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 Name: SAW Rx Filter 1842.5 MHz LTE Band 3 SMD 1.1x0.9mm (BW=75 MHz)

TST Parts No.: TA1843DB

Customer Parts No.:_____

Customer signature required

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by: David Chang

Approval by: Andy Yu

Date: 2019/12/10

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 1842.5 MHz

MODEL NO.:TA1843DB REV. NO.:1

A. MAXIMUM RATING:

1. Maximum Input Power: 10 dBm
2. DC Voltage: 0 V
3. Operating Temperature: -40 ℃ to +85 ℃
4. Storage Temperature Range: -40 ℃ to +85 ℃
5. Moisture Sensitive Level: Level 3 (MSL 3)
6. ESD: 50 V(MM), 100 V(HBM)

RoHS Compliant

Lead-free soldering

Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS:

Terminating source impedance: Zs = 50//33nH Ω (Single-ended)

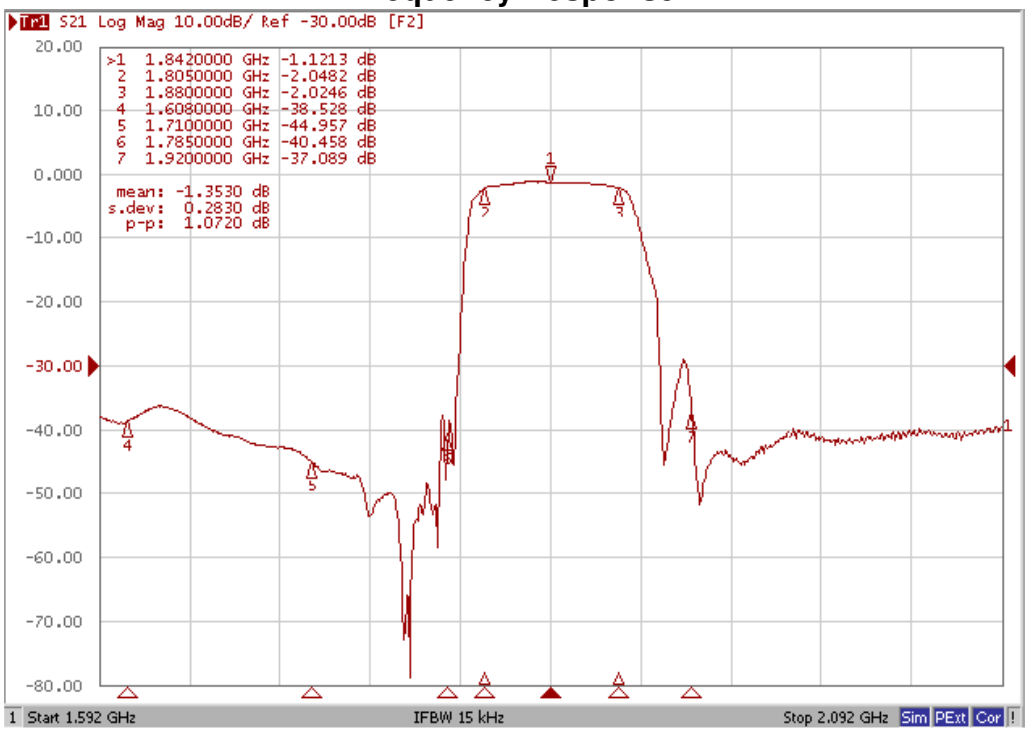
Terminating load impedance: Z_L = 50//12nH Ω (Single-ended)

