



# 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 Description: SAW Rx Filter 1842.5MHz LTE Band 3 SMD 1109

TST Part No.: TA1843C

Customer Part No.: \_\_\_\_\_

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

Checked by: \_\_\_\_\_ Hayley Chou *Hayley Chou*

Approved by: \_\_\_\_\_ Andy Yu *Andy Yu*

Date: \_\_\_\_\_ 2017, 04. 05

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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## SAW Rx Filter 1842.5MHz LTE Band 3 SMD 1109 (75MHz BW)

MODEL NO.: TA1843C

REV. NO.:2

### A. MAXIMUM RATING:

1. Operating temperature range: -20 °C to +85 °C
2. Storage temperature range: -40 °C to +100 °C
3. Maximum Input Power: +10 dBm
4. Maximum DC Voltage: +/-5 V
5. Moisture Sensitivity Level: Level 1
6. ESD 50V(MM) 100V(HBM)

RoHS Compliant  
Lead free  
Lead-free soldering

Electrostatic Sensitive Device (ESD)

### B. ELECTRICAL CHARACTERISTICS:

Terminating source impedance:  $Z_s = 50//33nH \Omega$  (Single-ended)

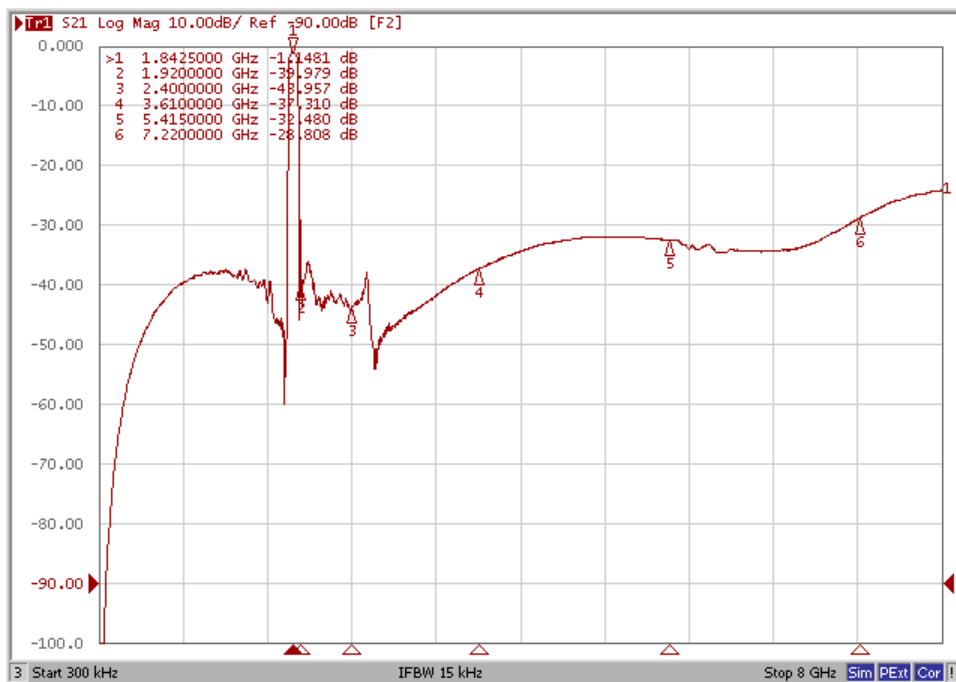
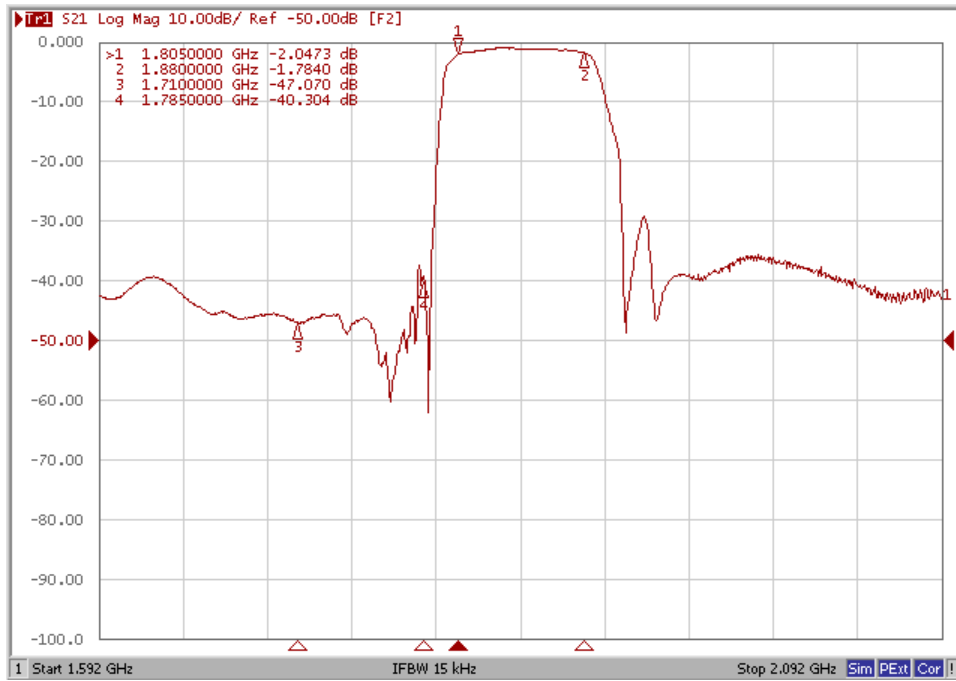
Terminating load impedance:  $Z_L = 50//12nH \Omega$  (Single-ended)

