TAI-SAW TECHNOLOGY CO., LTD.
No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
Taoyuan, 324, Taiwan, R.O.C.
TEL: 886-3-4690038 FAX: 886-3-4697532
E-mail: tstsales@mail.taisaw.com Web: www.taisaw.com

Product Specifications Approval Sheet

Product Description: 480MHz 3.9MHz BW SMD 7.0 x 5.0 mm SAW IF Filter

TST Parts No.: TB1353A

Customer Parts No.:_____

Customer signature required

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by: Kazuma Lee Kazuma Lee

Approval by: Andy Yu Andy Yu

Date: 12 / 02 / 2019

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 Filter 480MHz 3.9MHz BW (SMD 7.0×5.0 mm)
MODEL NO.: TB1353A REV. NO.1

A. MAXIMUM RATING:

1. Operating temperature range: -40℃ to 85℃
2. Storage temperature range: -40℃ to 85℃
3. Input Power Level : 10 dBm
4. Maximum DC Voltage : 10V
5. Moisture Sensitivity Level: Level1 (MSL1)

RoHS Compliant
Lead-free soldering

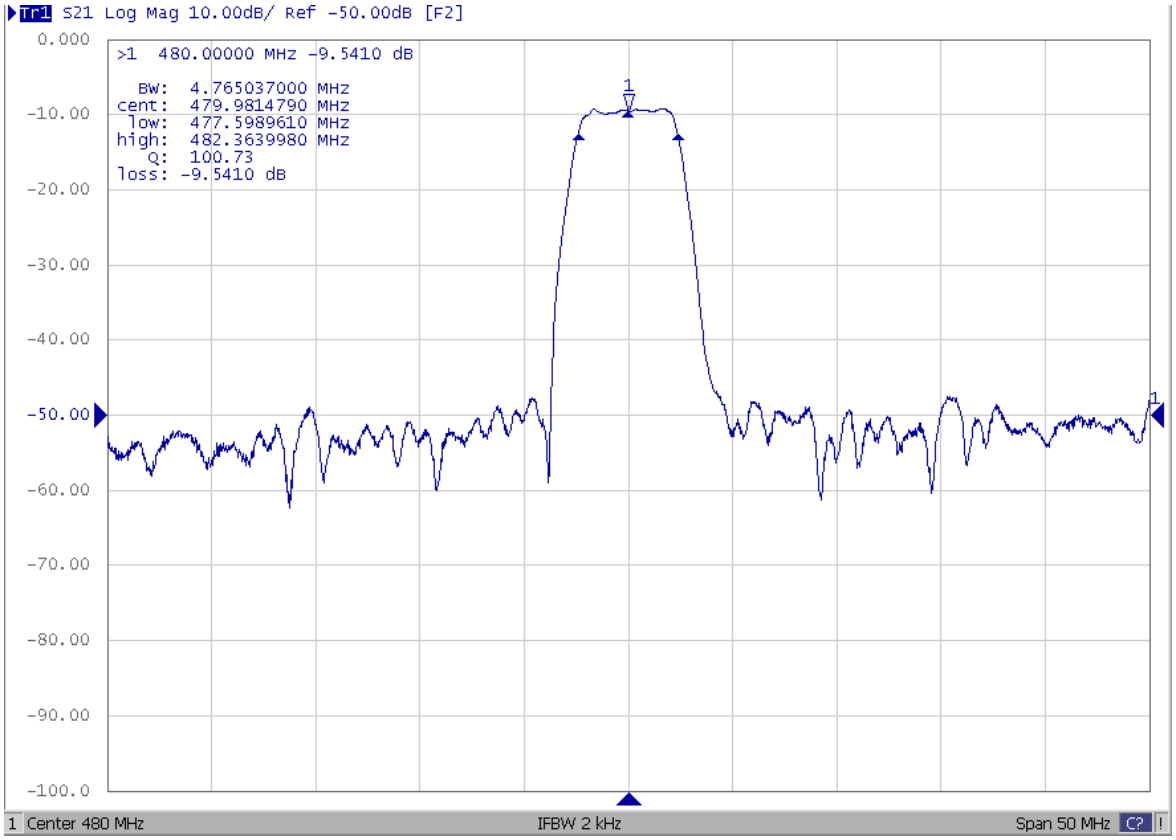
Electrostatic **S**ensitive **D**evice

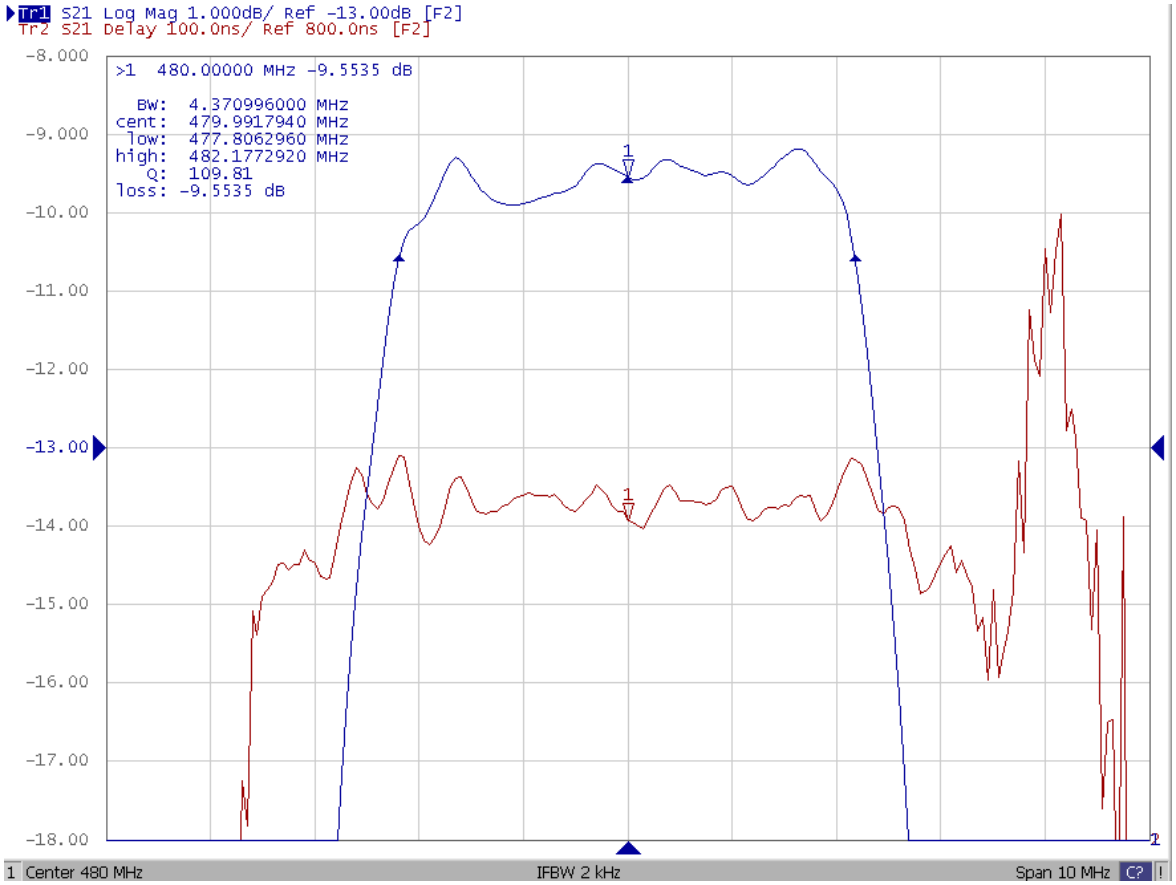
B. ELECTRICAL CHARACTERISTICS:

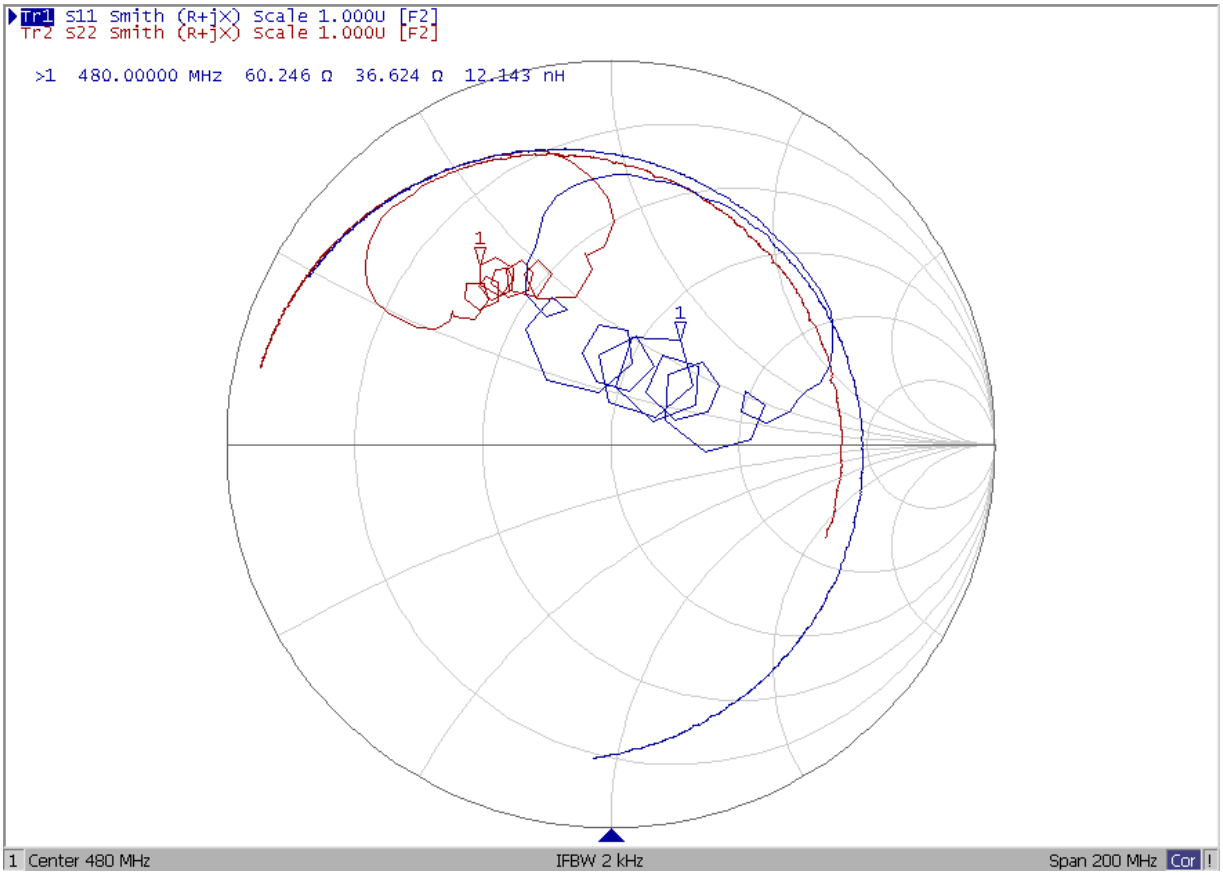
Ambient Temperature: 25°C

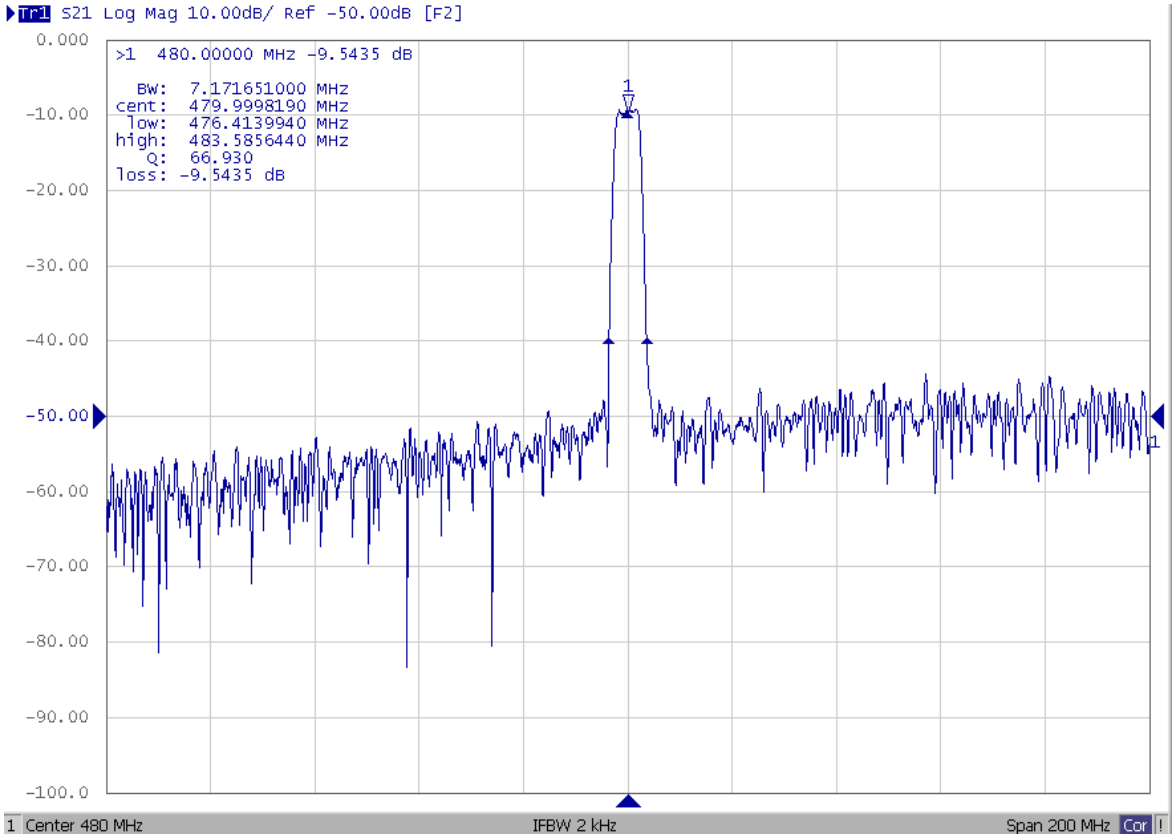
Item	Unit	Min.	Type.	Max.
Center frequency, **Fc**	MHz	-	480	-
Insertion Loss, **IL**	dB	-	9.5	11.0
3dB Bandwidth	MHz	3.9	4.7	-
25dB Bandwidth	MHz	-	6.8	7.2
30dB Bandwidth	MHz	-	7.2	8.0
Passband Ripple Fc+/- 1.7MHz	dB	-	0.8	1.2
Absolute group Delay	us	-	0.70	-
Group Delay variation Fc+/- 1.7MHz	ns	-	80	250
Attenuation (Reference level from minimum Insertion loss)				
Fc-100MHz ~ Fc-10MHz	dB	38	43	-
Fc+10MHz ~ Fc+100MHz	dB	32	37	-
Temperature Coefficient	ppm/℃	-	-23	-
Source Impedance	Ohm	-	50	-
Load Impedance	Ohm	-	50	-

