



TAI-SAW TECHNOLOGY CO., LTD.

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Product Specifications Approval Sheet

Product Name: BAW Filter 2442MHz 79MHz BW Rx SMD 1.4x1.1 mm

TST Parts No.: TA1869B (This part is compliant with AEC-Q200)

Customer Parts No.: _____

Customer signature required

Company: _____

Division: _____

Approved by : _____

Date: _____

Checked by: _____ Anne Chen *Anne Chen*

Approved by: _____ Andy Yu *Andy Yu*

Date: _____ 03, 15, 2018

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 2442MHz 79MHz BW Rx SMD 1.4x1.1 mm

MODEL NO.:TA1869B

REV.1.0

A. MAXIMUM RATING:

1. DC Voltage : 3V
2. Operating Temperature: -40 °C to +85 °C
3. Storage Temperature: -40 °C to +85 °C
4. Moisture Sensitivity Level 1(MSL 1).
5. Pre-aging condition to 150C / 8hrs
6. ESD 50V(MM) 100V(HBM)

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS:

Terminating source impedance: $Z_s = 50 // 15nH (Q=\infty) \Omega$ (Single)

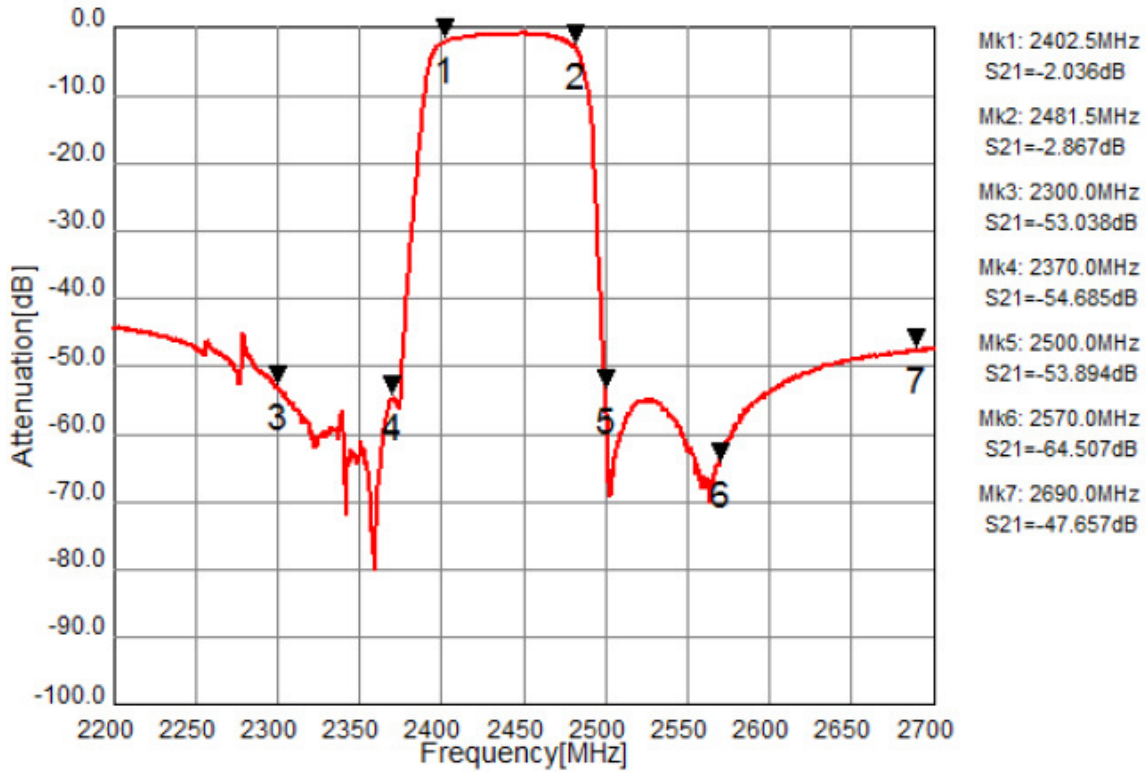
Terminating load impedance: $Z_L = 50 // 15nH (Q=\infty) \Omega$ (Single)