Parameters Description		Unit	Min.	Typ.	Max.	
Center Frequency		MHz	-	1842.5	-	
Insertion Loss(*1)	1805~1880 MHz	dB	-	2.0	4.0	
Amplitude Ripple	1805~1880 MHz	dB	-	-	3.3	
VSWR	Input	1805~1880 MHz	-	-	1.9	2.3
	Output	1805~1880 MHz	-	-	1.8	2.2
<b>Attenuation:</b>						
<b>DC~960 MHz</b>		dB	34	37	-	
<b>1558~1608 MHz</b>		dB	35	41	-	
<b>1710~1785 MHz</b>		dB	34	38	-	
<b>1920~2400 MHz</b>		dB	25	35	-	
<b>2400~2500 MHz</b>		dB	33	44	-	
<b>2500~3610 MHz</b>		dB	25	36	-	
<b>3610~3760 MHz</b>		dB	25	36	-	
<b>3760~5415 MHz</b>		dB	20	29	-	
<b>5415~5640 MHz</b>		dB	20	29	-	
<b>5640~7220 MHz</b>		dB	18	24	-	
<b>7220~7520 MHz</b>		dB	16	24	-	
<b>7520~8000 MHz</b>		dB	14	22	-	

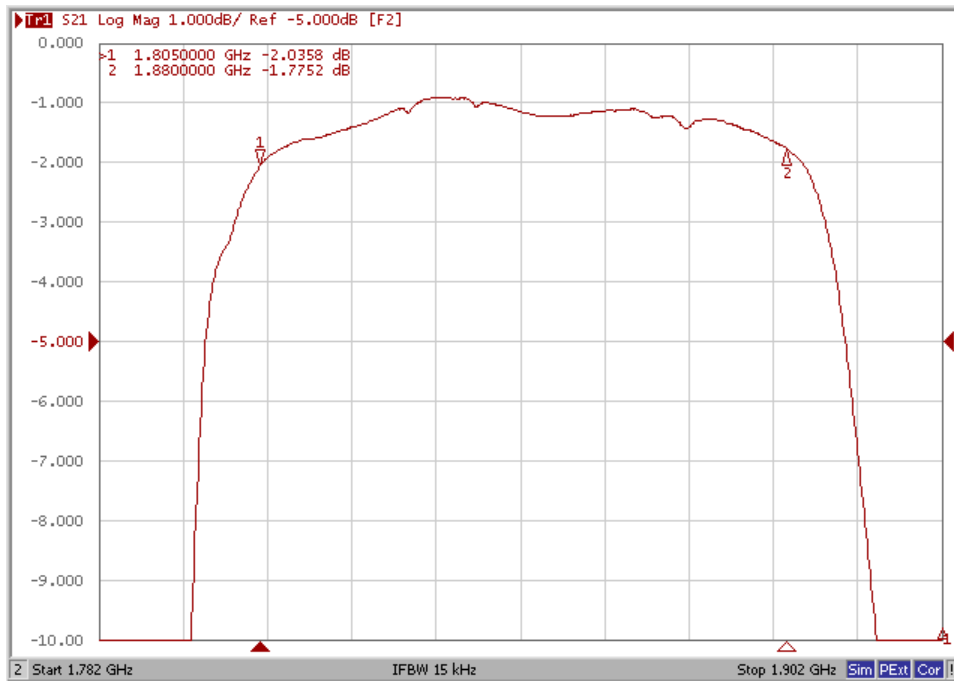
(\*1) Specification of insertion loss excludes loss that comes from the test board.

