



# TAI-SAW TECHNOLOGY CO., LTD.

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

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## Product Specifications Approval Sheet

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

TST Parts No.: TA1869C (This part is compliant with AEC-Q200)

Customer Parts No.: \_\_\_\_\_

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

Checked by: \_\_\_\_\_ Nina Chen *Nina Chen*

Approval by: \_\_\_\_\_ Kazuma Lee *Kazuma Lee*

Date: \_\_\_\_\_ 2022/07/15

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

MODEL NO.:TA1869C

REV.2.0

### A. MAXIMUM RATING:

1. Operating temperature range: -40 °C to +105 °C
2. Storage temperature range: -40 °C to +105 °C
3. Moisture Sensitivity Level: Level 1 (MSL 1)

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-ended)

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

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	1.9	(*2)
	2407.5~2426.5 MHz	dB		0.2	1.7	(*2)
	2412.5~2471.5 MHz	dB		0.5	1.7	(*2)
	2457.5~2476.5 MHz	dB		0.4	1.7	(*2)
	2462.5~2481.5 MHz	dB		0.8	2.5	(*2)
VSWR(Input)	2402.5~2481.5 MHz	-	-	1.61	2.2	+25°C
VSWR(Output)	2402.5~2481.5 MHz	-	-	1.64	2.2	+25°C
Maximum RF Input Power (CW)		dBm	+28			CW, 50°C, 10kh
<b>Attenuation:</b>						
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	-	-30~-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)
2690~7500 MHz		dB	30	37		

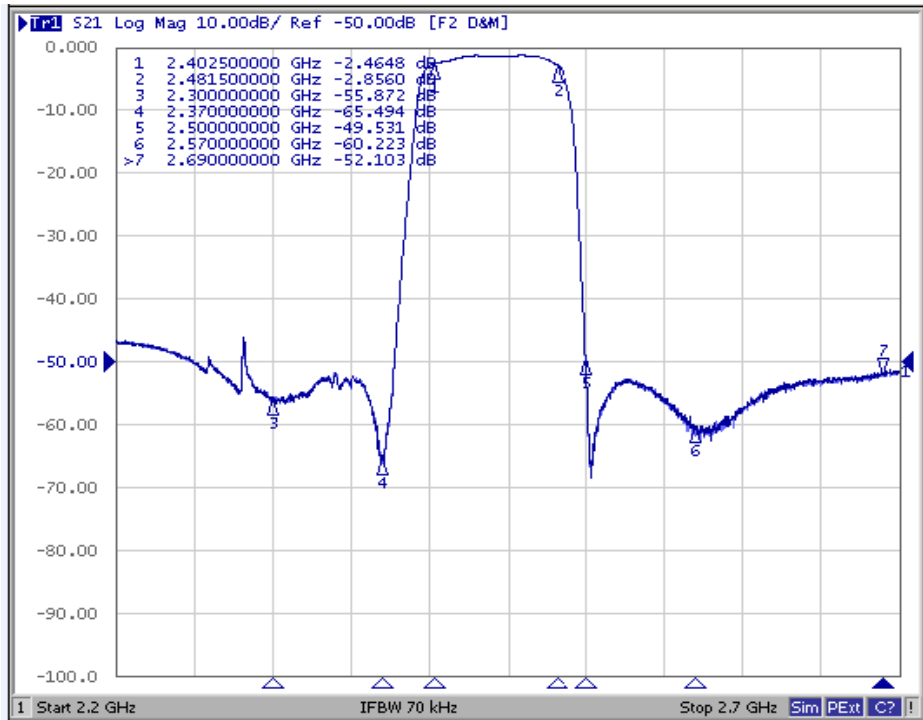
(\*1)Specification of insertion loss excludes loss that comes from the test board.

(\*2)The integrated loss over any 19MHz channel within the band.

