

**SM1109**

**MAXIMUM RATING**

- Operating temperature range: -40 °C to +85 °C
- Storage temperature range: -55 °C to +125 °C
- Input power : 10dBm
- Maximum DC Voltage: +/-5 V
- Moisture Sensitivity Level: Level 3 (MSL3)
- ESD 100V(MM) 200V(HBM)

**ELECTRICAL CHARACTERISTICS**

Terminating source impedance :  $Z_s = 50 \Omega$

Terminating load impedance :  $Z_L = 50 \Omega$

Parameters Description		Unit	Min	Typ	Max	Remarks
Insertion Loss	746~ 756MHz	dB(*1)	-	1.9	2.5	
Amplitude ripple	746~ 756MHz	dB	-	0.5	2	
VSWR	Input	746~ 756MHz	-	-	1.7	2
	Output	746~ 756MHz	-	-	1.7	2
<b>Attenuation:</b>						
<b>50~ 686 MHz</b>		dB	30	40	-	
<b>777 ~ 787 MHz</b>		dB	44	50	-	
<b>1710 ~ 1755 MHz</b>		dB	40	45	-	
<b>1850 ~ 1910 MHz</b>		dB	38	44	-	
<b>2400 ~ 2500 MHz</b>		dB	35	41	-	
<b>4900 ~ 6000 MHz</b>		dB	25	35	-	
Input impedance		$\Omega$	50			single-ended
Output impedance		$\Omega$	50			single-ended

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



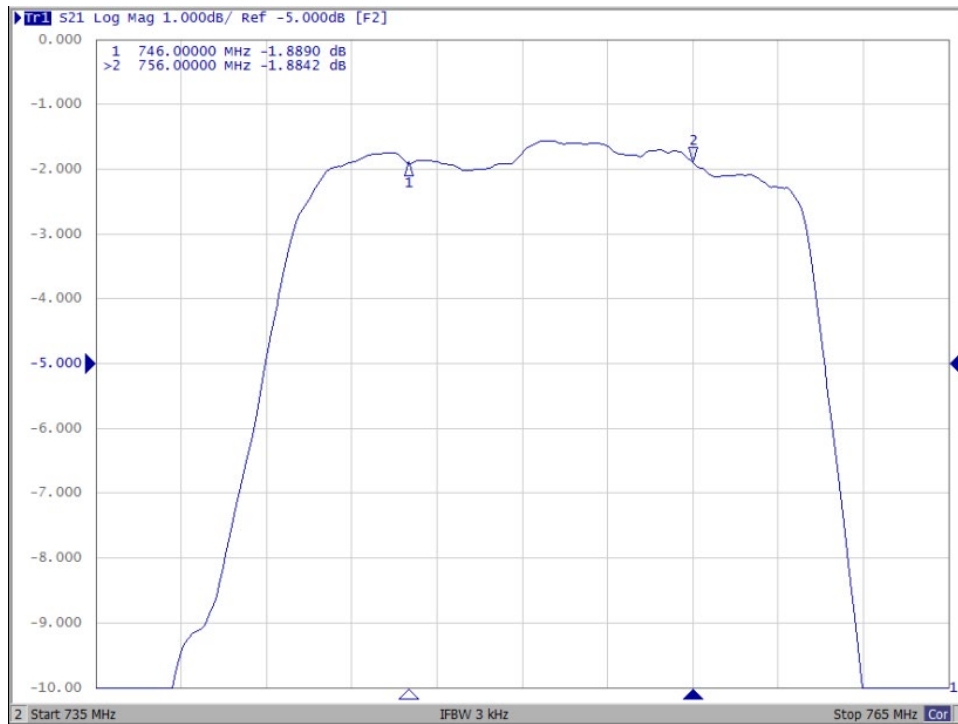
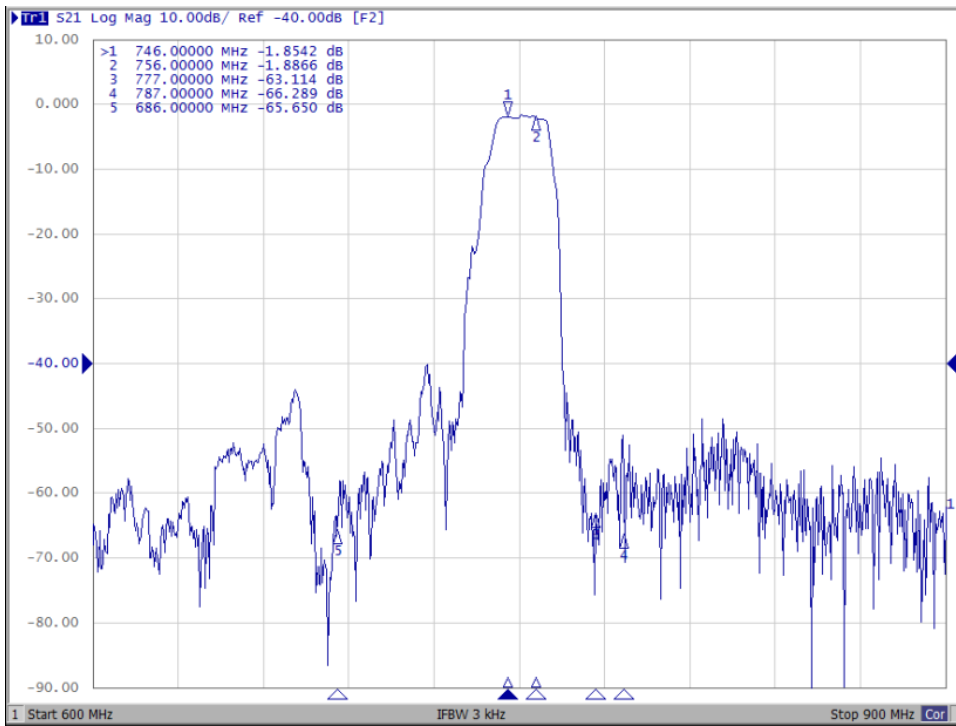
**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