### C. FREQUENCY CHARACTERISTICS:

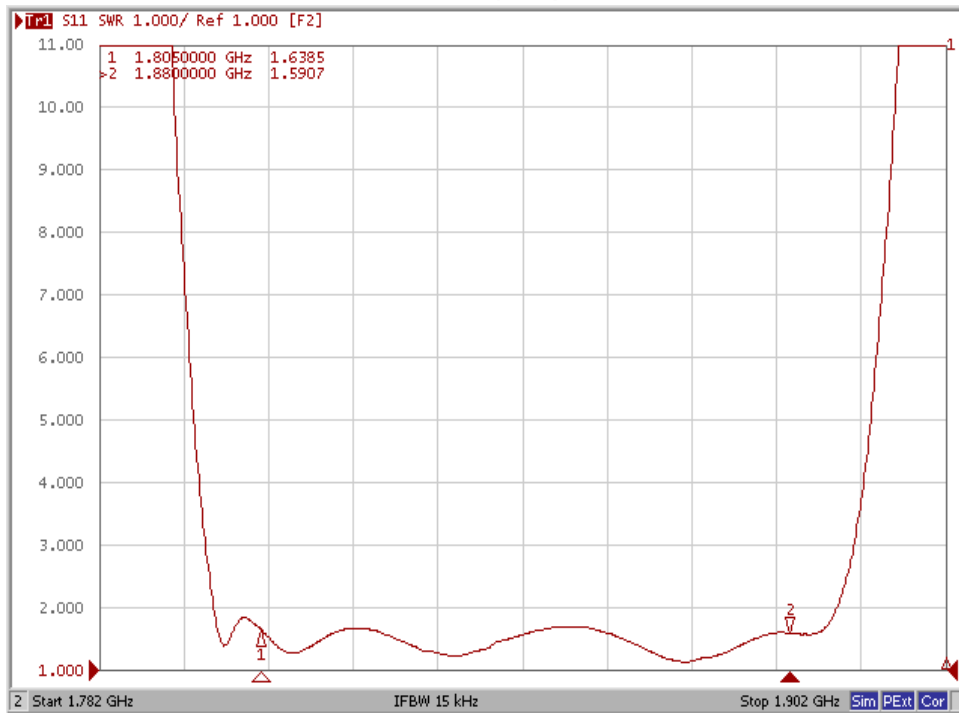
Frequency Response