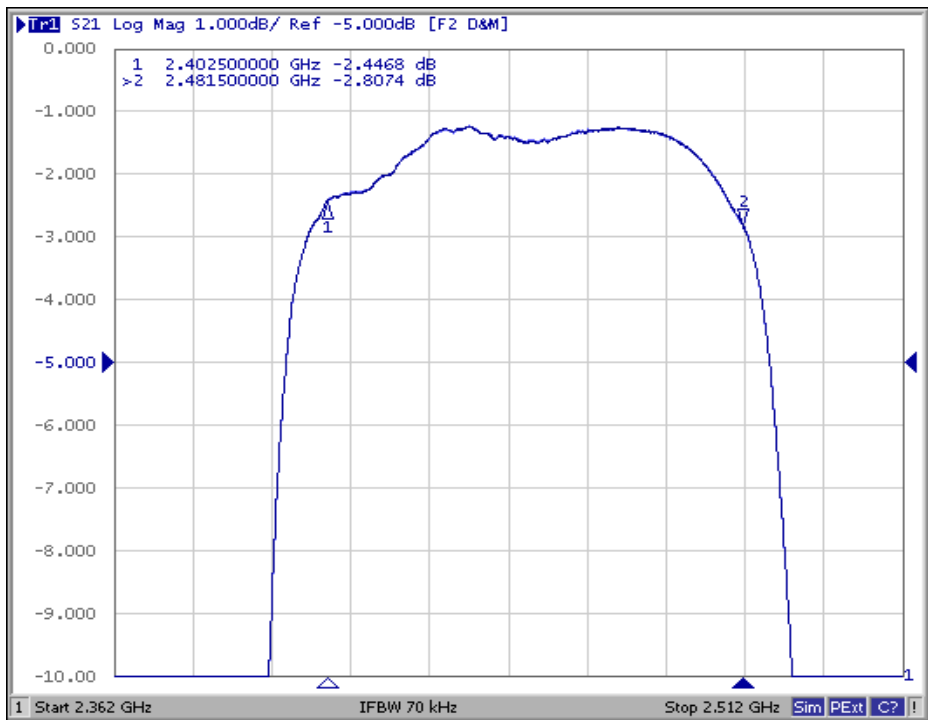
(\*3)The integrated loss over any 5MHz channel within the band.