C. FREQUENCY CHARACTERISTICS:

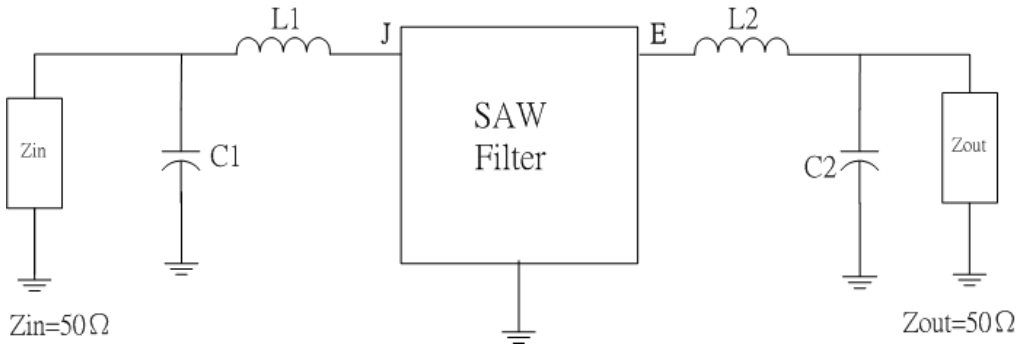





Tr1 S11 Smith (R+jX) Scale 1.000U [F2]
Tr2 S22 Smith (R+jX) Scale 1.000U [F2]
>1 480.00000 MHz 60.246 Ω 36.624 Ω 12.143 nH
1 Center 480 MHz
IFBW 2 kHz
Span 200 MHz
Cor

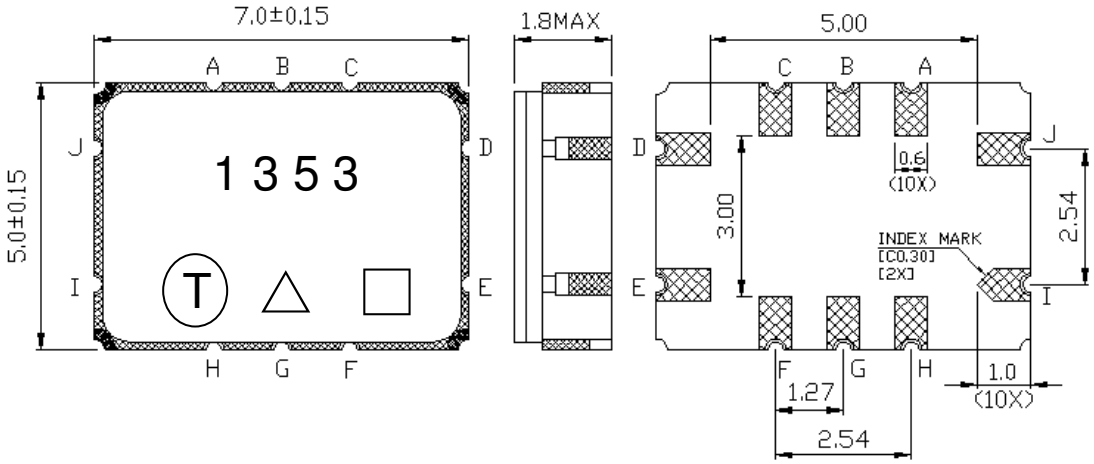

Tr1 S21 Log Mag 10.00dB/ Ref -50.00dB [F2]
>1 480.00000 MHz -9.5435 dB
BW: 7.171651000 MHz
cent: 479.9998190 MHz
low: 476.4139940 MHz
high: 483.5856440 MHz
Q: 66.930
loss: -9.5435 dB
0.000
-10.00
-20.00
-30.00
-40.00
-50.00
-60.00
-70.00
-80.00
-90.00
-100.0
1 Center 480 MHz
IFBW 2 kHz
Span 200 MHz
Cor

