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: Duplexer 725.5/780.5 MHz BW 45/45MHz Size 1.8x1.4mm
TST Parts No.: TF0235AA1822

Customer Parts No.:_____

Customer signature required

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by:_____ Jerry Lo Jerry Lo

Approved by:_____ Kazuma Lee Kazuma Lee

Date:_____ 2025/02/24

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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Duplexer 725.5/780.5 MHz BW 45/45MHz Size 1.8x1.4mm

MODEL NO.: TF0235AA1822 REV. NO.:1.0

A. MAXIMUM RATING:

1. Input Power: 29W
2. DC Voltage : 3V
3. Operating Temperature: -20°C to +85°C
4. Storage Temperature: -40 °C to +85 °C
5. Moisture Sensitivity Level: 3(MSL 3)

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS:

Tx to Ant		Specification			
Parameter	**Condition [MHz]**	**Unit**	**Minimum[1]**	**Typical[2]**	**Maximum[1]**
Insertion Loss	703 - 748	dB	-	2.3	2.9
Inband Ripple	703 - 748	dB	-	1.4	2.0
VSWR of Rx Port	703 - 748	-	-	1.7	2.0
VSWR of Ant Port	703 - 748	-	-	1.6	2.0
Absolute Attenuation	10 - 670	dB	25	31	-
	474 - 690	dB	25	31	-
	670 - 680	dB	35	41	-
	680 - 694	dB	25	30	-
	692 - 698	dB	6	8	-
	758 - 803	dB	45	52	-
	859 - 894	dB	25	31	-
	1164 - 1189	dB	27	32	-
	1189 - 1214	dB	27	32	-
	1215 - 1239.6	dB	27	33	-
	1406 - 1466	dB	33	38	-
	1559 - 1563	dB	38	42	-
	1565.4 - 1585.4	dB	38	42	-
	1597.5 - 1605.8	dB	38	43	-
	1605.8 - 1680	dB	38	43	-
	1710 - 1785	dB	40	47	-
	1805 - 1880	dB	40	45	-
	1930 - 1995	dB	38	43	-
	2010 - 2025	dB	37	42	-
	2109 - 2244	dB	35	40	-
	2300 - 2400	dB	35	40	-
	2400 - 2484	dB	35	39	-
	2496 - 2690	dB	35	39	-
	2812 - 2932	dB	35	39	-
	3400 - 3800	dB	25	32	-
	4900 - 5950	dB	30	35	-
Ant to Rx		**Specification**			

TST DCC
Release document

Parameter	Condition [MHz]	Unit	Minimum[1]	Typical[2]	Maximum[1]
Insertion Loss	758 - 803	dB	-	2.1	2.6
Inband Ripple	758 - 803	dB	-	1.5	1.8
VSWR of Rx Port	758 - 803	-	-	1.7	2.0
VSWR of Ant Port	758 - 803	-	-	1.7	2.0
Absolute Attenuation	10 - 699	dB	35	40	-
	699 - 703	dB	50	55	-
	703 - 748	dB	45	50	-
	814 - 849	dB	7	12	-
	824 - 849	dB	45	51	-
	832 - 862	dB	40	46	-
	880 - 915	dB	40	44	-
	1710 - 1785	dB	45	49	-
	1850 - 1910	dB	43	48	-
	1920 - 1980	dB	43	48	-
	2400 - 2484	dB	40	45	-
	2496 - 2690	dB	40	44	-
	4900 - 5950	dB	25	32	-

