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 Diplexer 1222.5/1582.5 MHz (BW 53/47 MHz)

SMD 1.5x1.1 mm

TST Parts No.: TE0150A

Customer Parts No.:_____

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by:_____ Sam Lin _____

Approval by:_____ Andy Yu _____

Date:_____ 2020/05/19 _____

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 Diplexer 1222.5/1582.5 MHz (BW 53/47 MHz) SMD 1.5x1.1 mm

MODEL NO.:TE0150A REV. NO.:1.0

A. MAXIMUM RATING:

1. Input Power Level: 15 dBm
2. DC Voltage : 0 V
3. Operating Temperature: -30℃ to +85℃
4. Storage Temperature: -40℃ to +85℃
5. Moisture Sensitive Level: MSL 3

RoHS Compliant

Lead-free soldering

Electrostatic **S**ensitive **D**evice (**ESD**)

B. ELECTRICAL CHARACTERISTICS:

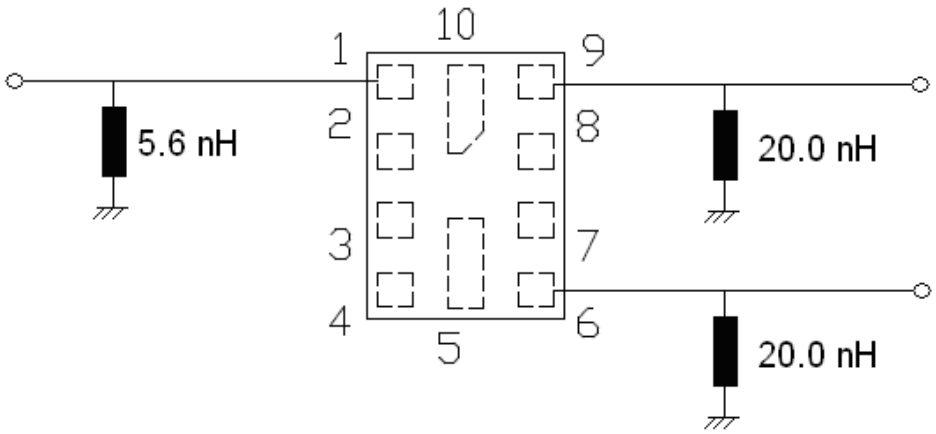
Terminating source impedance (single) : Z_S = 50 Ω
Terminating load impedance (single) : Z_L = 50 Ω

Item (L2 Band to Antenna)	Unit	Min.	Typ.	Max.
Center frequency	MHz	-	1222.5	-
Insertion Loss (1196 ~ 1249 MHz)	dB	-	2.0	3.0
Amplitude Ripple (1196 ~ 1249 MHz)	dB	-	0.8	1.8
Attenuation (reference level from 0 dB)				
880 ~ 920 MHz	dB	40	43	-
1565 ~ 1606 MHz (L1 Band)	dB	30	34	-
1710 ~ 1850 MHz	dB	25	31	-
1850 ~ 1920 MHz	dB	25	30	-
1920 ~ 1980 MHz	dB	25	30	-
Temperature Coefficient of Frequency	ppm/K	-	-36	-

Item (L1 Band to Antenna)	Unit	Min.	Typ.	Max.
Center frequency	MHz	-	1582.5	-
Insertion Loss (1559 ~ 1606 MHz)	dB	-	2.6	3.5
Amplitude Ripple (1559 ~ 1606 MHz)	dB	-	0.7	1.8
Attenuation (reference level from 0 dB)				
10 ~ 920 MHz	dB	40	43	-
1196 ~ 1249 MHz (L2 Band)	dB	40	43	-
1427 ~ 1453 MHz	dB	35	40	-
1453 ~ 1501 MHz	dB	20	26	-
1501 ~ 1525 MHz	dB	20	25	-
1710 ~ 1785 MHz	dB	30	35	-
1850 ~ 1980 MHz	dB	35	41	-
Temperature Coefficient of Frequency	ppm/K	-	-36	-

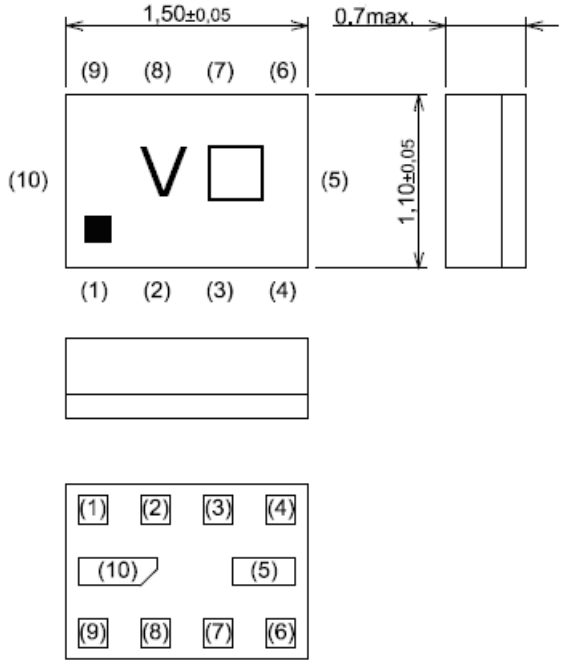
Item (Isolation)	Unit	Min.	Typ.	Max.
Attenuation (reference level from 0 dB)				
1196 ~ 1249 MHz (L2 Band)	dB	40	44	-
1565 ~ 1606 MHz (L1 Band)	dB	40	43	-
Temperature Coefficient of Frequency	ppm/K	-	-36	-