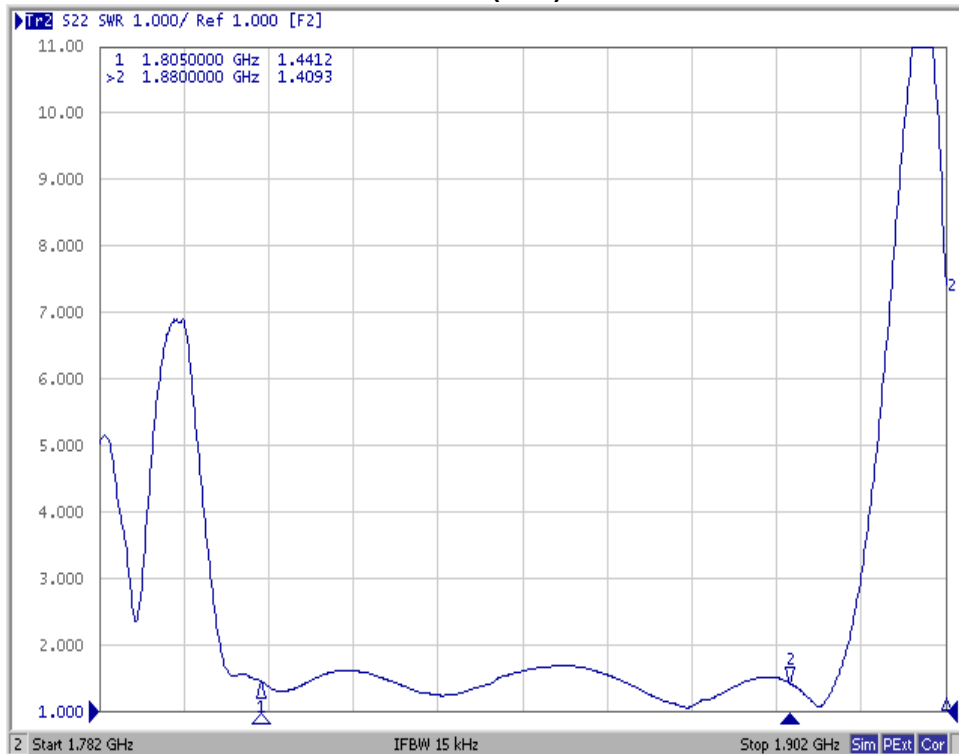
# Ripple



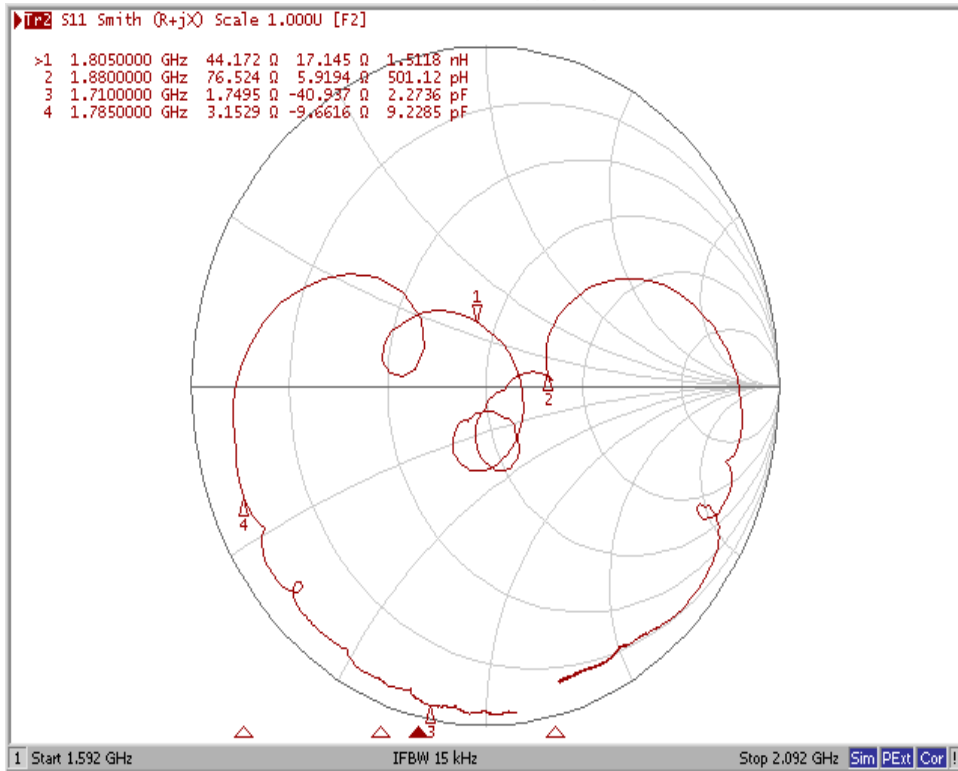
### VSWR (S11)