Parameters Description		Unit	Minimum	Typical	Maximum	Remarks
Center Frequency		MHz	-	2442	-	
Insertion Loss	2402.5~2421.5 MHz	dB	-	1.9	2.3	(*1)(*2)
	2407.5~2426.5 MHz	dB		1.6	2.2	(*1)(*2)
	2412.5~2471.5 MHz	dB		1.6	2.2	(*1)(*2)
	2457.5~2476.5 MHz	dB		1.8	2.2	(*1)(*2)
	2462.5~2481.5 MHz	dB		2.5	3.0	(*1)(*2)
Amplitude Ripple	2402.5~2421.5 MHz	dB	-	0.3	1.5	(*2)
	2407.5~2426.5 MHz	dB		0.2	1.2	(*2)
	2412.5~2471.5 MHz	dB		0.5	1.2	(*2)
	2457.5~2476.5 MHz	dB		0.4	1.2	(*2)
	2462.5~2481.5 MHz	dB		0.8	1.7	(*2)
VSWR(Input)	2402.5~2481.5 MHz	-	-	1.8	2.2	+25°C
VSWR(Output)	2402.5~2481.5 MHz	-	-	1.8	2.2	+25°C
Maximum RF Input Power (CW)		dBm	+28			CW, 50°C, 10kh
Attenuation:						
800~2300 MHz		dB	37	40		
2300~2365 MHz		dB	48	54	-	
2365~2370 MHz		dB	48	56	-	(*3)
2500~2505 MHz		dB	40	56	-	-40~-10°C (*3)
		dB	47		-	-10~+25°C (*3)
		dB	52		-	+25~+85°C (*3)
2505~2690 MHz		dB	45	49	-	(*3)
2570~2620 MHz		dB	47	53		(*3)
2690~6000 MHz		dB	45	50		
2690~7500 MHz		dB	30	37		

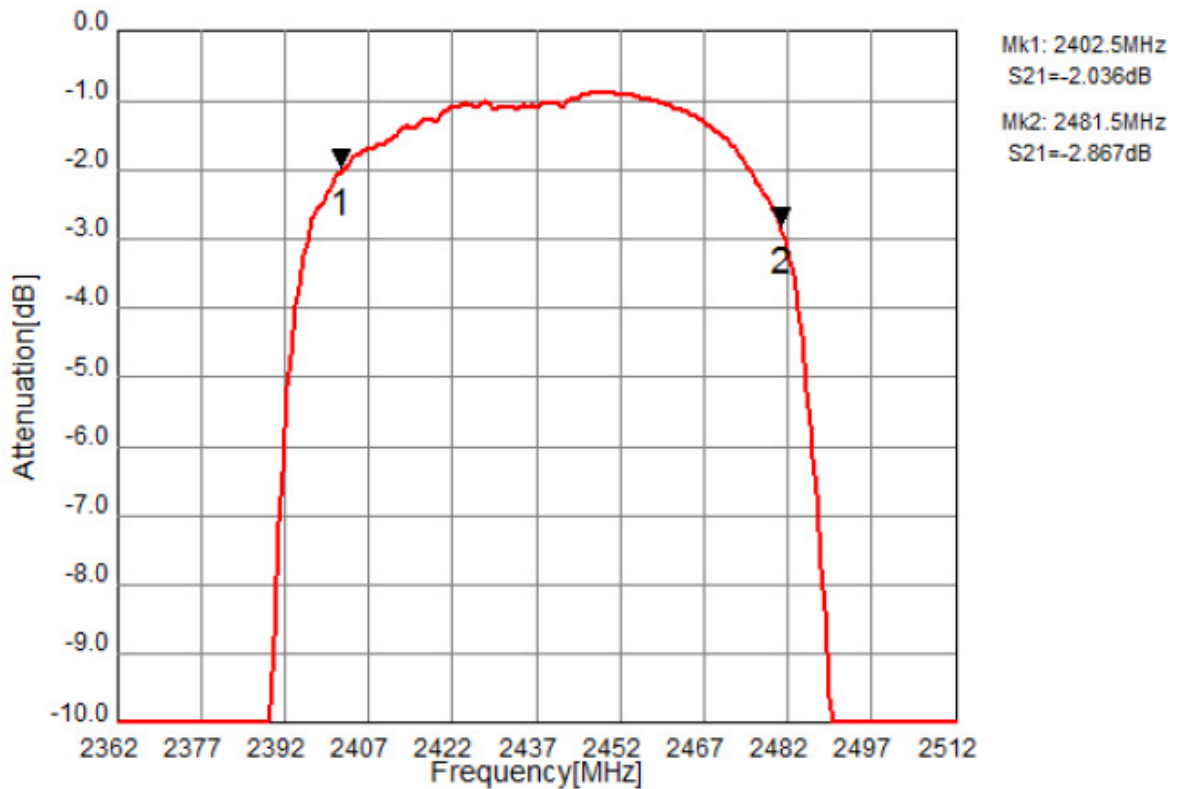
- (*1) Specification of insertion loss excludes loss that comes from the test board.
- (*2) The integrated loss over any 19MHz channel within the band.
- (*3) The integrated loss over any 5MHz channel within the band.