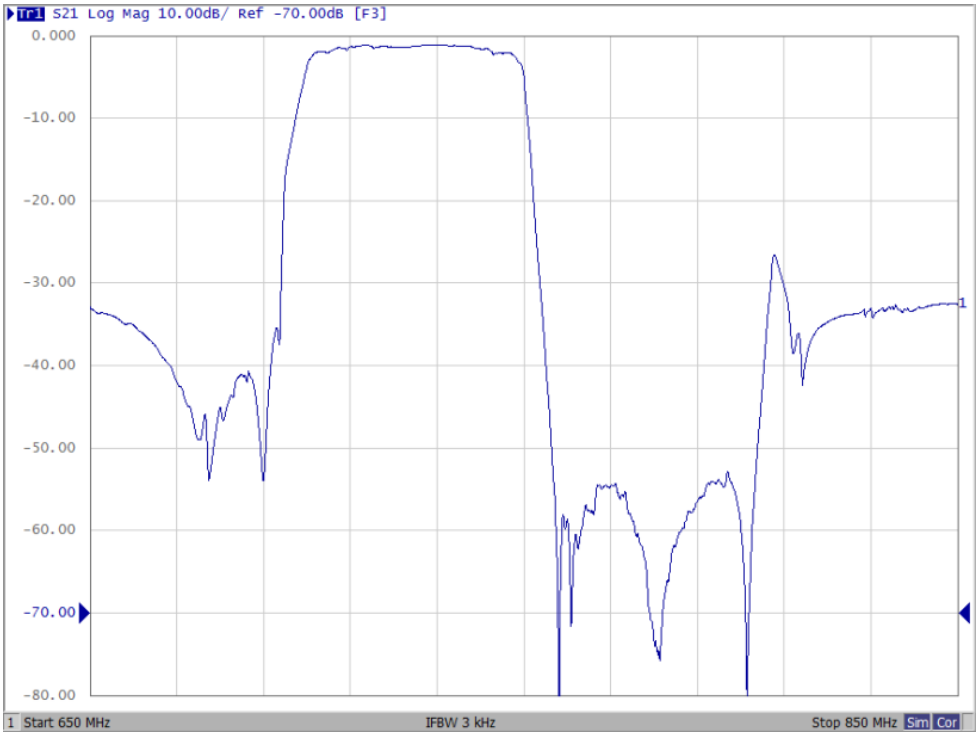
Tx to Rx		**Specification**			
Parameters	**Conditions [MHz]**	**Unit**	**Minimum[1]**	**Typical[2]**	**Maximum[1]**
Isolation	703 - 748	dB	50	52	-
	758 - 803	dB	50	53	-

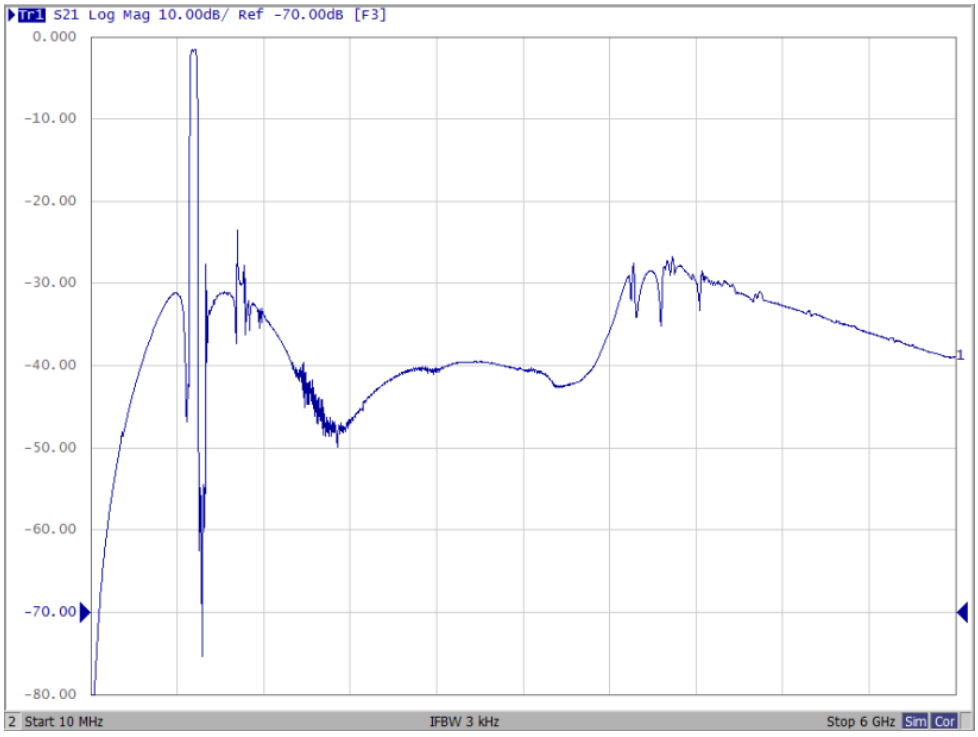
1. Min/Max specifications are guaranteed over the indicated temperature range (unless otherwise noted).