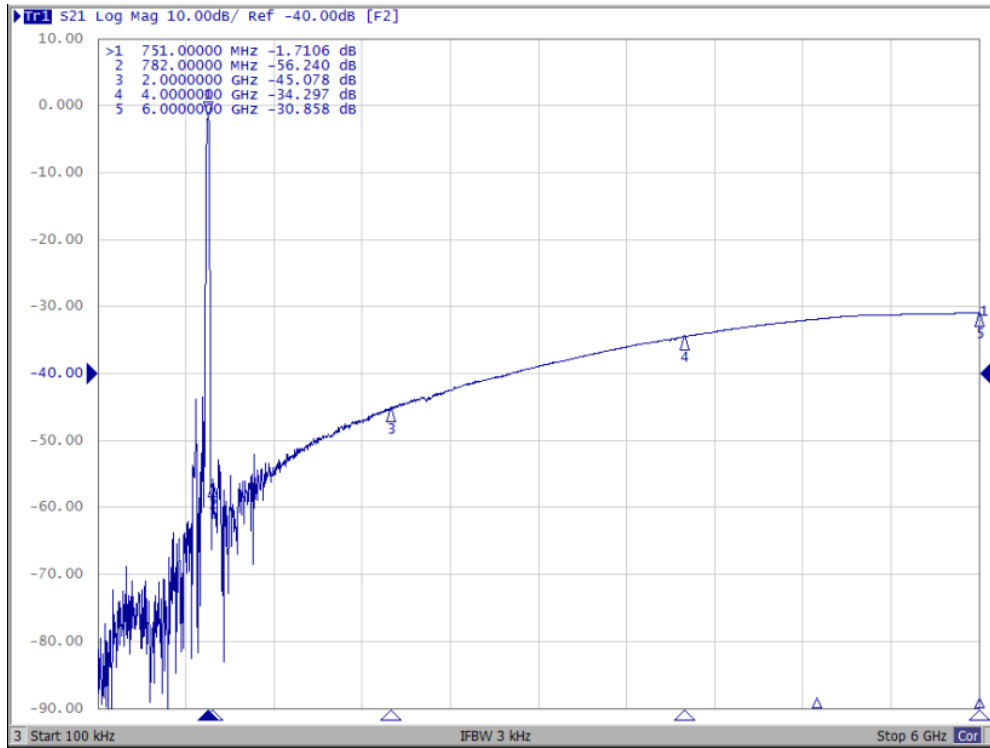
**NOTES:**

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

# FREQUENCY CHARACTERISTICS

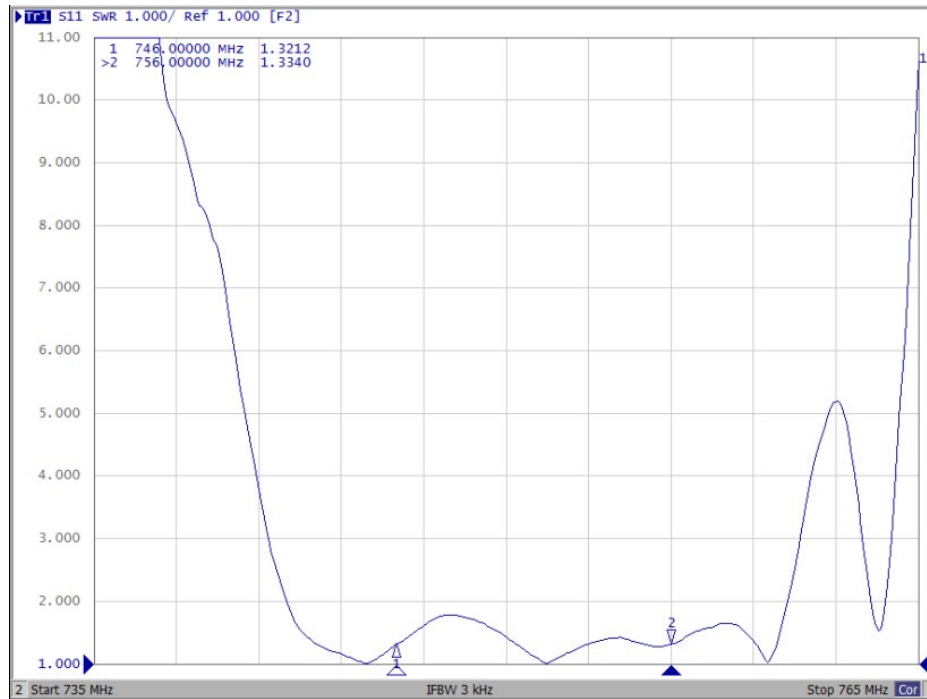