D. MATCHING CIRCUIT:



L1=5.6nH L2=3nH C1=10pF C2=10pF

E. OUTLINE DRAWING:



Pin J –RF Input

Pin E –RF Output

Others - Ground

□ : Week Code

△ : Product / Year Code

Unit: mm

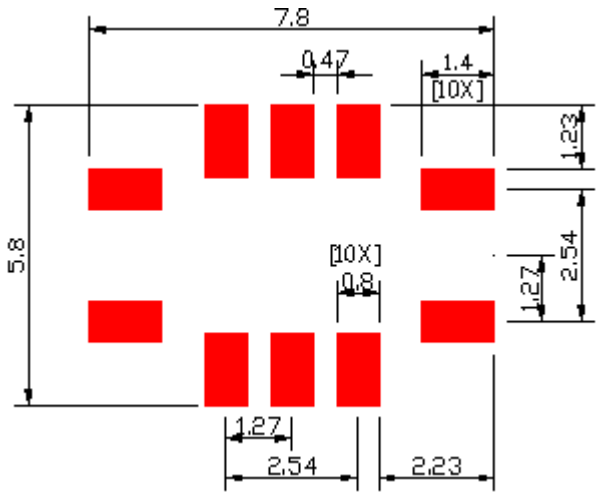
Product / Year Code - 4year cycle

Year	2017 2021	2018 2022	2019 2023	2020 2024
Product Code	B	b	B	b

Week Code Table

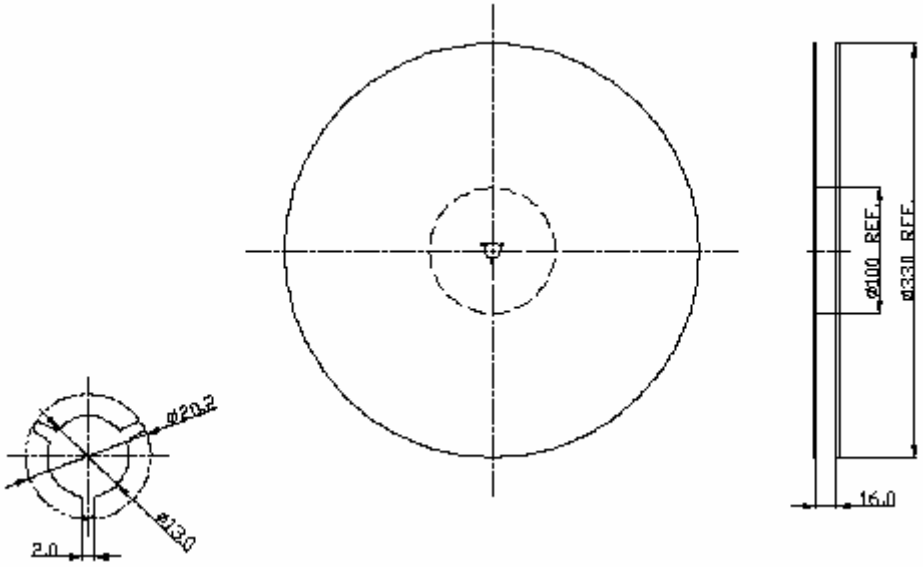
WK01	WK02	WK03	WK04	WK05	WK06	WK07	WK08	WK09	WK10	WK11	WK12	WK13
A	B	C	D	E	F	G	H	I	J	K	L	M
WK14	WK15	WK16	WK17	WK18	WK19	WK20	WK21	WK22	WK23	WK24	WK25	WK26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
WK27	WK28	WK29	WK30	WK31	WK32	WK33	WK34	WK35	WK36	WK37	WK38	WK39
a	b	c	d	e	f	g	h	i	j	k	l	m
WK40	WK41	WK42	WK43	WK44	WK45	WK46	WK47	WK48	WK49	WK50	WK51	WK52
n	o	p	q	r	s	t	u	v	w	x	y	z