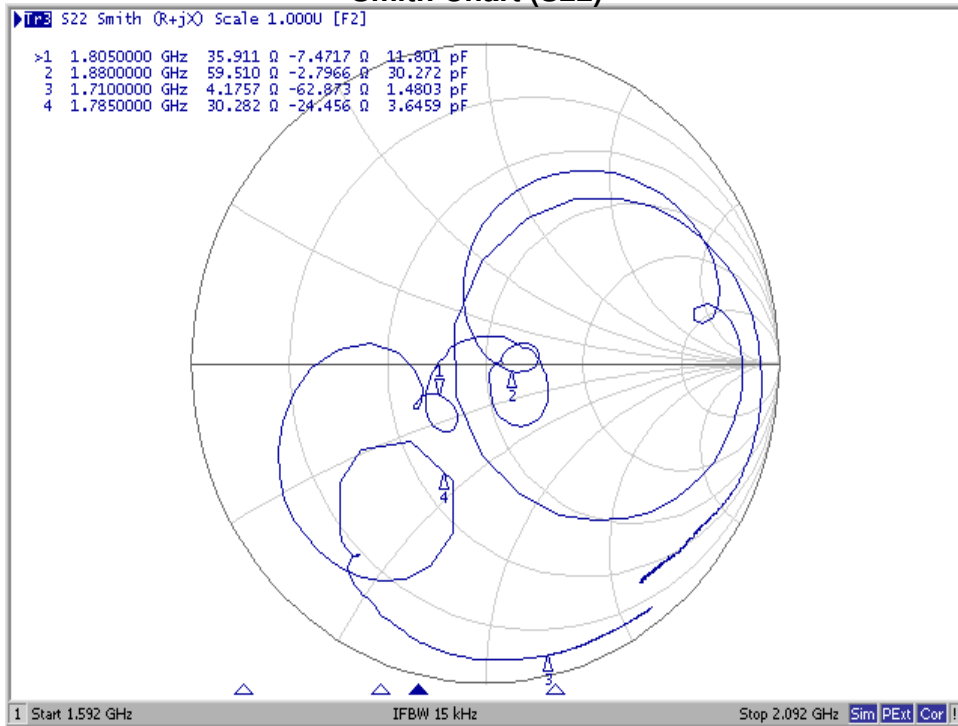
### VSWR (S22)



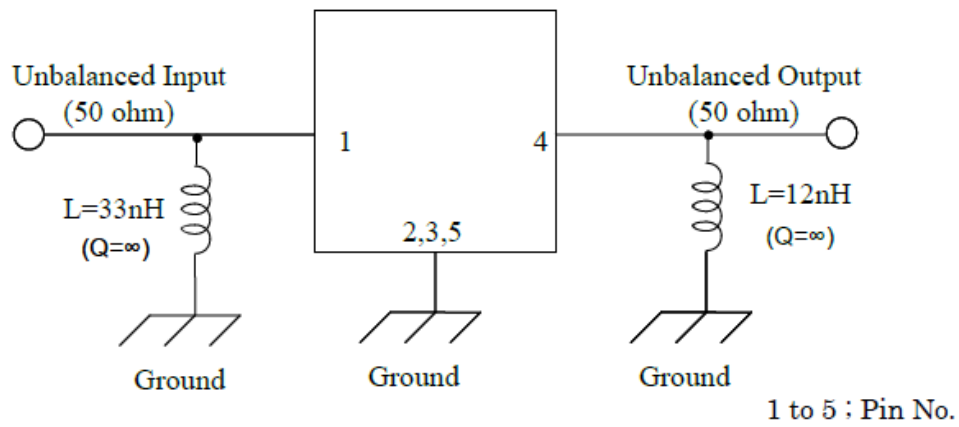
### Smith Chart (S11)



### Smith Chart (S22)

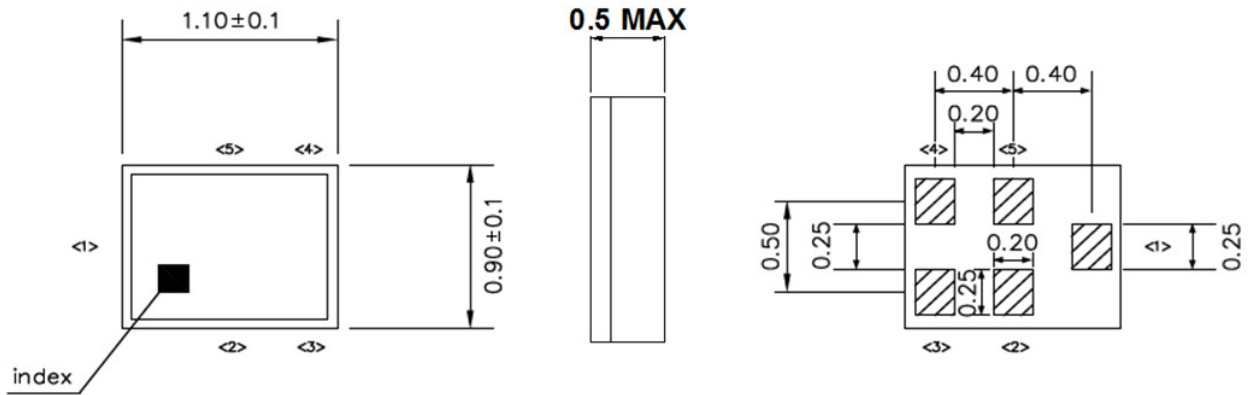


**D. MEASUREMENT CIRCUIT:**



**E. OUTLINE DRAWING:**

Device size: 1.1typ. x 0.9typ. x 0.5max.