## Passband



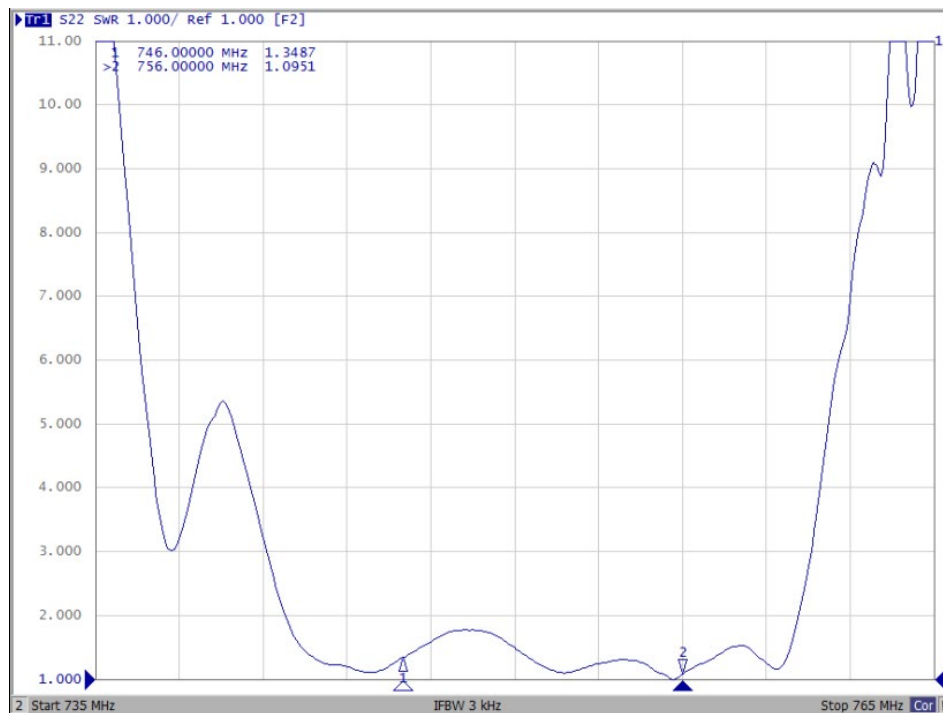


## Reflection Functions :

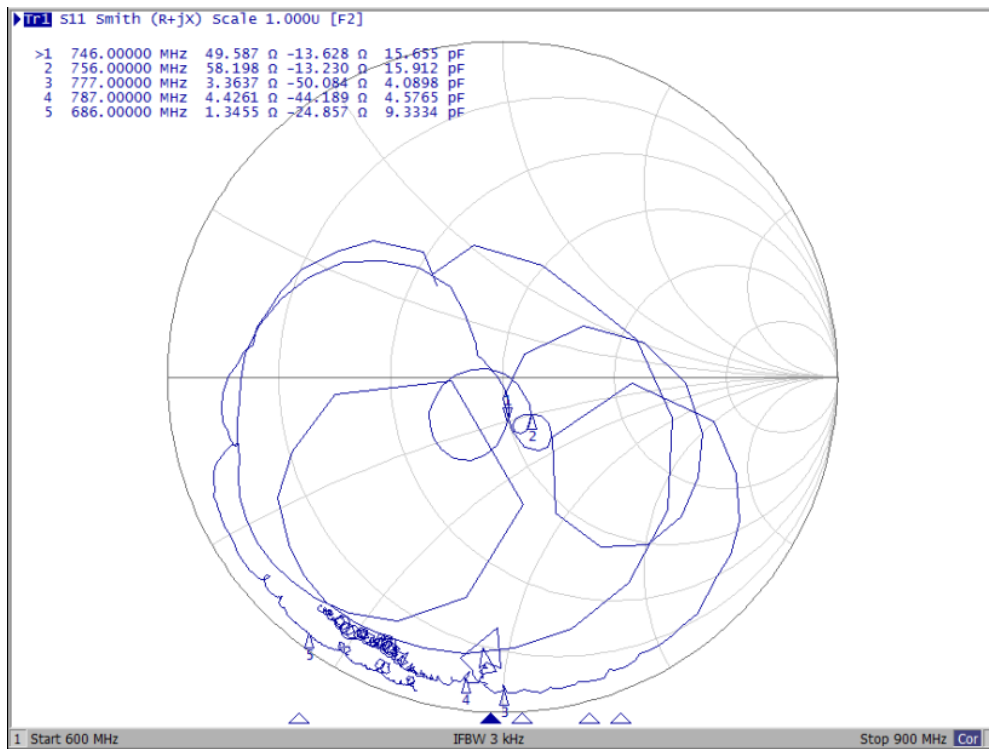