### C. FREQUENCY CHARACTERISTIC:

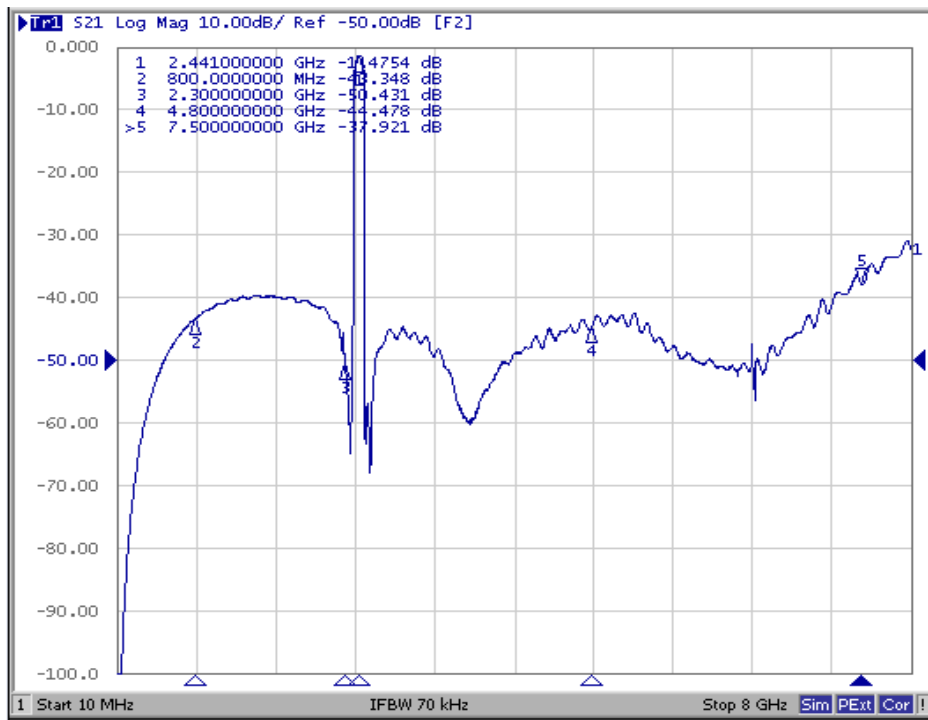
#### Pass-band



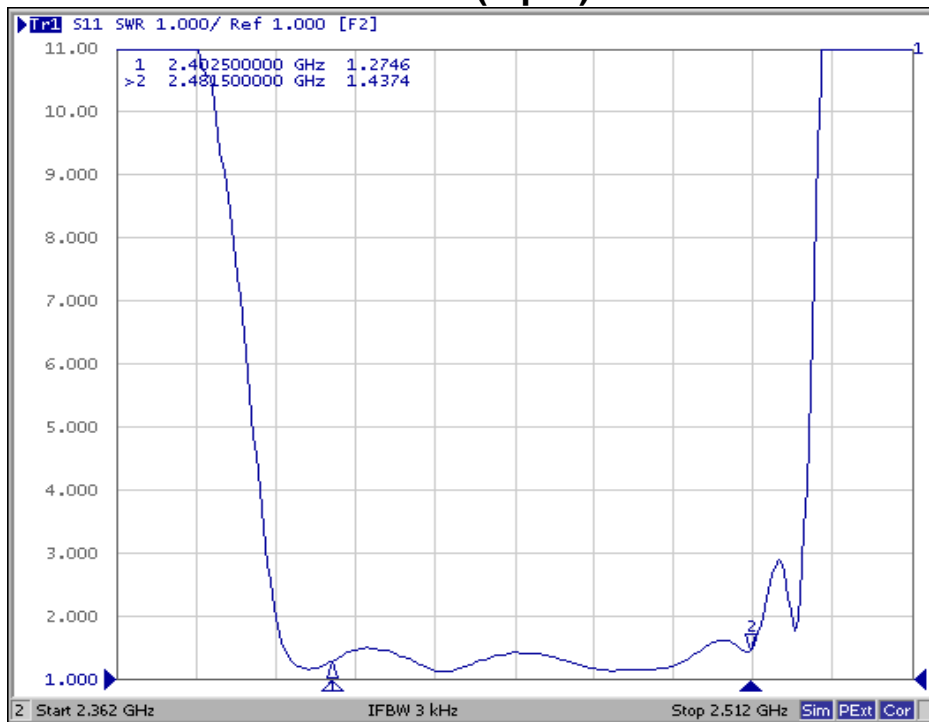
#### In-band