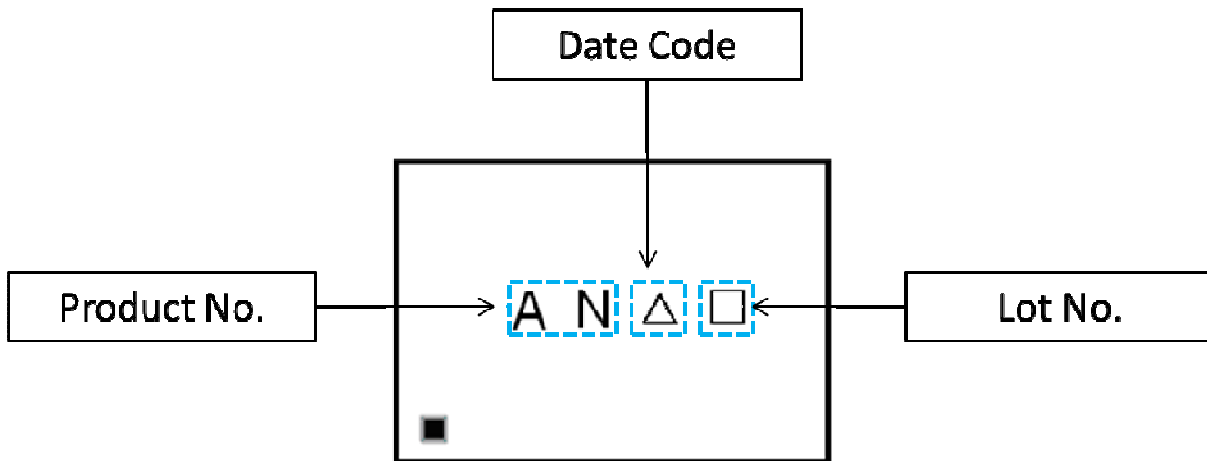


Unit : mm

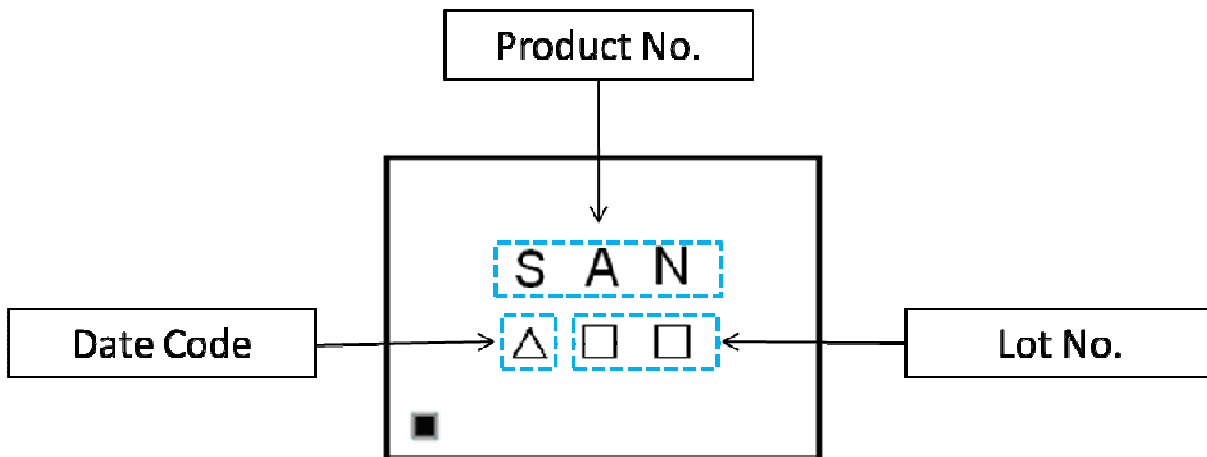
**Pin Configuration**

Pin No.	Symbol	Function
1	IN	Unbalanced pin
2	GND	Ground
3	GND	Ground
4	OUT	Unbalanced pin
5	GND	Ground