### S11 VSWR



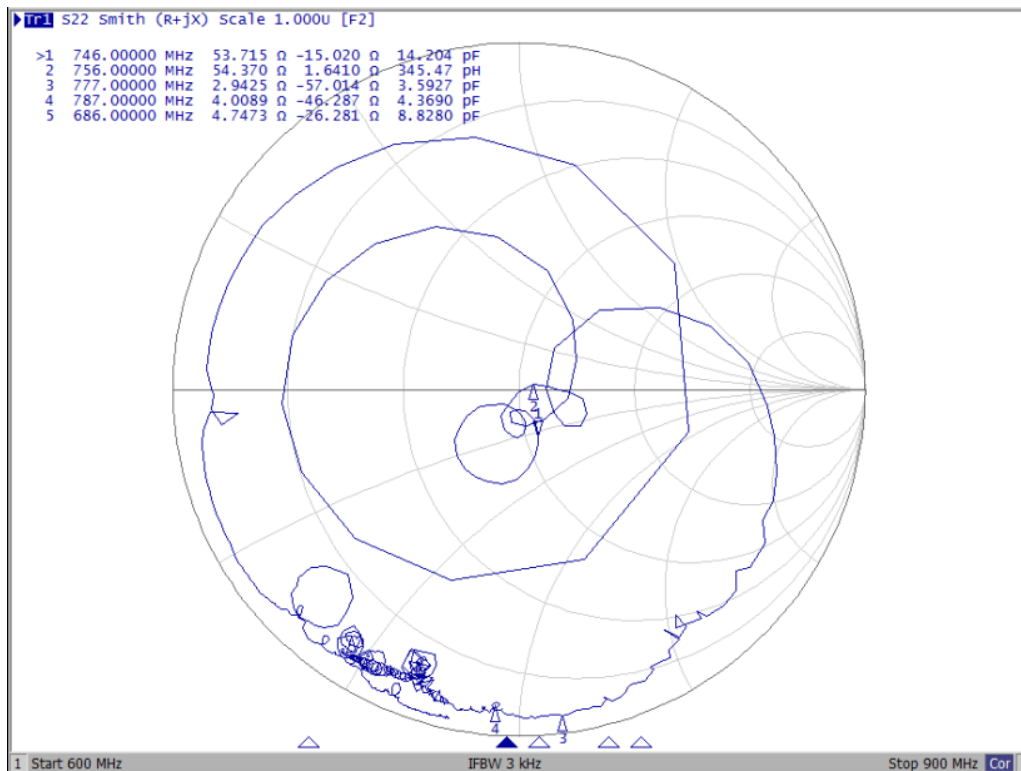
### S22 VSWR



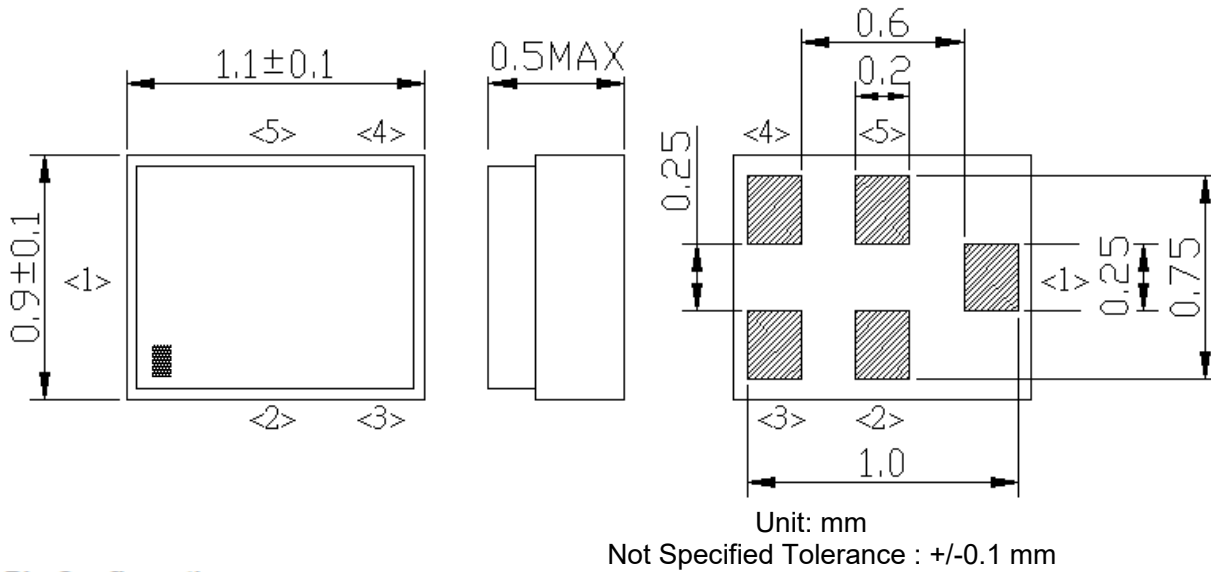
## S11 Smith Chart



## S22 Smith Chart