2. Typical data is the value at +25°C

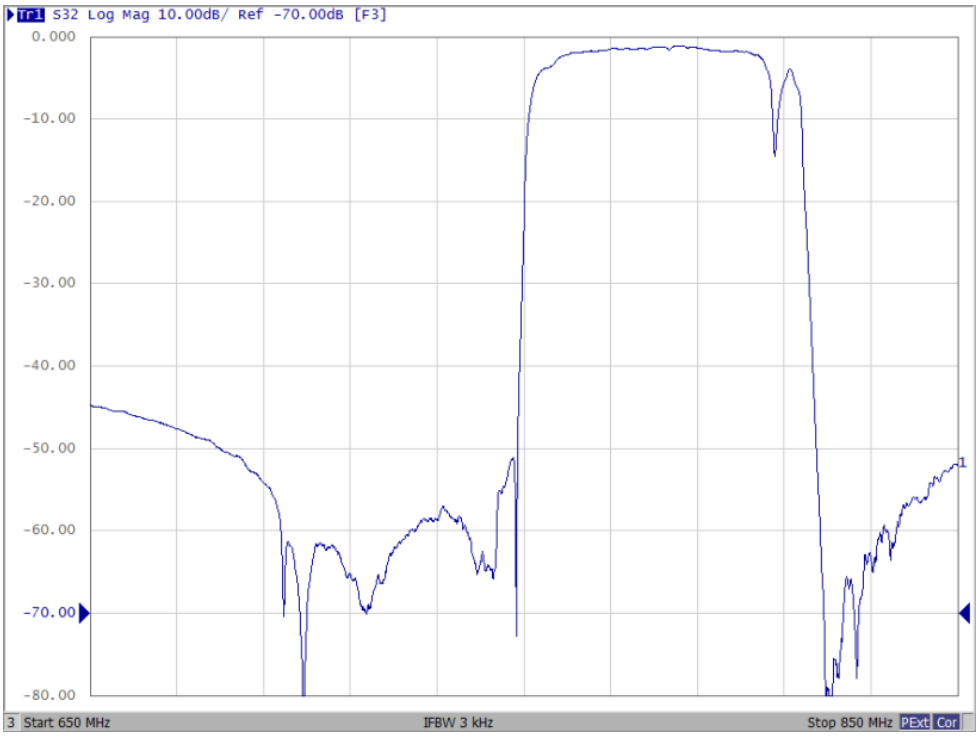
C. FREQUENCY CHARACTERISTICS:

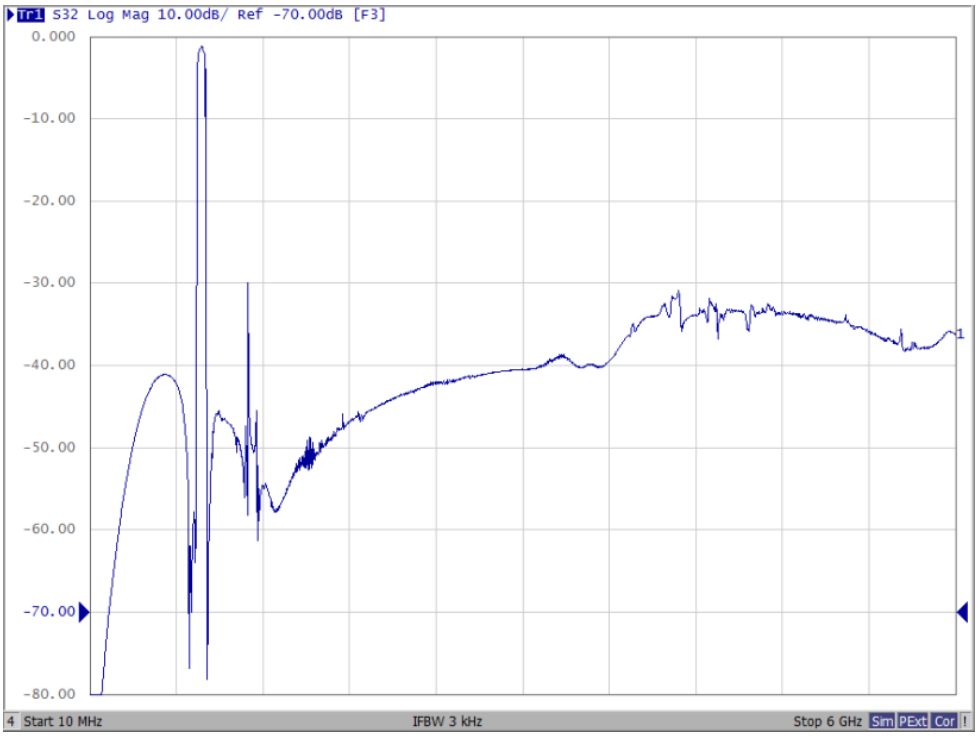
Electrical Characteristics: Tx to Ant.