**Top View (Sample Production):**



**Top View (Mass Production):**



△ : Date Code

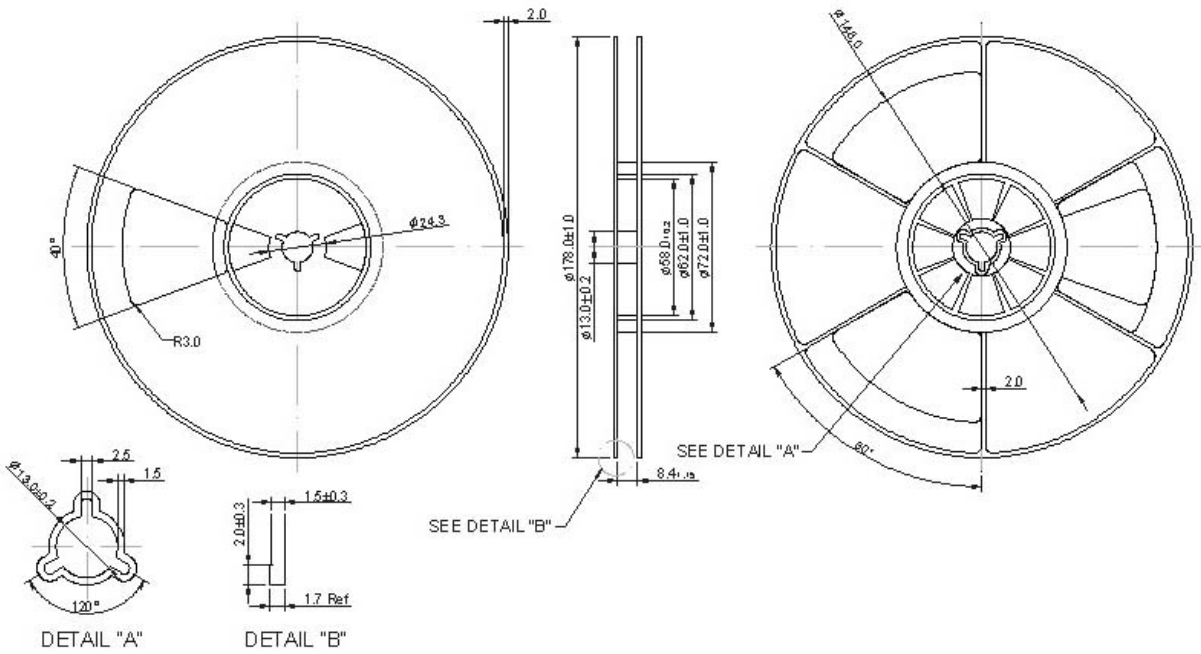
□ : Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

**Product date Code (EIAJ)**

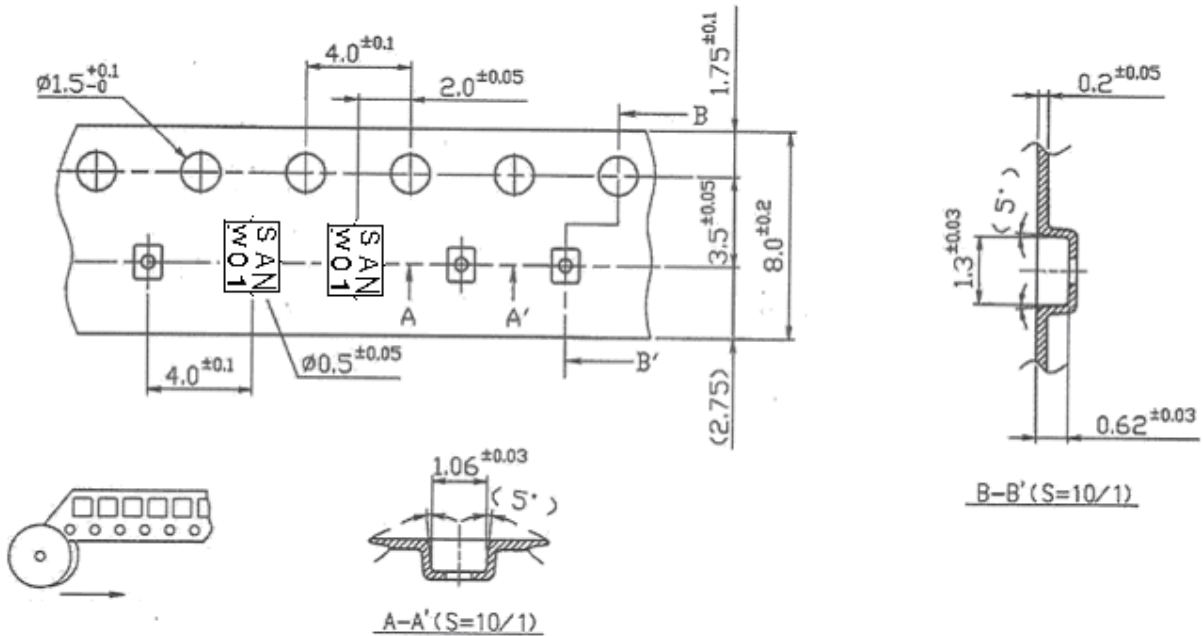
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	a	b	c	d	e	f	g	h	j	k	l	m
2016	n	p	q	r	s	t	u	v	w	x	y	z
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z