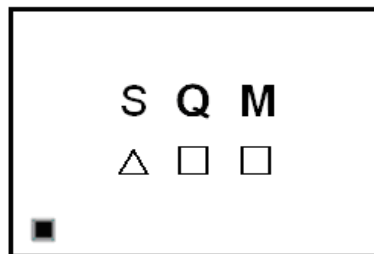
## OUTLINE DRAWING



### 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



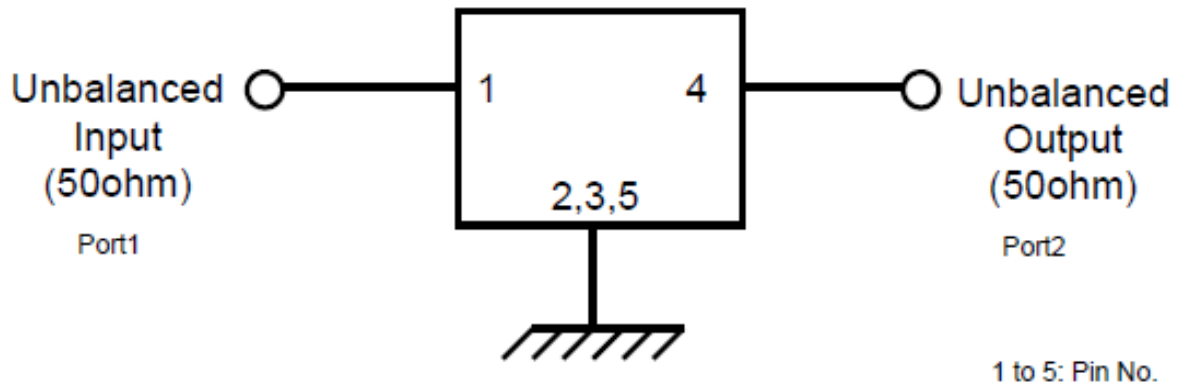