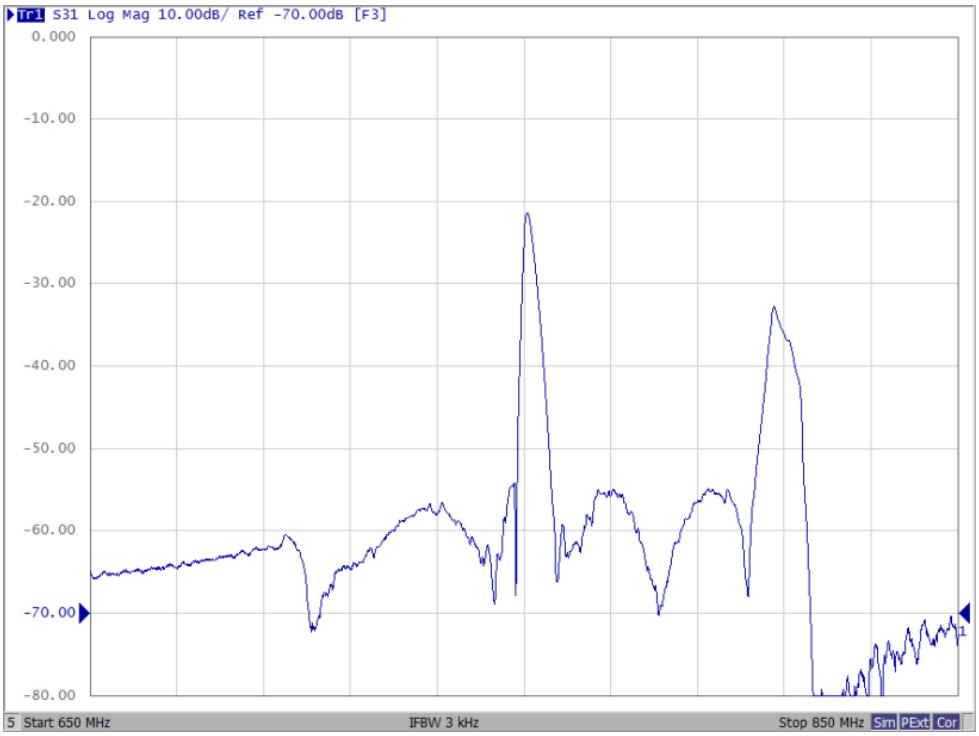


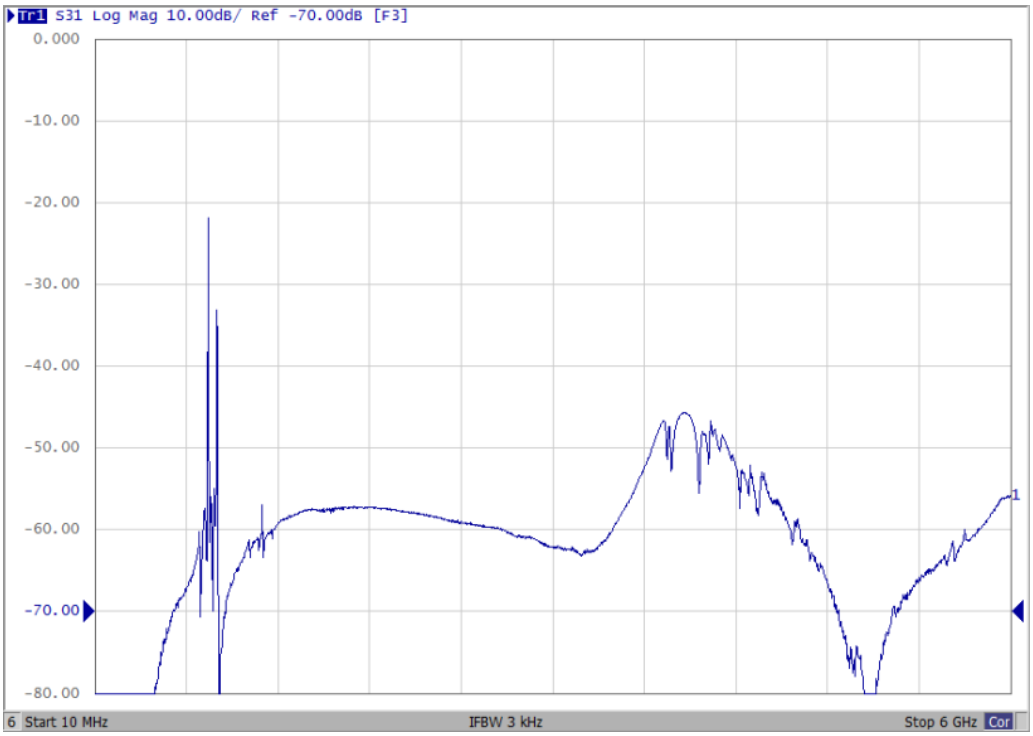
Electrical Characteristics: Ant to Rx.





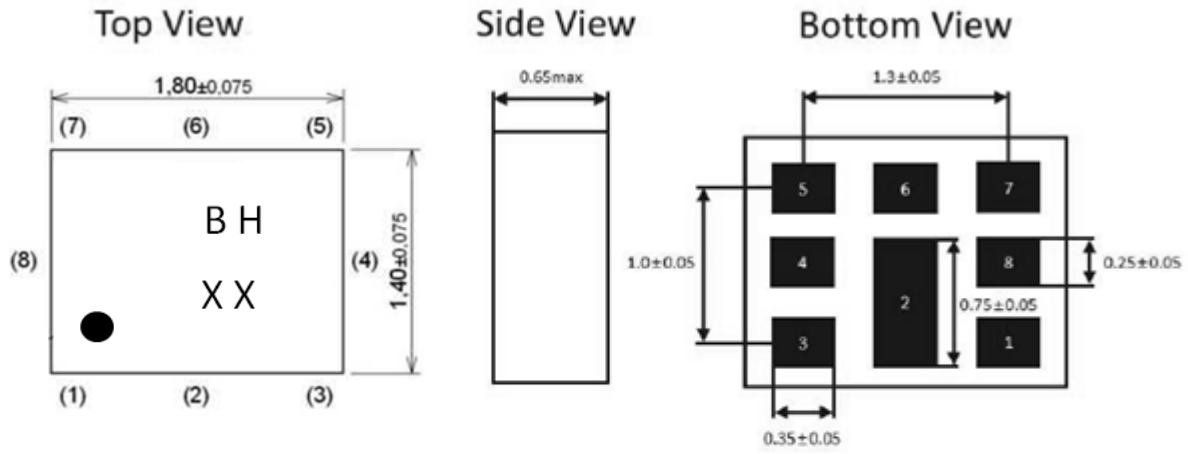
Electrical Characteristics: Tx to Rx.