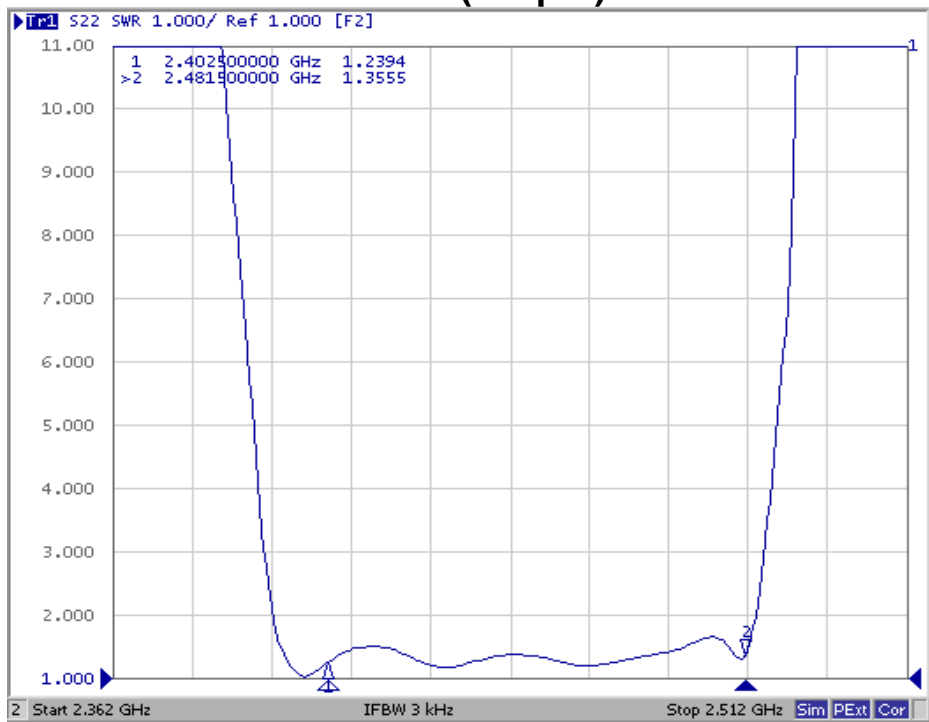
# Wide-band



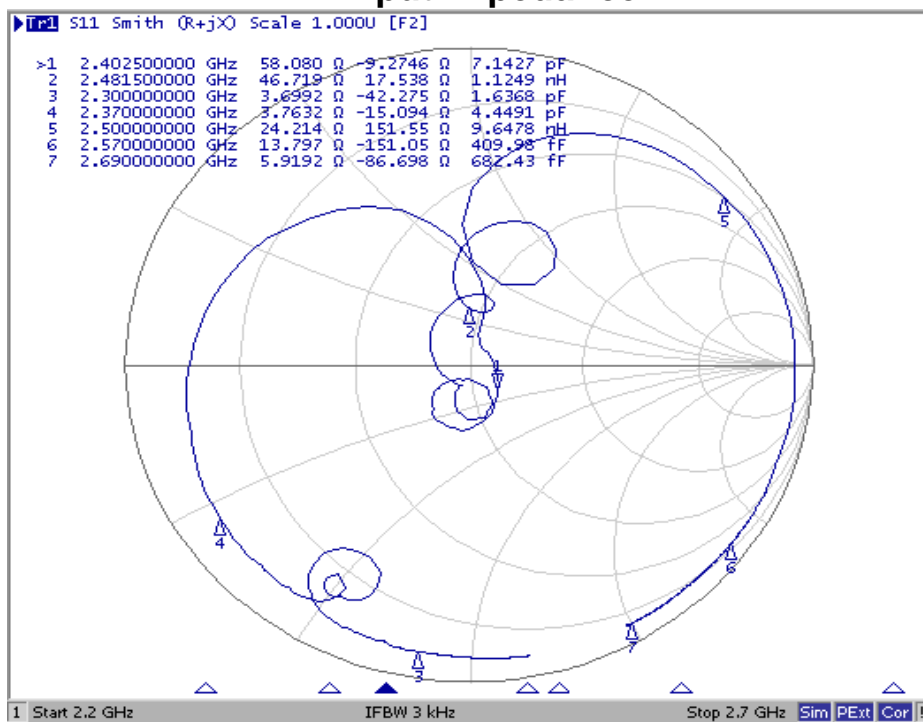
## VSWR (Input)



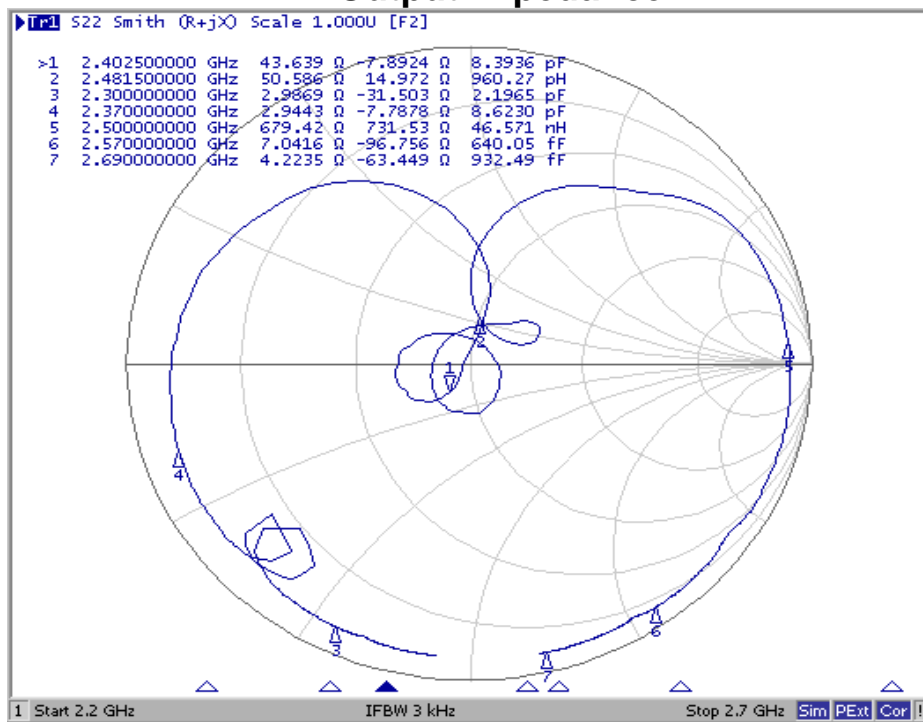
## VSWR (Output)