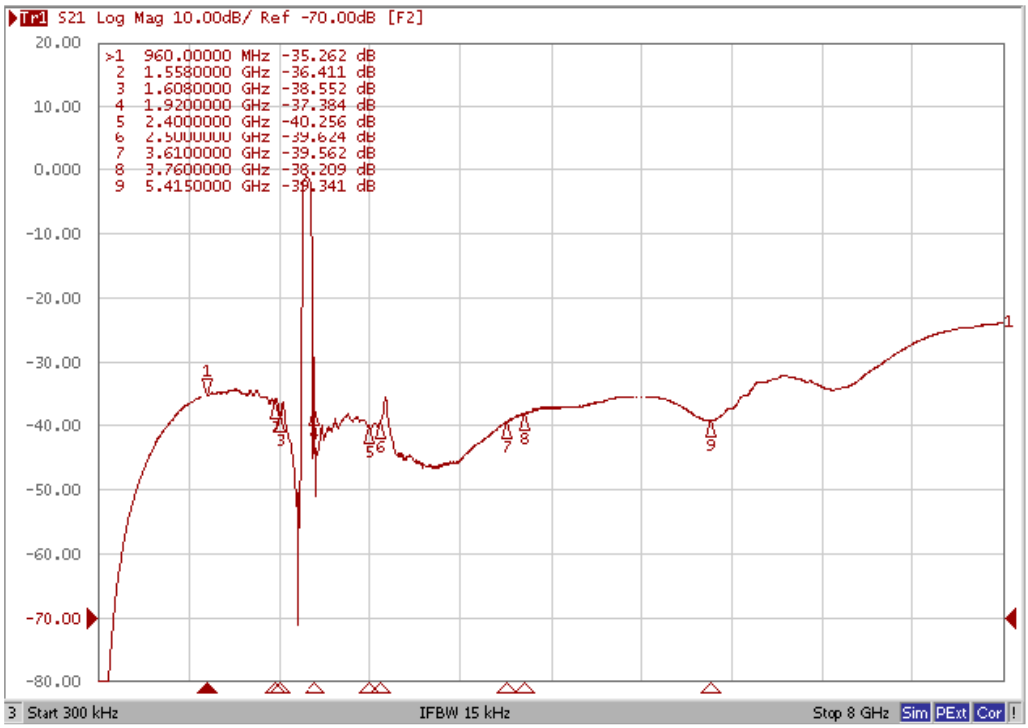
Item			Unit	Min.	Typ.	Max.
Center Frequency			MHz	-	1842.5	-
Insertion Loss (*1)		1805 ~ 1880 MHz	dB	-	2.0	5.5
Amplitude Ripple		1805 ~ 1880 MHz	dB_{p-p}	-	1.0	4.5
VSWR	**Input**	1805 ~ 1880 MHz	-	-	1.7	2.5
	Output	1805 ~ 1880 MHz	-	-	1.6	2.5
Attenuation (Reference level from 0 dB)						
DC ~ 960 MHz			dB	32	35	-
1558 ~ 1608 MHz			dB	32	36	-
1710 ~ 1785 MHz			dB	34	38	-
1920 ~ 2400 MHz			dB	22	37	-
2400 ~ 2500 MHz			dB	33	39	-
2500 ~ 3610 MHz			dB	25	35	-
3610 ~ 3760 MHz			dB	25	38	-
3760 ~ 5415 MHz			dB	20	35	-
5415 ~ 5640 MHz			dB	20	36	-
5640 ~ 7220 MHz			dB	18	27	-
7220 ~ 7520 MHz			dB	16	25	-
7520 ~ 8000 MHz			dB	14	23	-

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

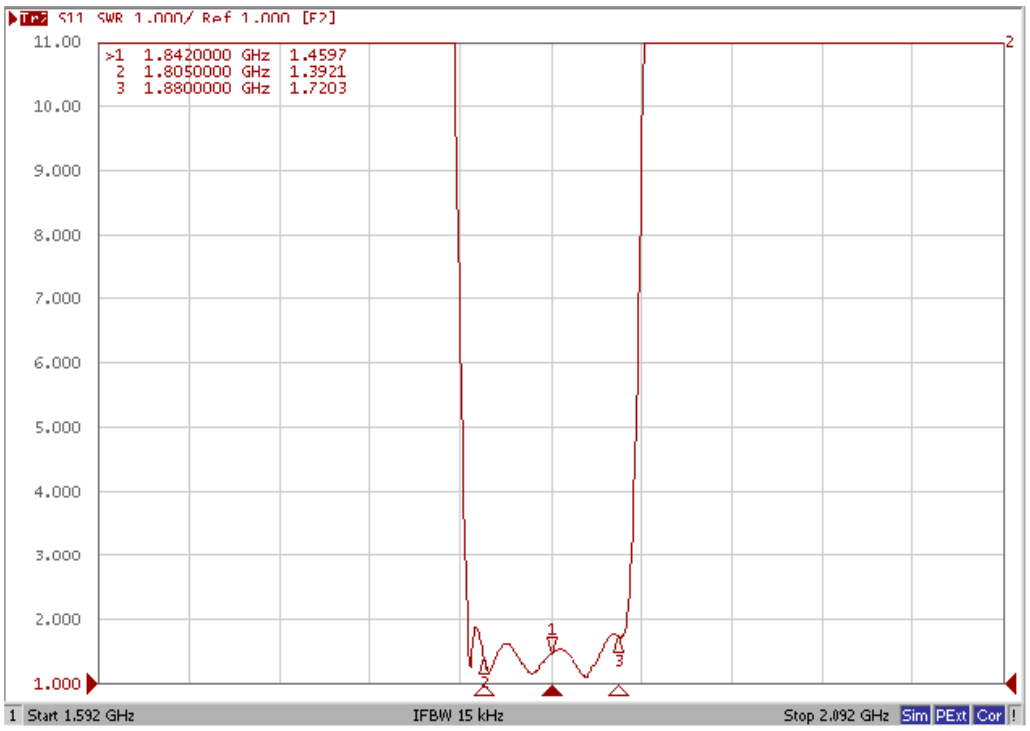
C. EFREQUENCY CHARACTERISTICS:

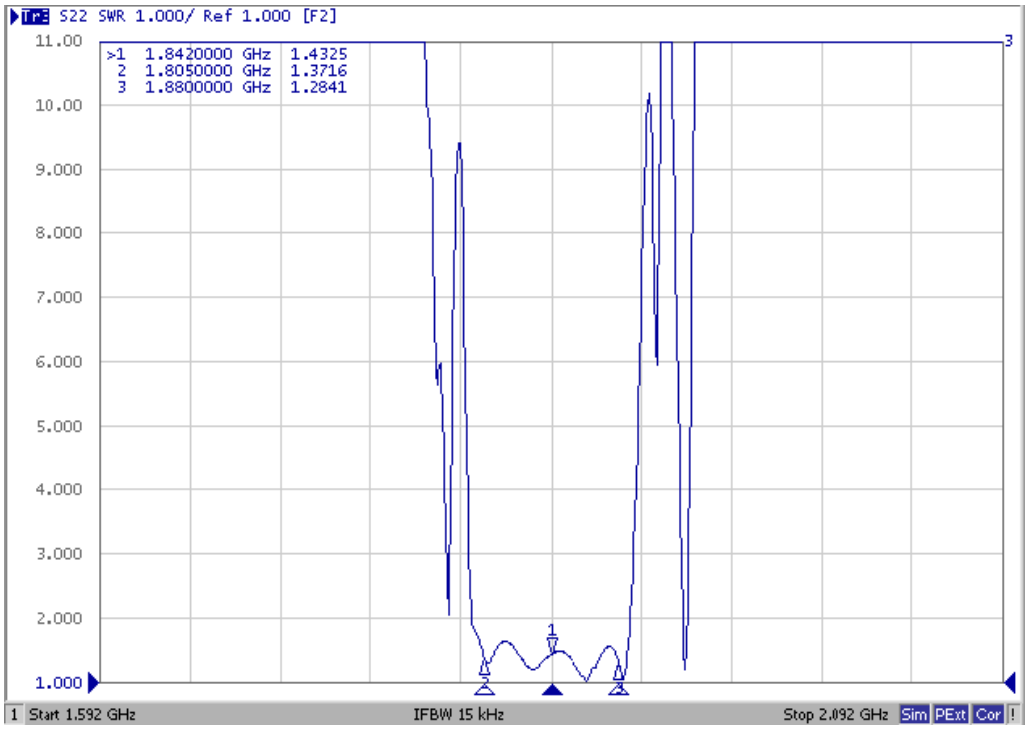
Frequency Response



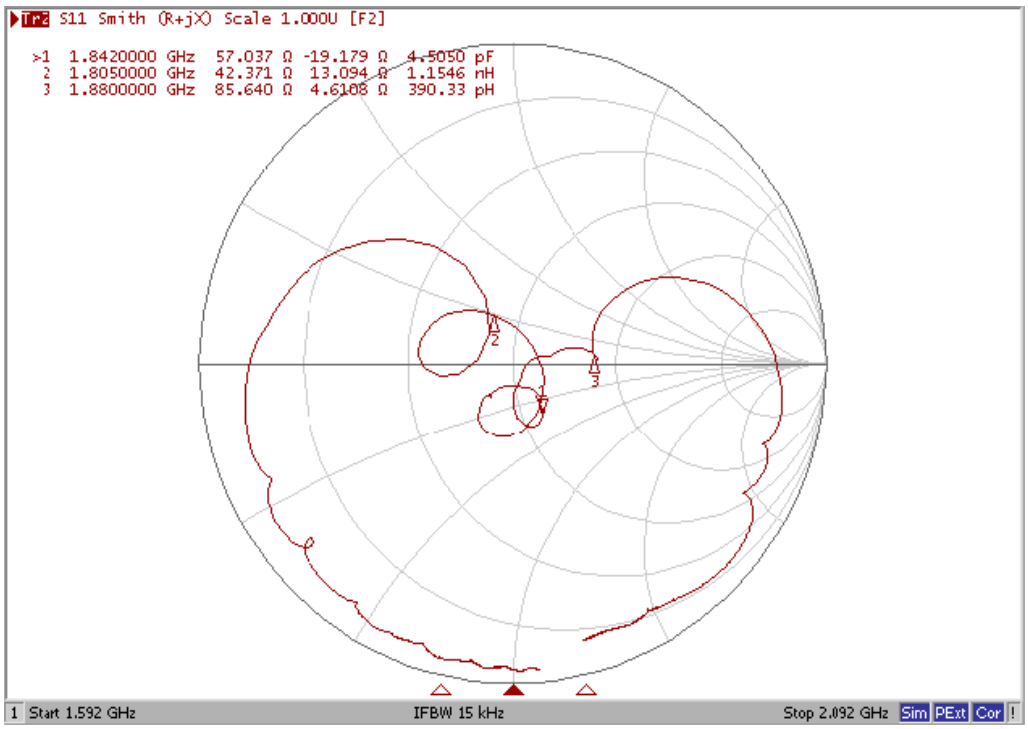


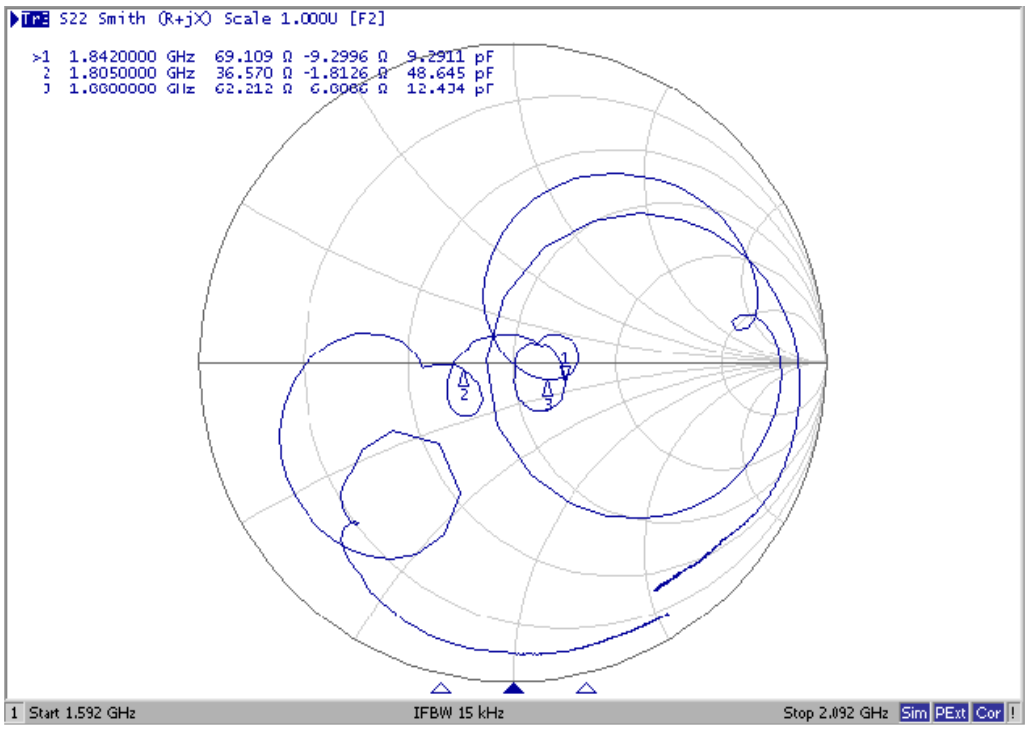
VSWR


Tr2 S11 SWR 1.000/ Ref 1.000 [F2]
>1 1.8420000 GHz 1.4597
2 1.8050000 GHz 1.3921
3 1.8800000 GHz 1.7203
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Start 1.592 GHz
IFBW 15 kHz
Stop 2.092 GHz
Sim PExt Cor