C. Frequency Characteristics:

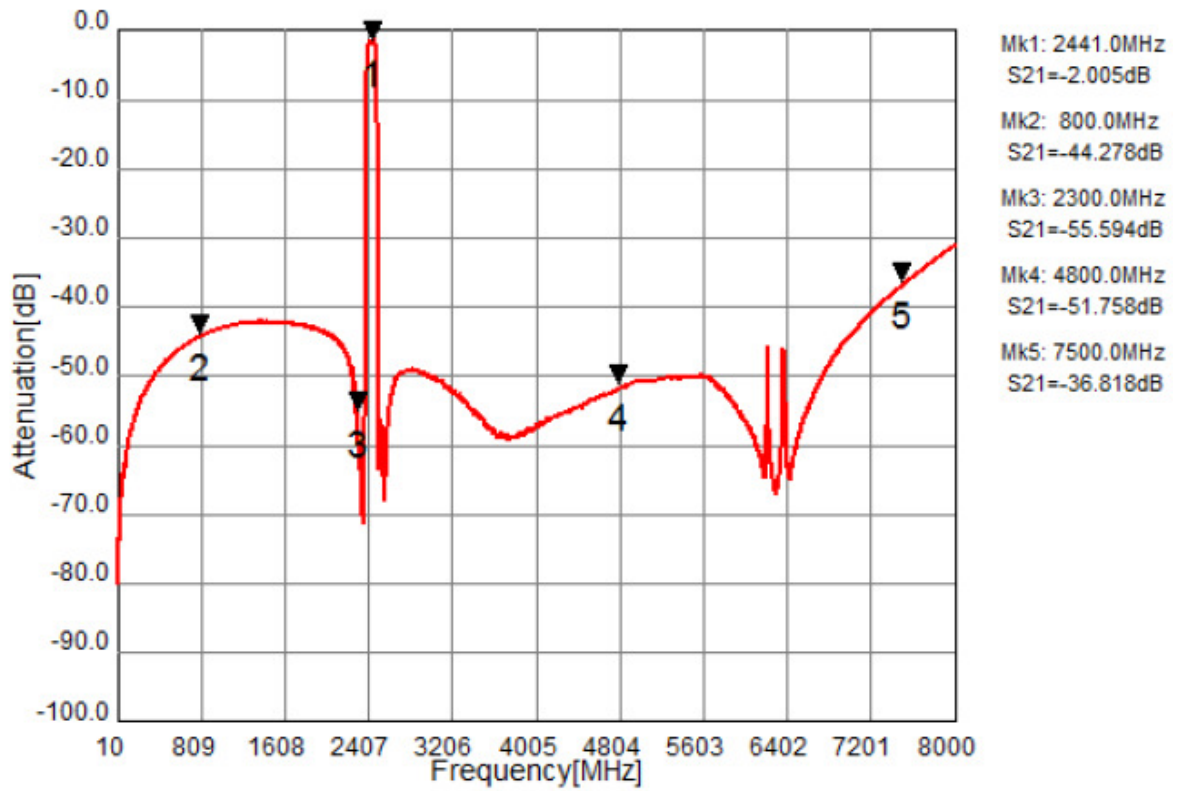
Pass-band



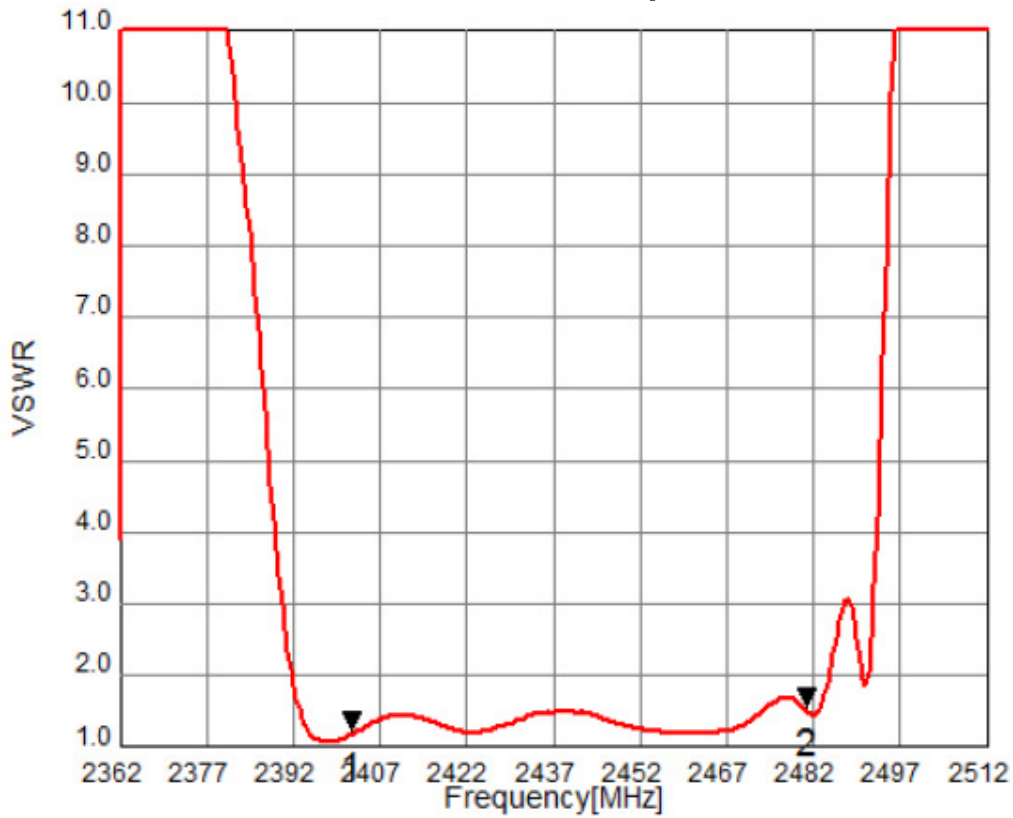