D. DIMENSION:

Package & Dimensions



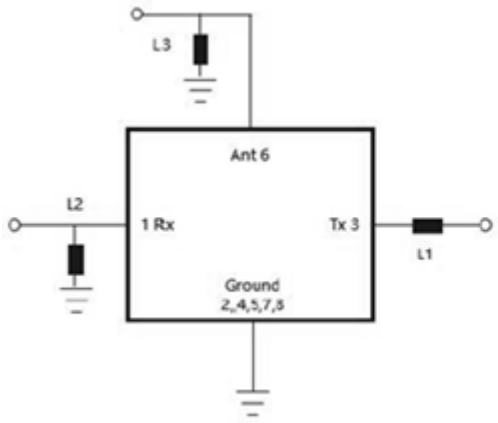
Marking Description	
XX	Date Code

Pin Configuration	
3	Tx
1	Rx
6	Antenna
2,4,5,7,8	Ground

Date Code X1->Year code X2->Date Code

Year Code	1	2	3	4	5	6	7	8	9	10	11	12
2020/2024	1	2	3	4	5	6	7	8	9	A	B	C
2021/2025	D	E	F	G	H	J	K	L	M	N	P	Q
2022/2026	R	S	T	U	V	W	X	Y	Z	a	b	d
2023/2027	e	f	g	h	j	k	m	n	q	r	t	y
Date Code	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
code	1	2	3	4	5	6	7	8	9	A		
Date	11st	12nd	13rd	14th	15th	16th	17th	18th	19th	20th		
code	B	C	D	E	F	G	H	J	K	L		
Date	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31th	
code	M	N	P	Q	R	S	T	U	V	W	X	

Matching

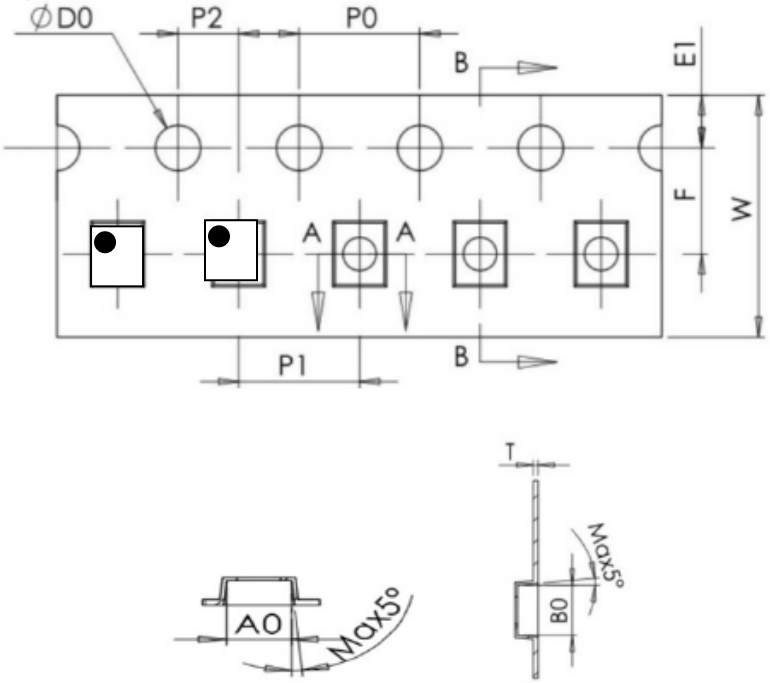


Port	Matching Component
Tx	L1 : 10 nH
Rx	L2 : 15 nH
Ant	L3 : 12 nH

E. PACKING:

Tape&Reel

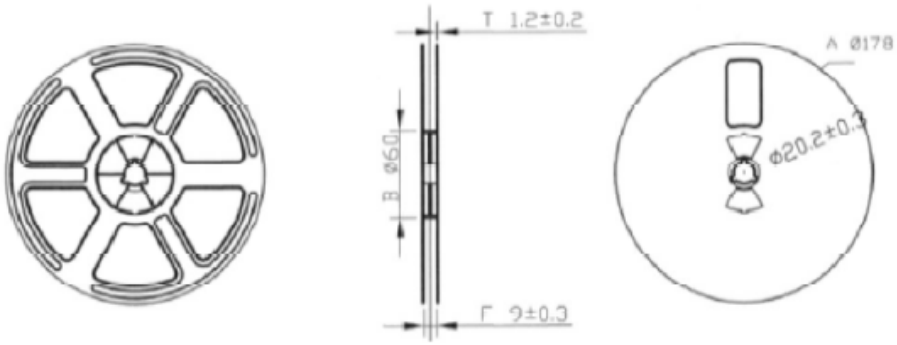
Tape



Item	Spec
W	8.00±0.10
P1	4.00±0.10
E1	1.75±0.10
F	3.50±0.05
D0	1.55±0.05
P0	4.00±0.10
P2	2.00±0.05
A0	1.63±0.05
B0	2.03±0.05
K0	0.83±0.05
T	0.20±0.05

Unit: mm

Reel



Item	Spec
A	178±1
F	9.0±0.3
T	1.2±0.2
B	60.0±0.5

Unit: mm

F. 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.