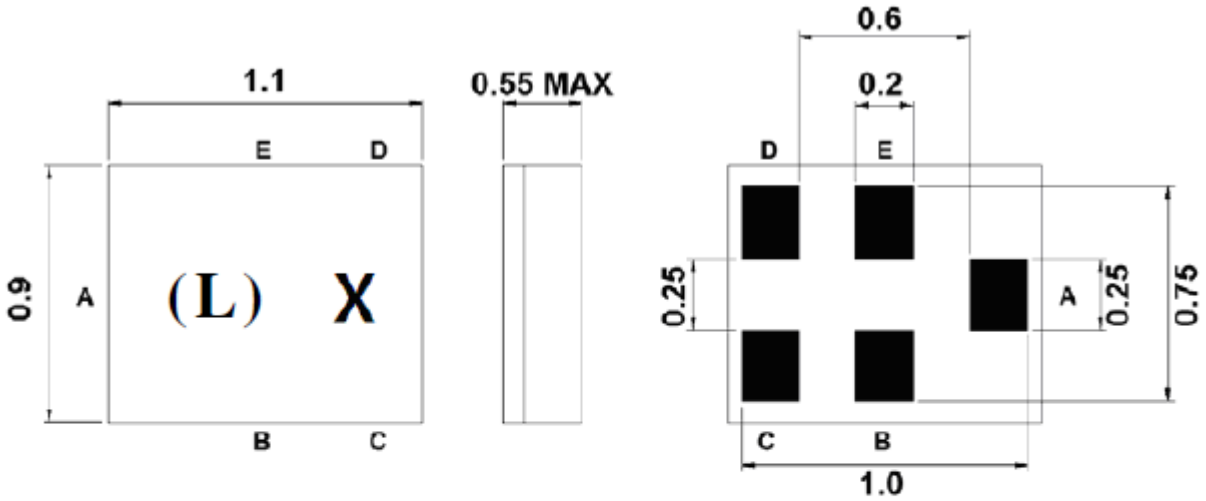

Tr3 S22 SWR 1.000/ Ref 1.000 [F2]
>1 1.8420000 GHz 1.4325
2 1.8050000 GHz 1.3716
3 1.8800000 GHz 1.2841
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Start 1.592 GHz
IFBW 15 kHz
Stop 2.092 GHz
Sim PExt Cor

Smith Chart


Tr2 S11 Smith (R+jX) Scale 1.000U [F2]
>1 1.8420000 GHz 57.037 Ω -19.179 Ω 4.5050 pF
2 1.8050000 GHz 42.371 Ω 13.094 Ω 1.1546 nH
3 1.8800000 GHz 85.640 Ω 4.6108 Ω 390.33 pH
1 Start 1.592 GHz
IFBW 15 kHz
Stop 2.092 GHz
Sim PExt Cor


Tr3 S22 Smith (R+jX) Scale 1.000U [F2]
>1 1.8420000 GHz 69.109 Ω -9.2996 Ω 9.2911 pF
2 1.8050000 GHz 36.570 Ω -1.8126 Ω 48.645 pF
3 1.8800000 GHz 62.212 Ω 6.8066 Ω 12.434 pF
1 Start 1.592 GHz
IFBW 15 kHz
Stop 2.092 GHz
Sim PExt Cor

D. OUTLINE DRAWING:



Pin Description	
B, C, E	Ground
A	Input
D	Output

Marking Descriptions:

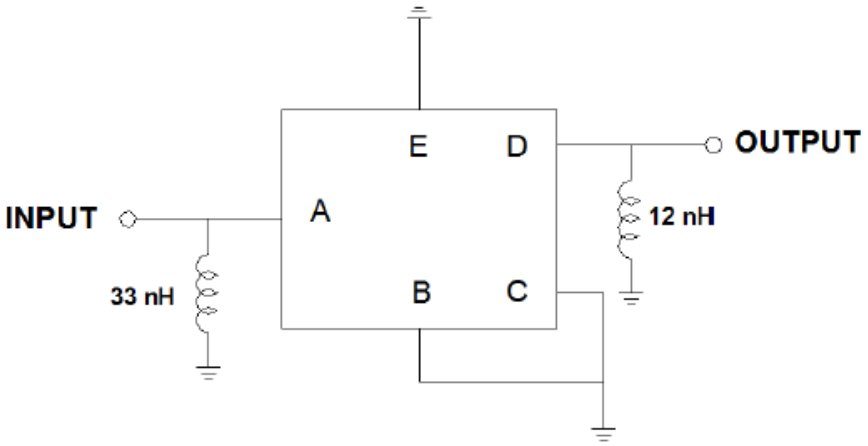
(L): Series Number

X : Year/Month Code (Follow the table)