In-band



Wide-band

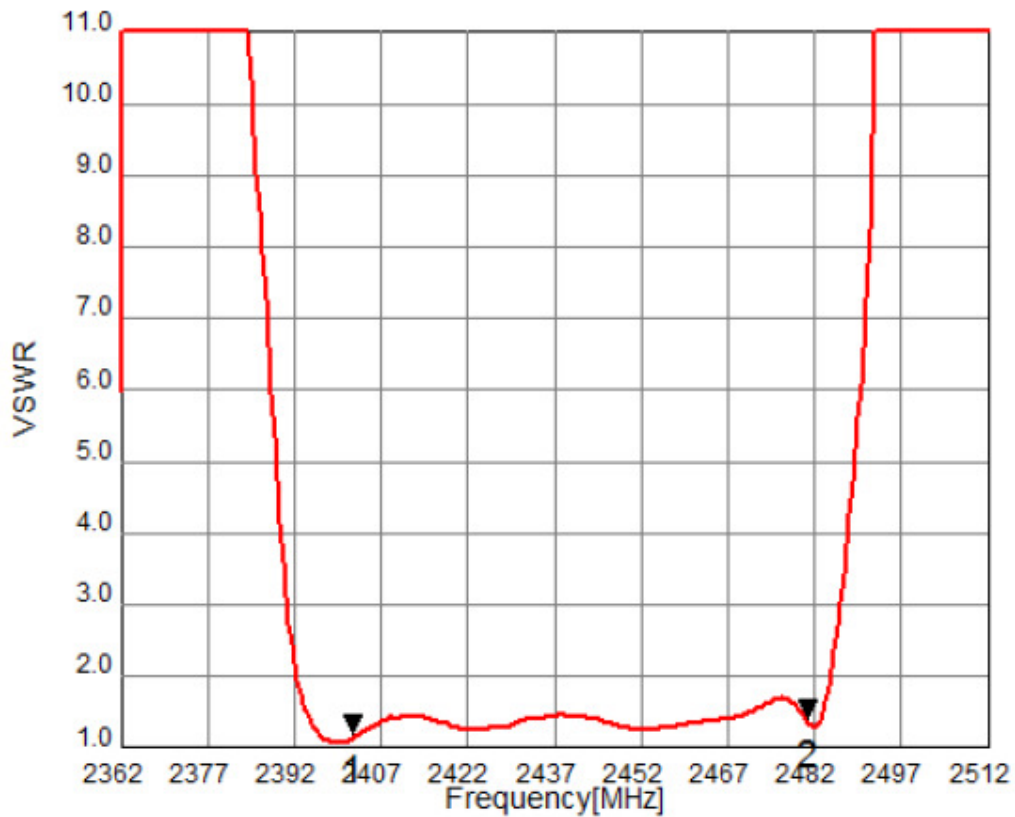


VSWR (Input)