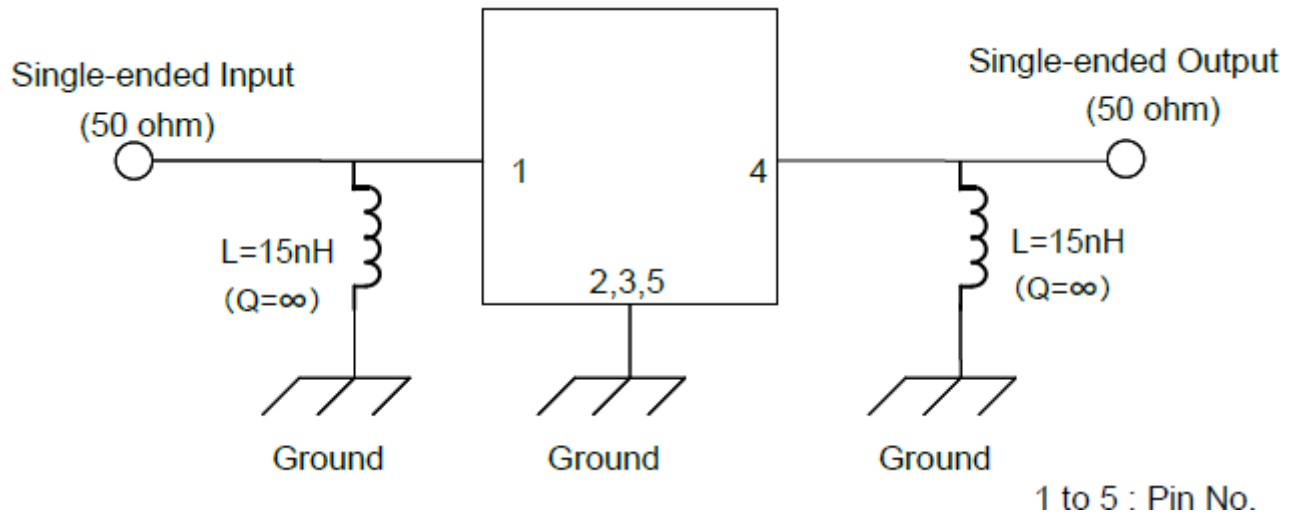
## Input Impedance



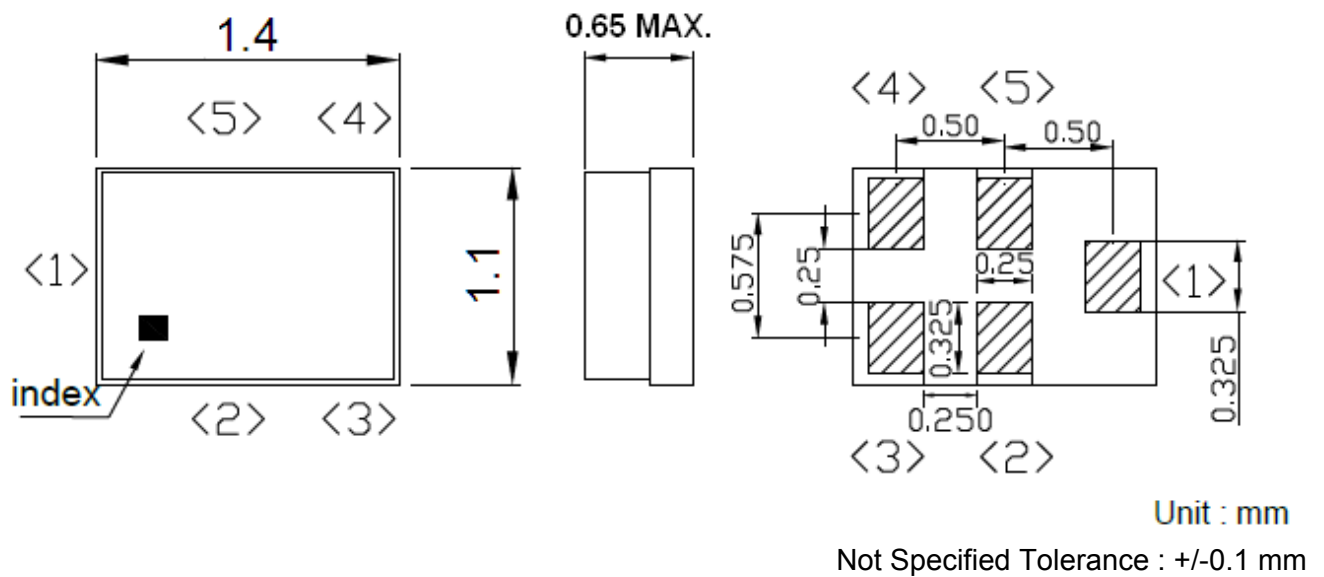
## Output Impedance



**D. MEASUREMENT CIRCUIT:**



**E. OUTLINE DRAWING:**



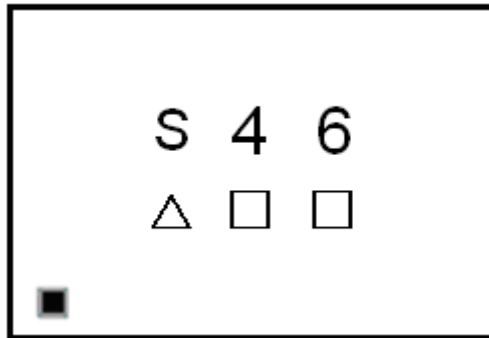
**Pin Configuration**

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 (Sample Production):**