C. TEST CIRCUIT:



Pin #	Function
(1)	Antenna
(2)	Ground
(3)	Ground
(4)	Ground
(5)	Ground
(6)	L1 Band
(7)	Ground
(8)	Ground
(9)	L2 Band
(10)	Ground

D. OUTLINE DRAWING:

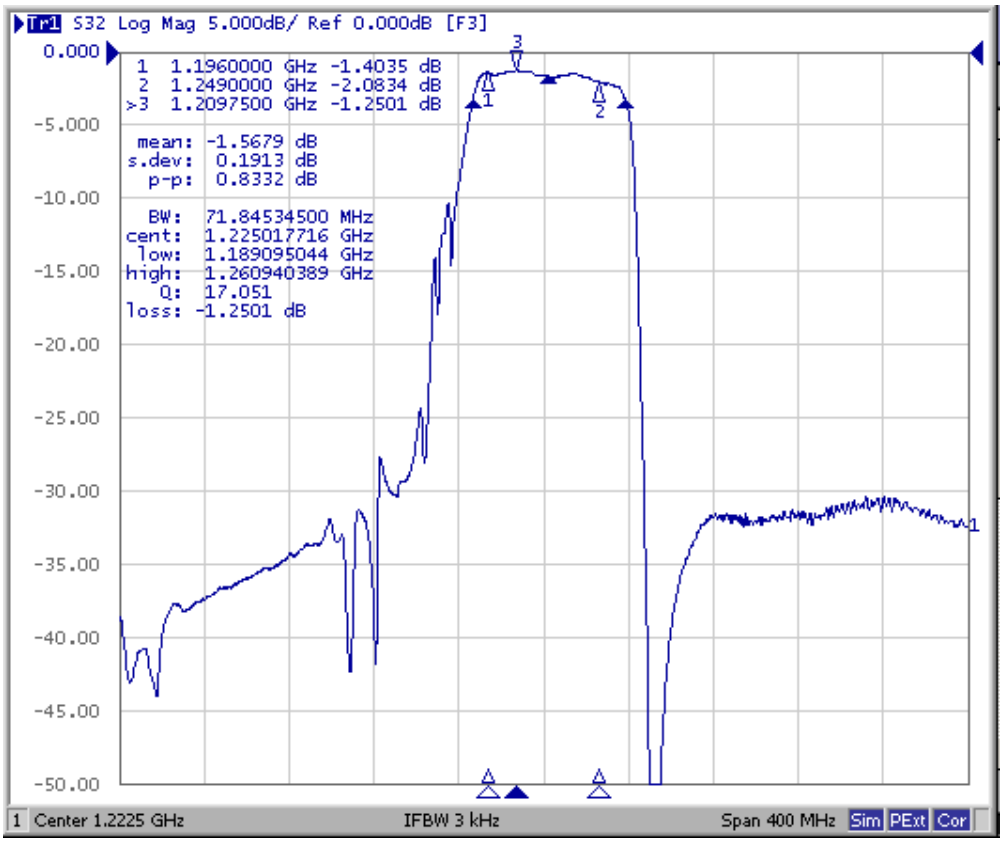


Pin #	Function
(1)	Antenna
(2)	Ground
(3)	Ground
(4)	Ground
(5)	Ground
(6)	L1 Band
(7)	Ground
(8)	Ground
(9)	L2 Band
(10)	Ground