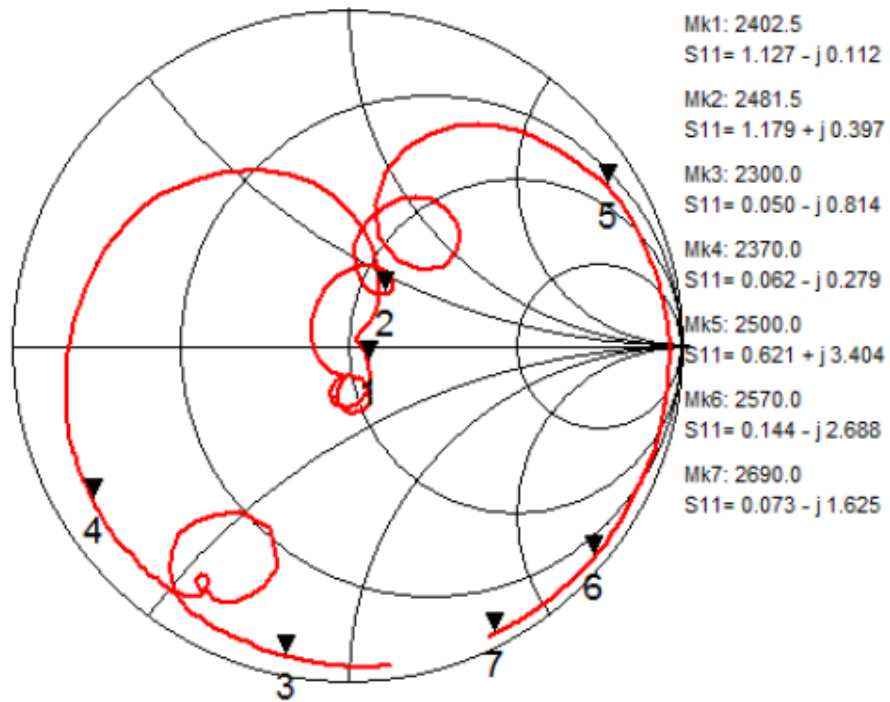
Mk1: 2402.5MHz
VSWR1= 1.173
Mk2: 2481.5MHz
VSWR1= 1.490

VSWR (Output)