**Top View (Mass Production):**



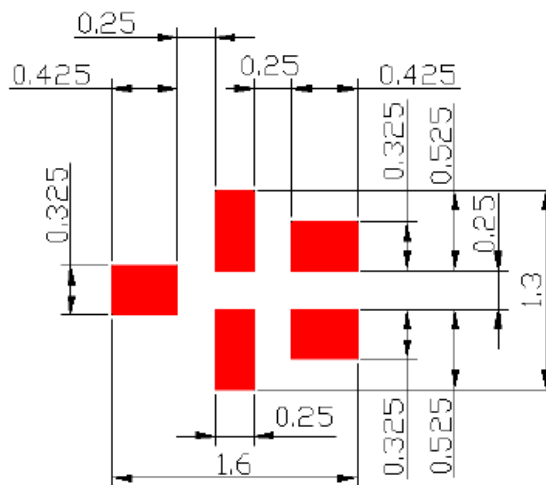
△ : Date Code

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

**Date Code:**

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

**F. PCB Footprint:**

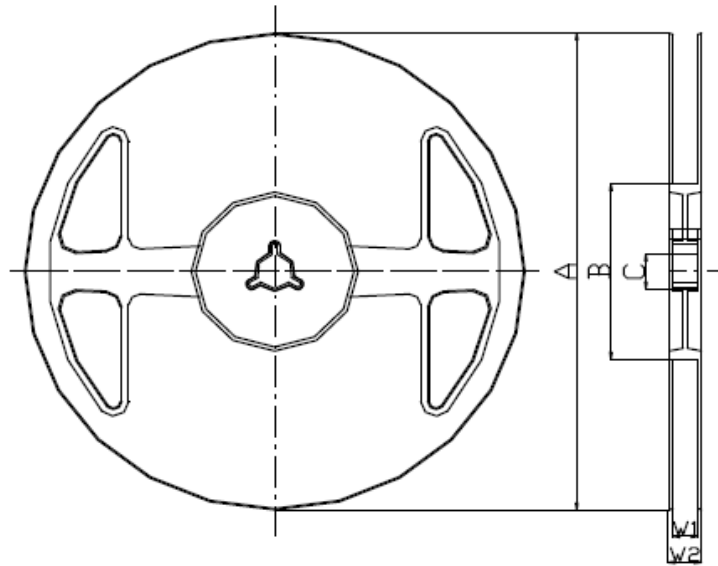


■ : Land Pattern  