**F. PACKING:**  
**1. REEL DIMENSION**

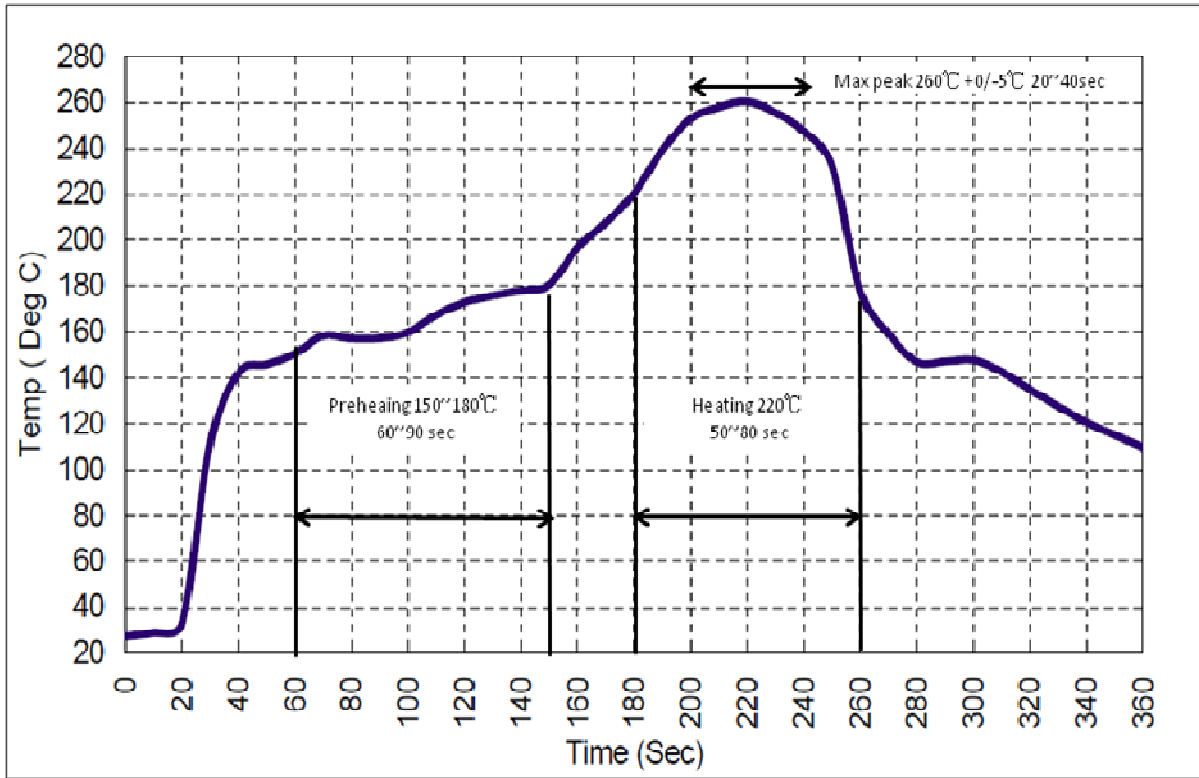


**2. TAPE DIMENSION**



### G. 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.



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[DC0710J5005AHF](#) [DC2327J5005AHF](#) [43020](#) [LFB2H2G60BB1C106](#) [LFL15869MTC1B787](#) [X3C19F1-20S](#) [XC3500P-20S](#) [10013-20](#)  
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[B0922J7575AHF](#) [10017-3](#) [TP-103-PIN](#) [BD1222J50200AHF](#) [BD1722J50100AHF](#) [2450DP39K5400E](#) [BD0810J50150AHF](#)