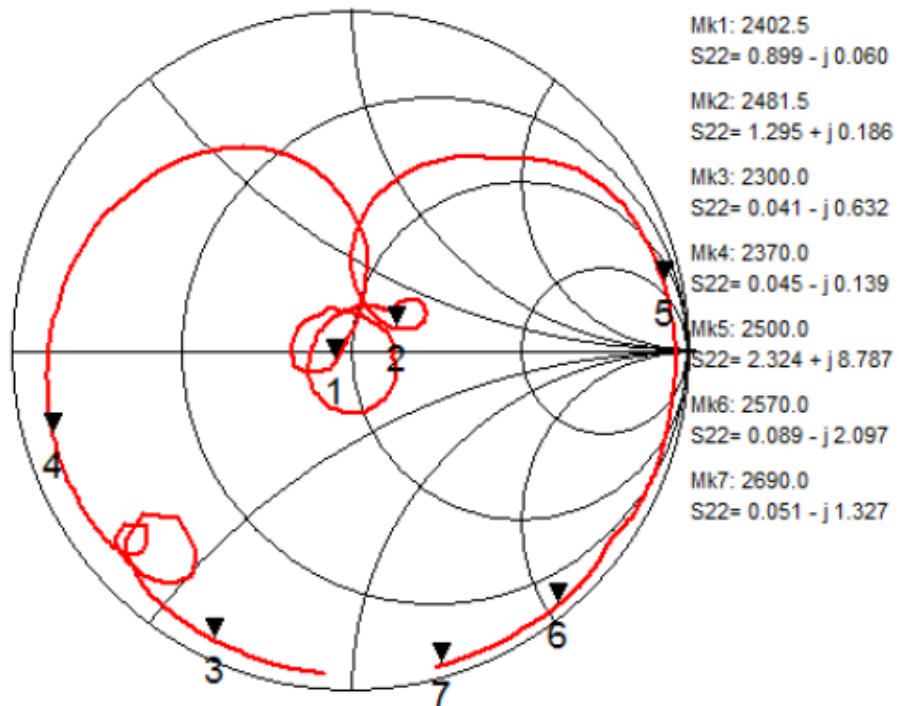


Mk1: 2402.5MHz
VSWR2= 1.131
Mk2: 2481.5MHz
VSWR2= 1.358

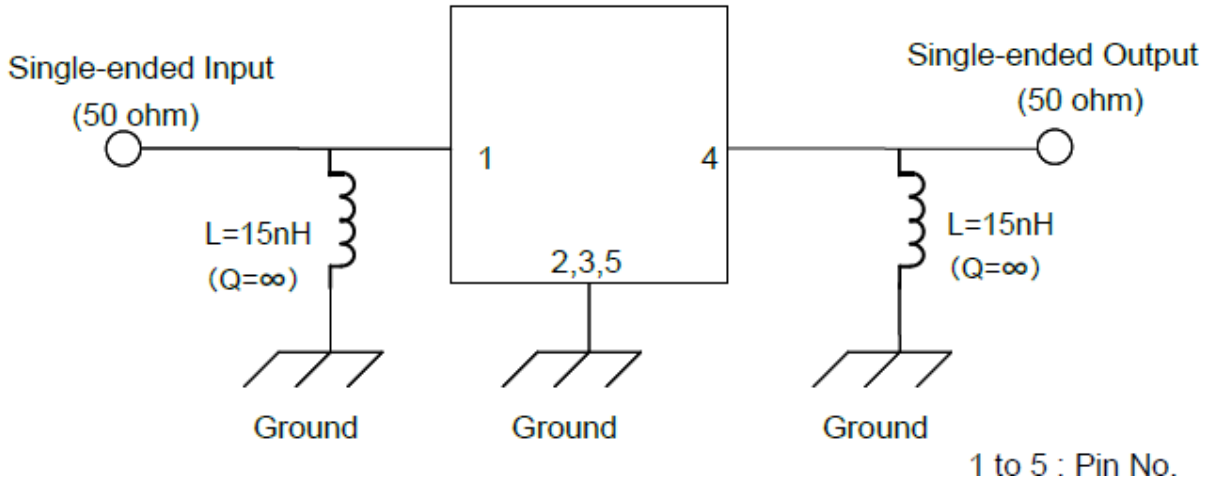
Input Impedance



Output Impedance

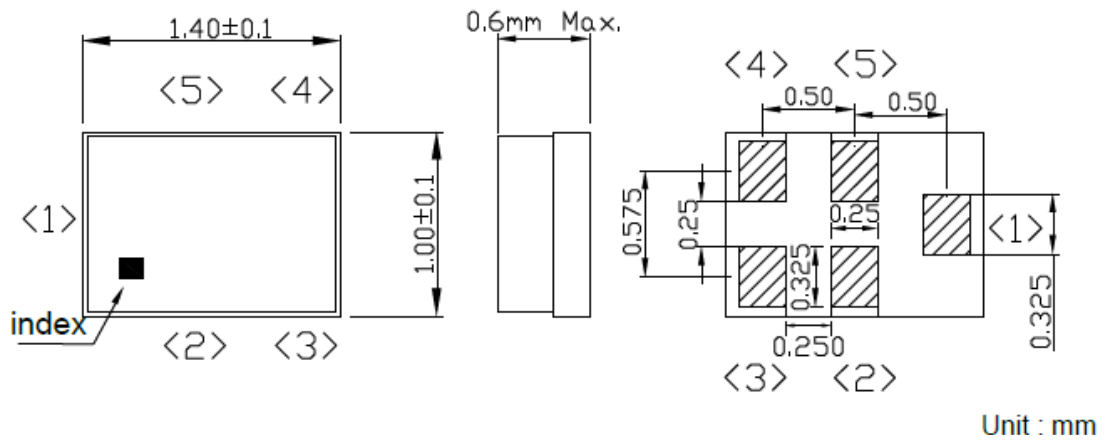


D. MEASUREMENT CIRCUIT:



E. OUTLINE DRAWING:

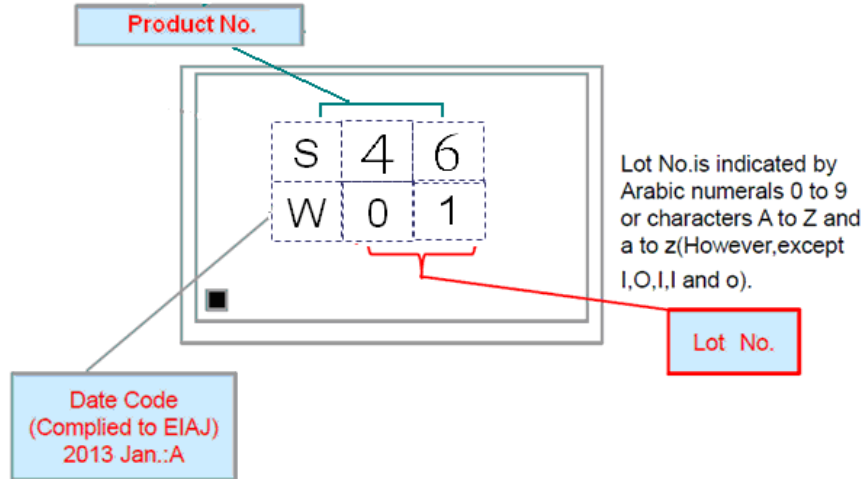
Device size: 1.4typ. x 1.0typ. x 0.6max



Pin Configuration