Unit : mm



**G. PACKING:**

**1. REEL DIMENSION**



**Materials of Reel**

Material : Polystyrene + Carbon

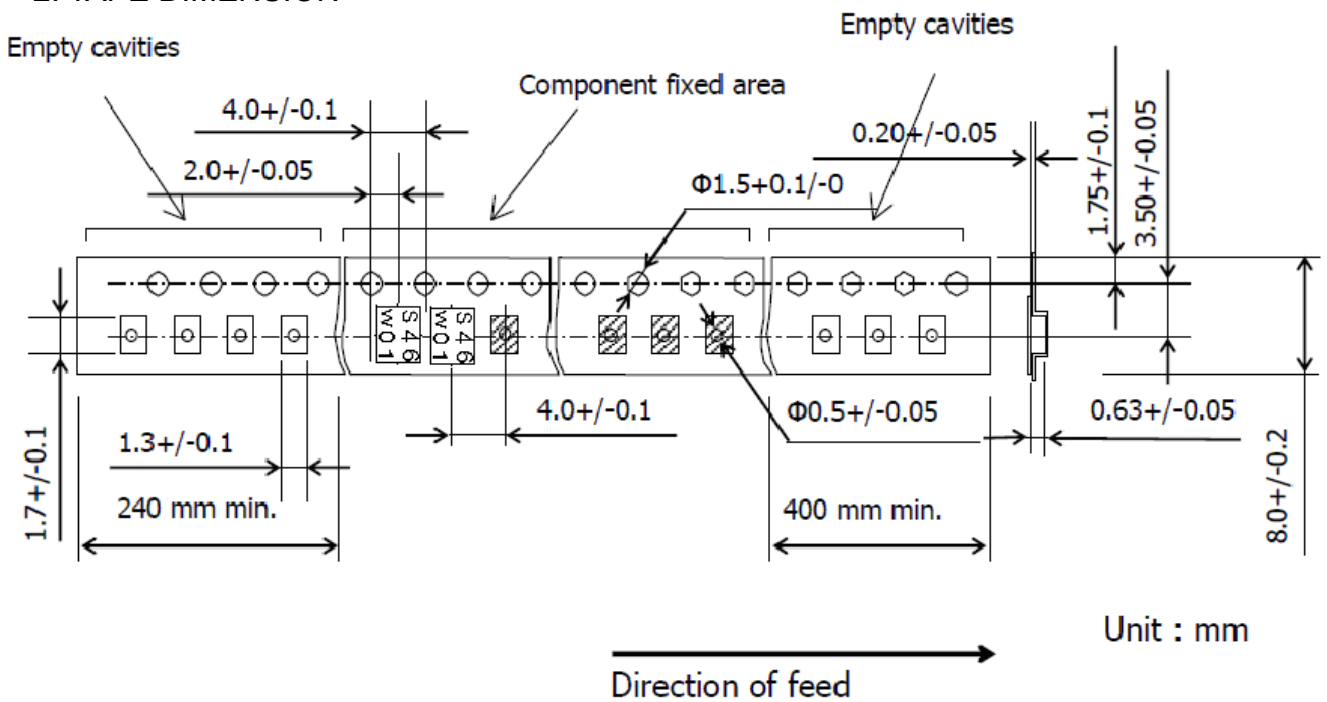
Color : Black

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 TEMPERATURE PROFILE OF REFLOW SOLDERING:

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.