△ : Date Code

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

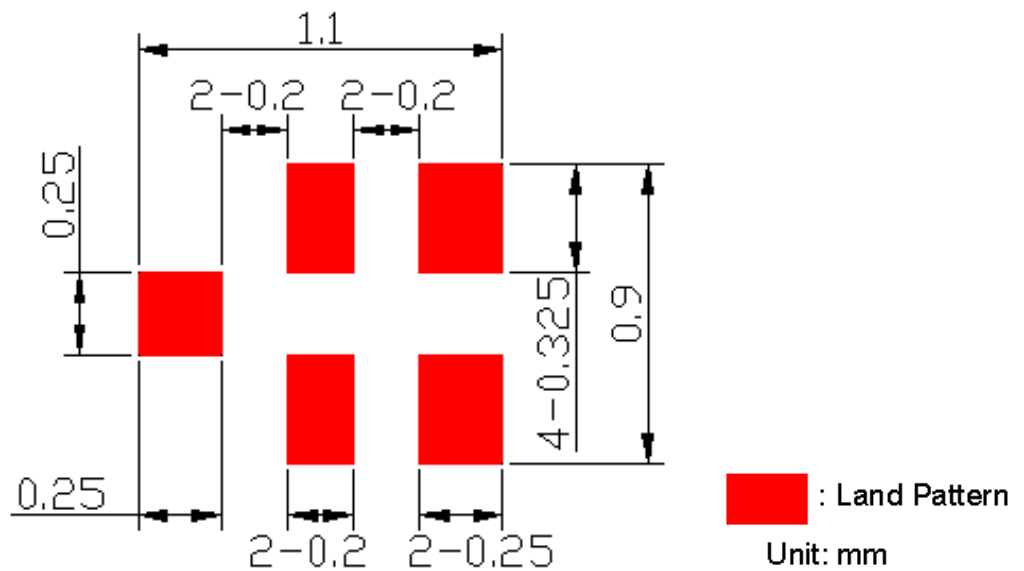
#### Date Code: Follow below table (4 year cycle)