Pin No.	Symbol	Function
1	IN	Single-ended pin
2	GND	Ground
3	GND	Ground
4	OUT	Single-ended pin
5	GND	Ground

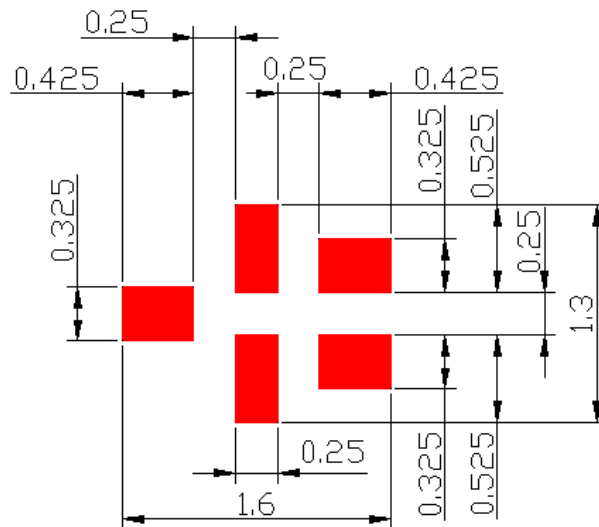
Top View (Pilot Run):



Date Code

Year	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2016	n	p	q	r	s	t	u	v	w	x	y	z
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	∇	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m