Date Code (Year/Month Code)

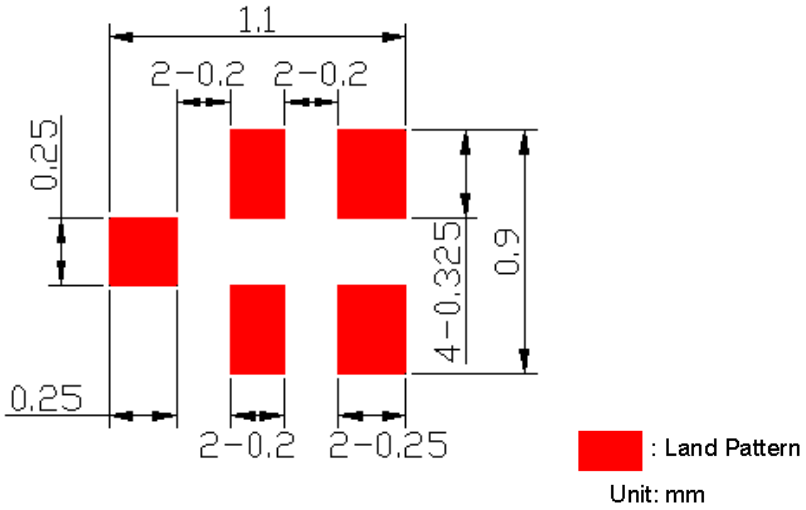
YEAR/Month	1	2	3	4	5	6	7	8	9	10	11	12
2013	A	B	C	D	E	F	G	H	J	K	L	M
2014	N	P	Q	R	S	T	U	V	W	X	Y	Z
2015	a	b	c	d	e	f	g	h	j	k	l	m
2016	n	p	q	r	s	t	u	v	w	x	y	z
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m
2020	n	p	q	r	s	t	u	v	w	x	y	z

E. MEASUREMENT CIRCUIT:



Source & Load Impedance: 50 Ω

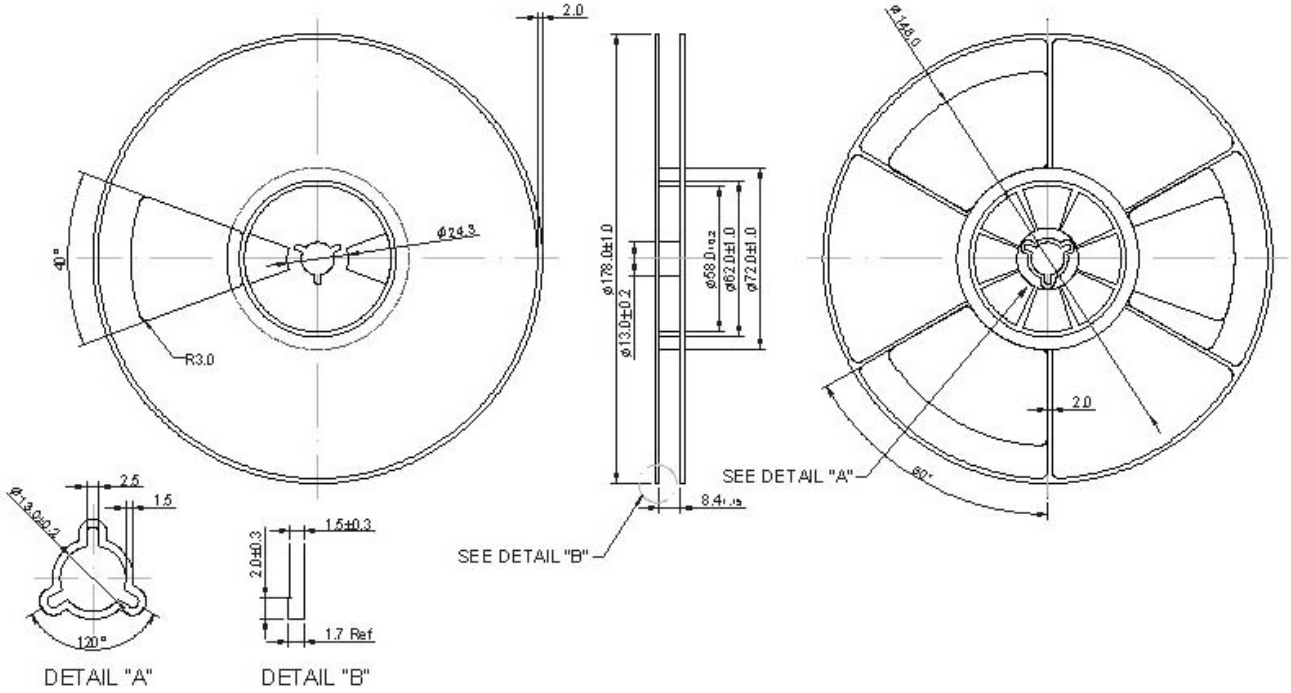
F. PCB Footprint:



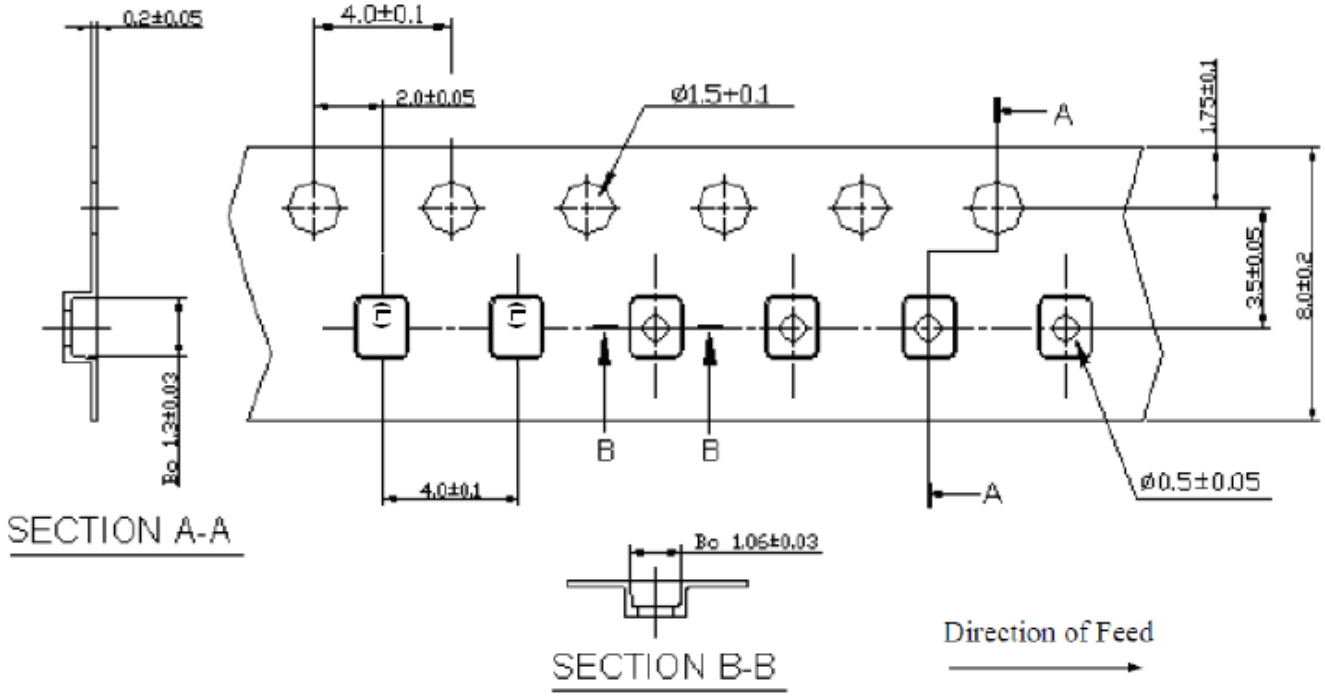
G. PACKING: (Ref: WI-75M03)

1. REEL DIMENSION

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



2. TAPE DIMENSION



H. <u>RECOMMENDED REFLOW PROFILE</u>:

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.