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

## MEASUREMENT CIRCUIT



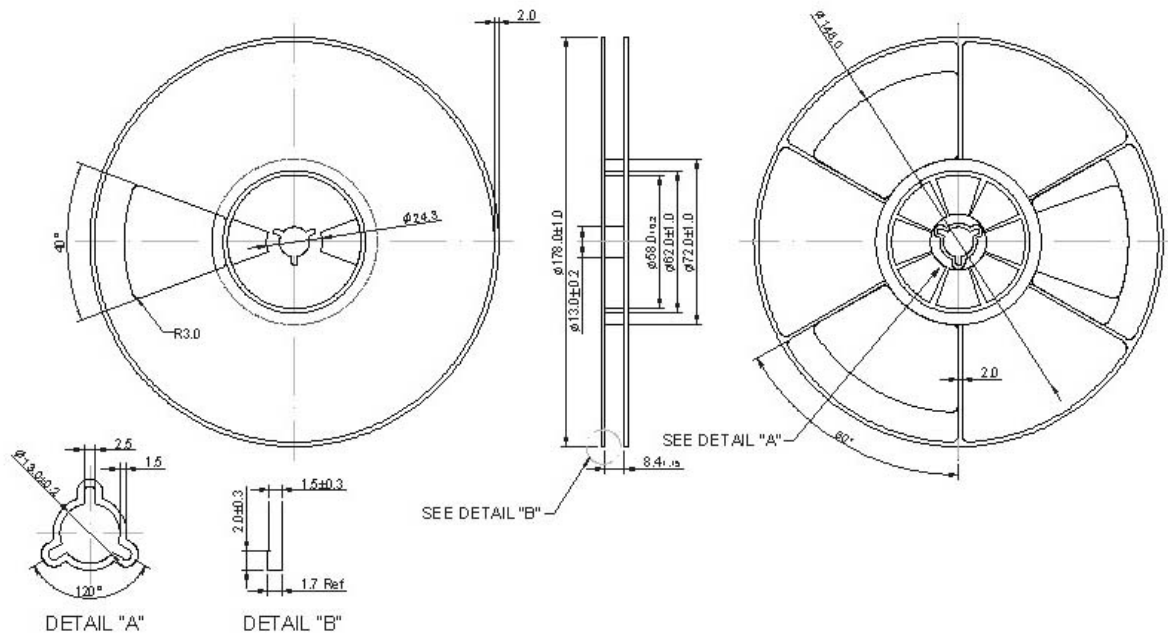
## FOOTPRINT



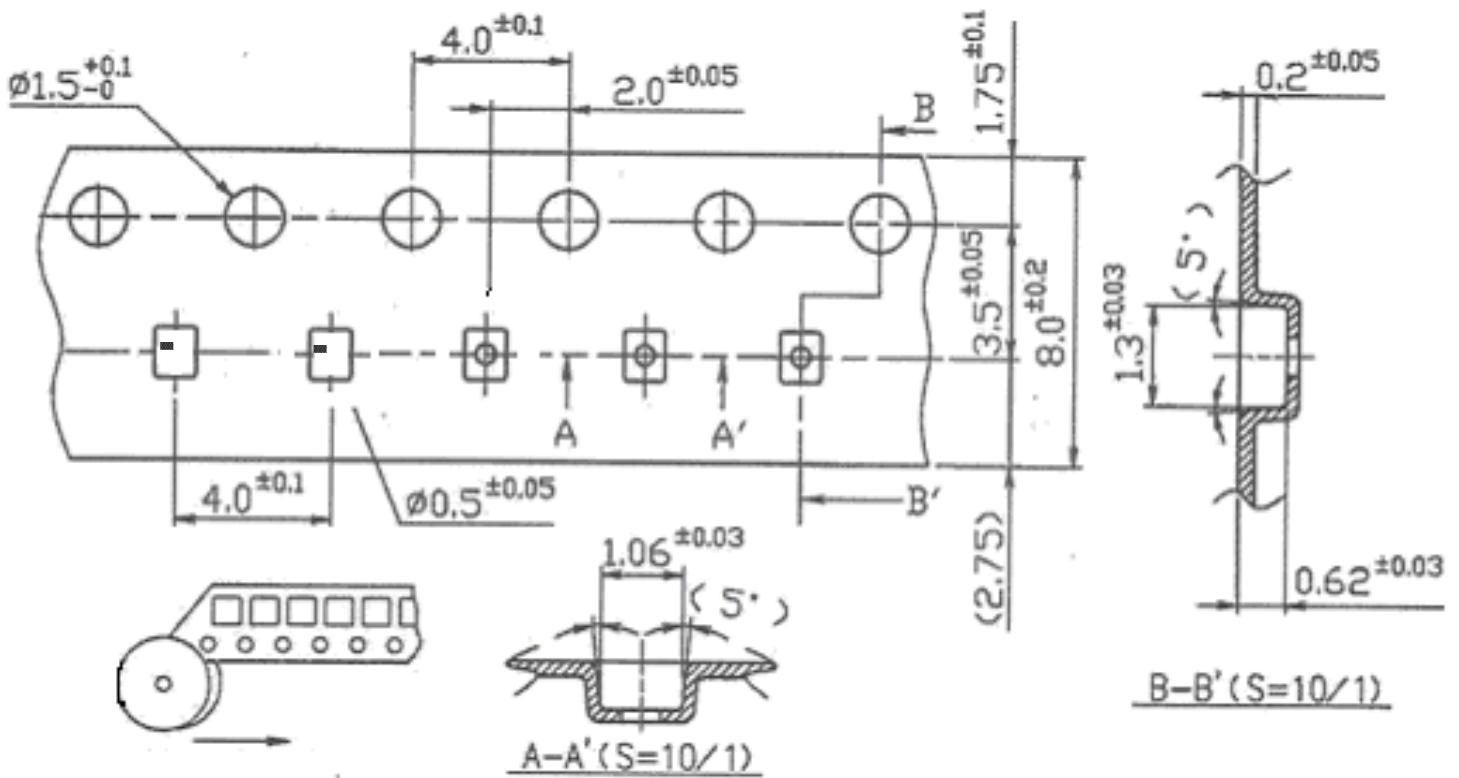
**PACKING**

Reel Count  
 7" = 3000  
 13" = 10,000

**REEL DIMENSION**



**TAPE DIMENSION**





## 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 245~260°C peak (min. 10sec).
4. Time : 2 times.

