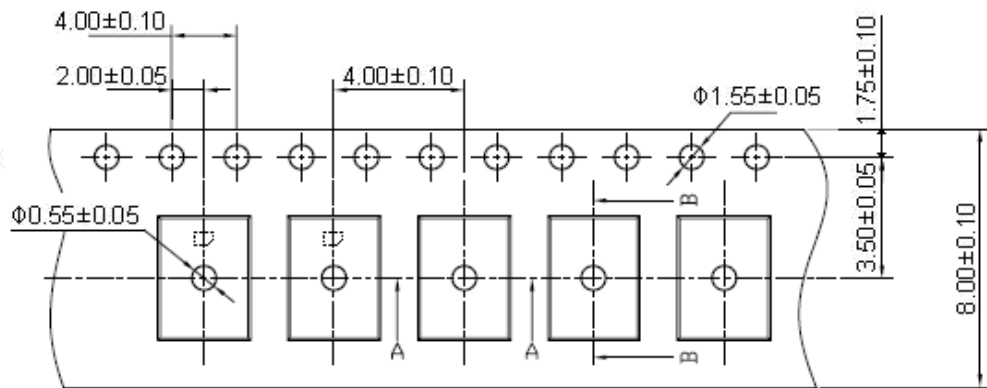
Stability Characteristics

•	Test Item	STD Reference	Test Conditions	per lot
	Preconditioning	JESD22-A113	1) Temperature Cycling, 5 cycles -40°C to 85°C; 2) Bake, 24 hrs @85±5°C; 3)Moisture Soak, Soak time and conditions per IPC/JEDEC J-STD-020 based on device MSL level; 4) Reflow, 3 reflow cycles; 5) Drying, Room ambient temperature.	All behind
1	Temperature Cycling	JESD22-A104	-40°C / +85°C,5°C/min,15min dwell,<1 min transfer time,500cycles	3*25 pcs
2	High Temperature Storage	JESD22-A103	Temperature=85°C, 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°C, ≥100V	3 pcs
5	Charge Device Mode ESD	JESD22-C101	Ta=25°C, ≥100V	3 pcs
6	Solderability	JESD22-B102	Wetting: 245°C, 5s.	22 pcs
7	Drop Test	JESD22-B111	1500 Gs, 0.5 millisecond duration, half-sine pulse.	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

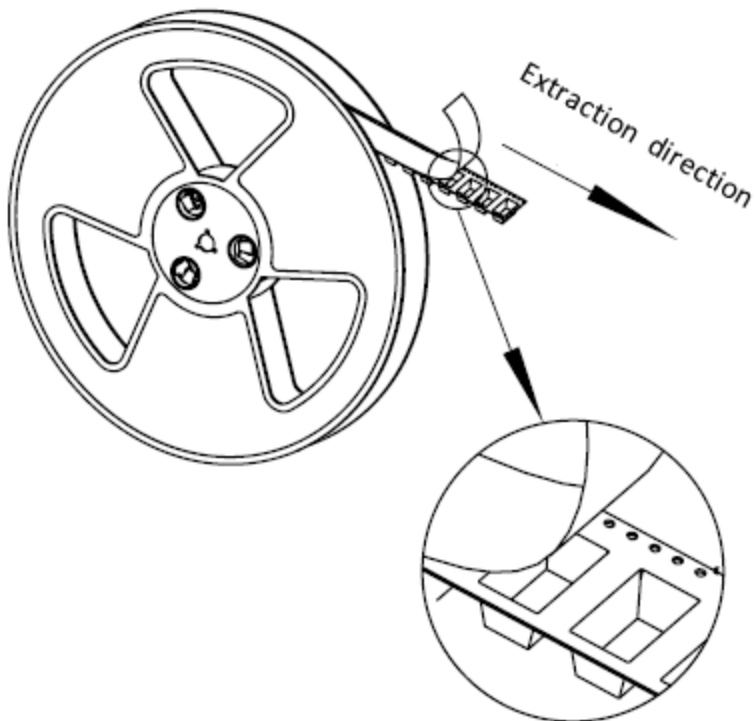
Requirements: The SAW filer shall remain within the electrical specifications after tests.

Packing Information

Carrier Tape



Reel Dimensions



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

Outer Packing

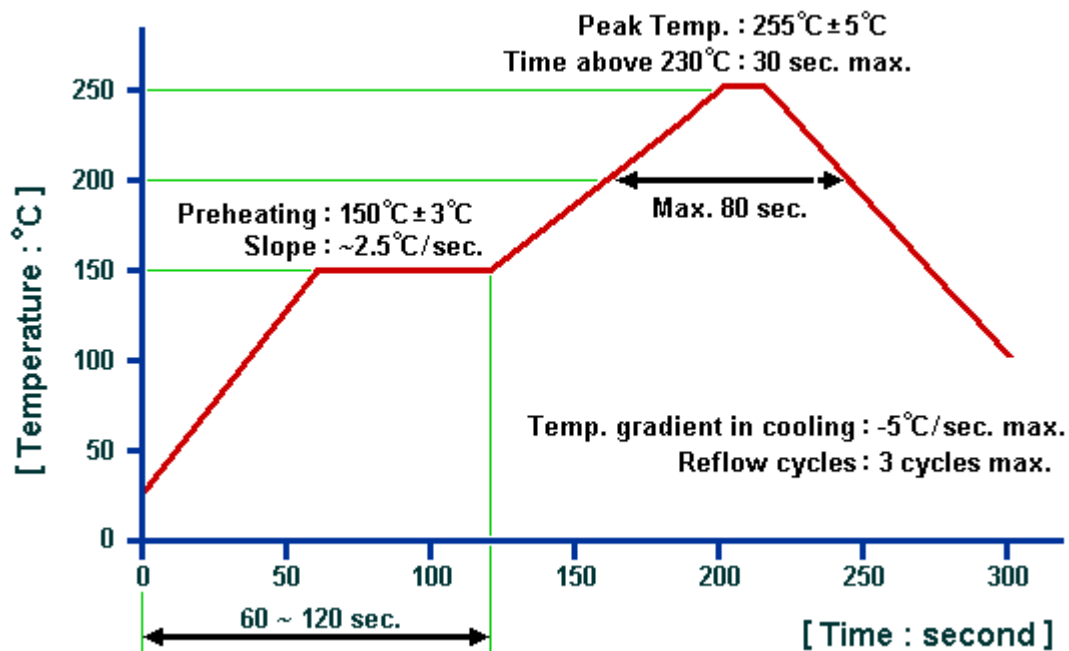
Type	Quantity	Dimension	Description	Weight
Carton Box I	40000	240×210×285	anti-static plastic bag & carton box 1 reel / bag 10bags / box (40000 pcs) 30 bags / box (120000pcs)	1.86
Carton Box II	120000	470×310×285		5.64

Unit: mm Unit: kg

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.

Recommended Soldering Profile



© ACT 2018. All Rights Reserved.

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.