F. PCB Footprint:

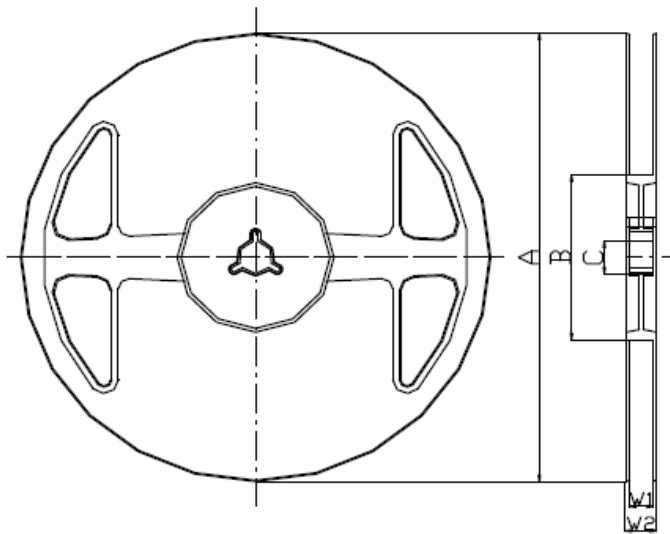


: Land Pattern
Unit : mm

G. PACKING:

1. REEL DIMENSION

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



Materials of Reel

Material : Polystyrene + Carbon

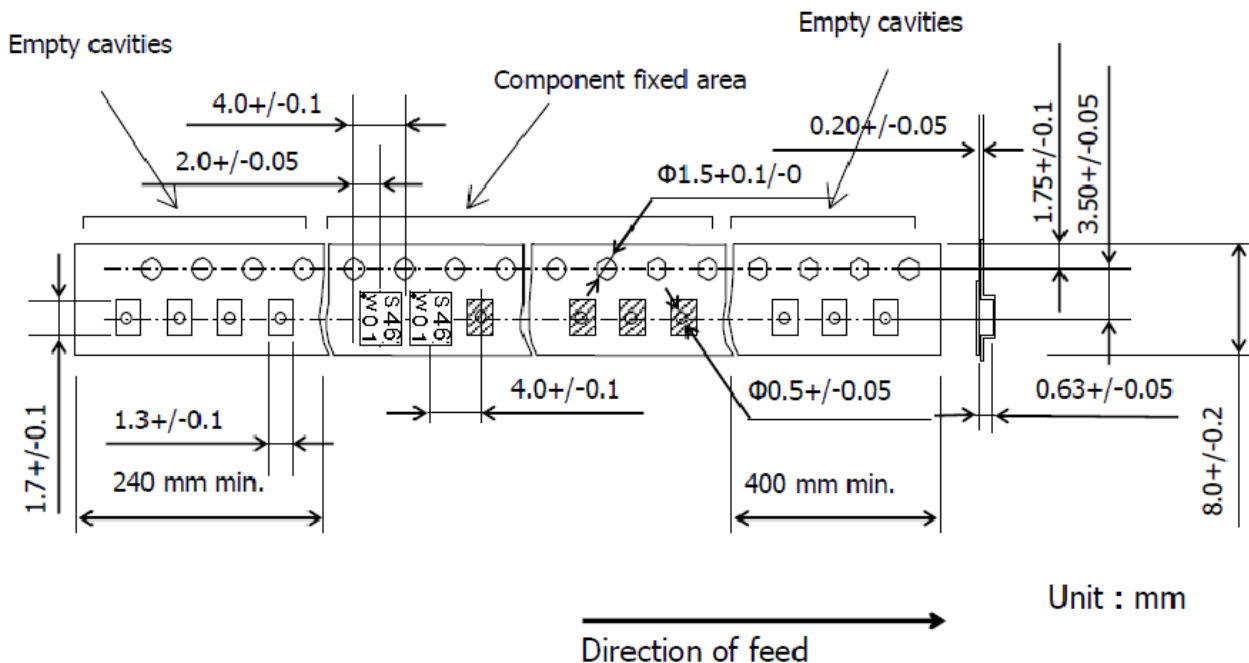
Color : Black

Surface resistance (reference value) : $10^9 \Omega/\text{sq}$ Max.

Unit : mm

Code	Quantity	A	B	C	W1	W2
Z	3,000 pcs	$\phi 180.0 +0.0/-1.5$	$\phi 66.0 +/-0.5$	$\phi 13.0 +/-0.2$	$9.0 +1.0/-0.0$	$11.4 +/-1.0$

2. TAPE DIMENSION



Unit : mm

H. 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 260°C+0/-5°C peak (20~40sec).
4. Time: 2 times.