F. PCB FOOTPRINT:

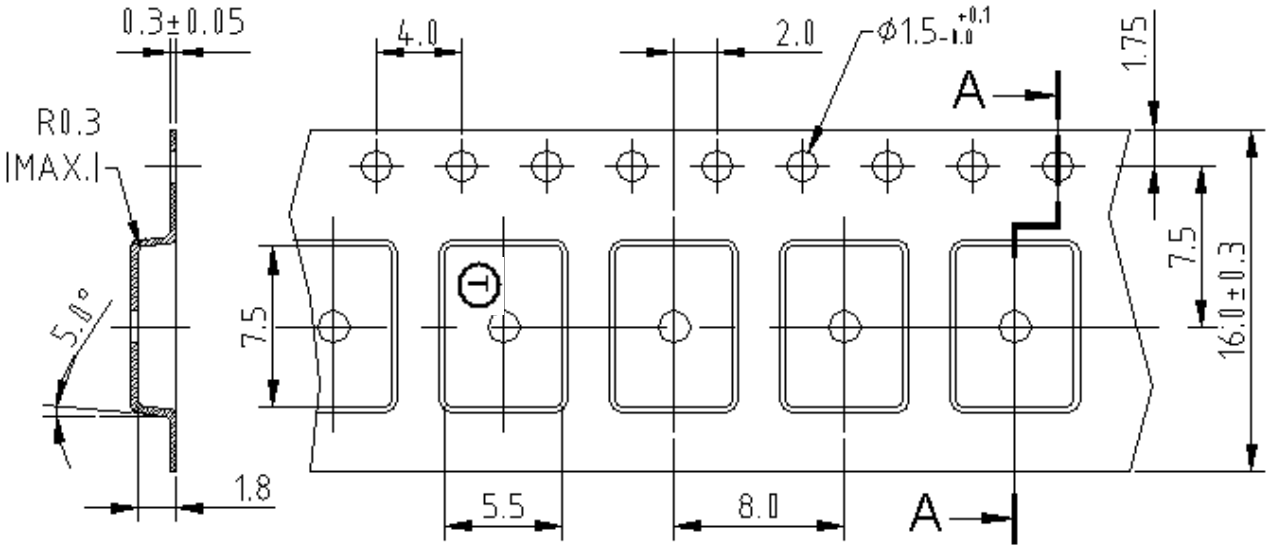


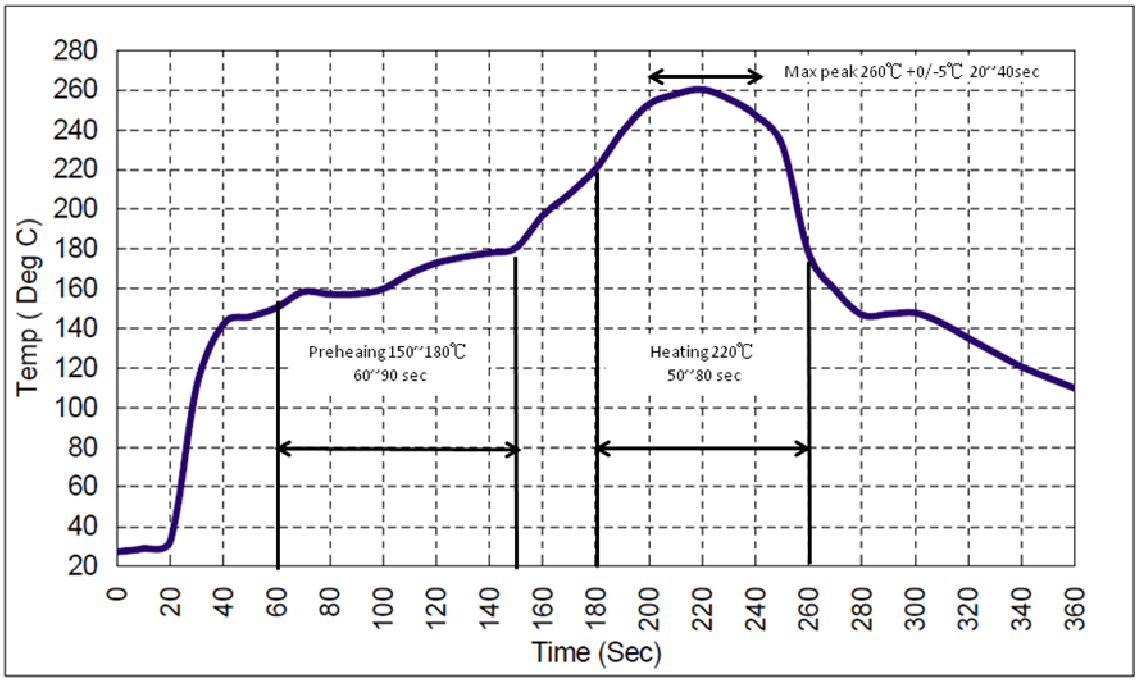
G. PACKING:

1. REEL DIMENSION (Please refer to FR-75D10 for packing quantity)



2. TAPE DIMENSION



H. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at 150~180℃ for 60~90 seconds.
2. Ascending time to preheating temperature 150℃ shall be 30 seconds min.
3. Heating shall be fixed at 220℃ for 50~80 seconds and at 260℃+0/-5℃ peak (20~40sec).
4. Time: 2 times.