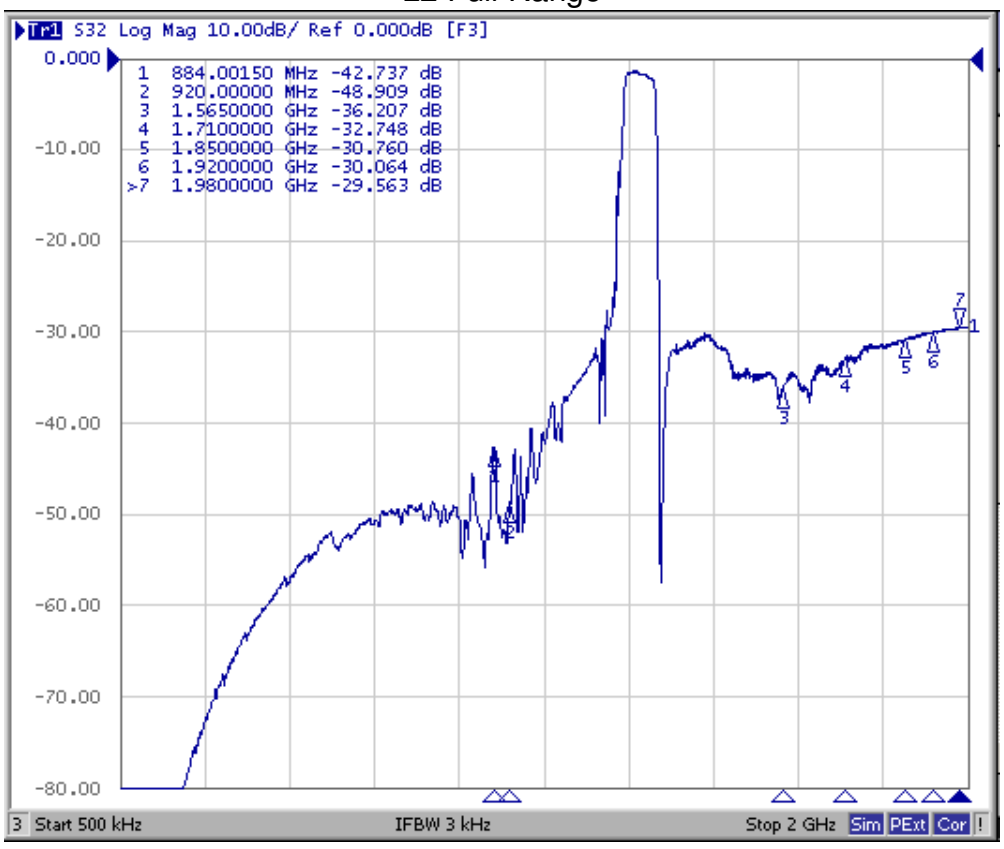
Year/Month	1	2	3	4	5	6	7	8	9	10	11	12
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m
2020	n	p	q	r	s	t	u	v	w	x	y	z
2021	A	B	C	D	E	F	G	H	J	K	L	M
2022	N	P	Q	R	S	T	U	V	W	X	Y	Z
2023	a	b	c	d	e	f	g	h	j	k	l	m
2024	n	p	q	r	s	t	u	v	w	x	y	z

E. Frequency Characteristics:

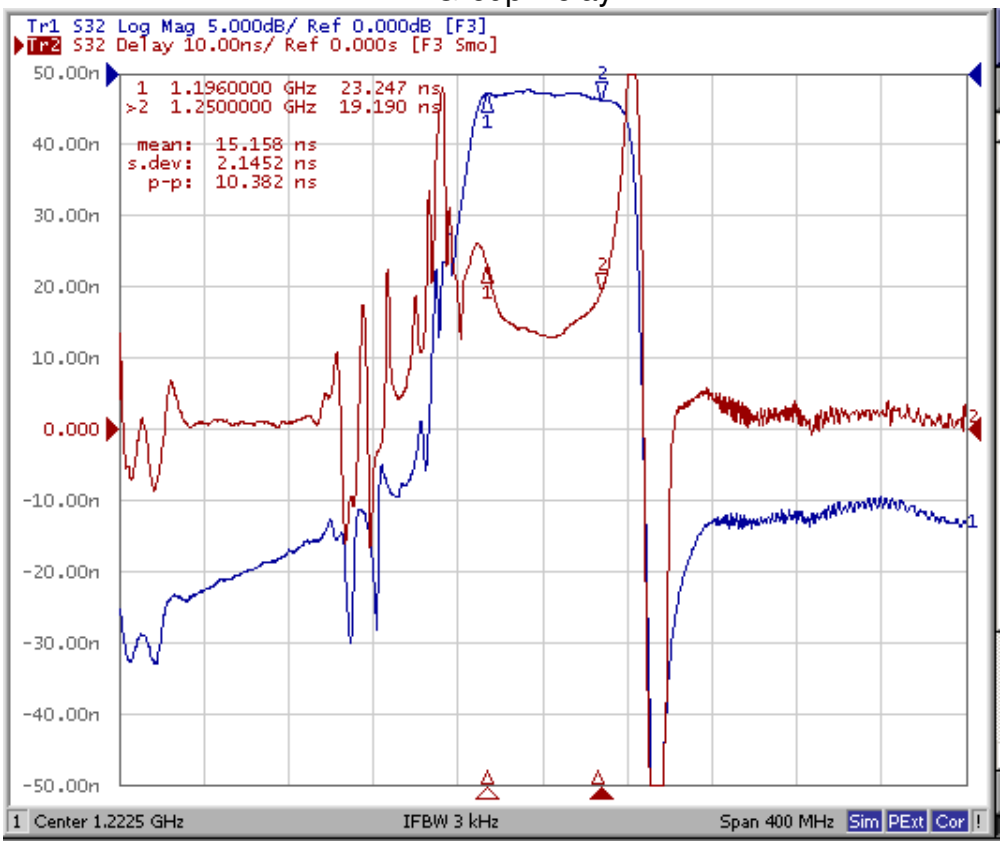
L2 Pass Band



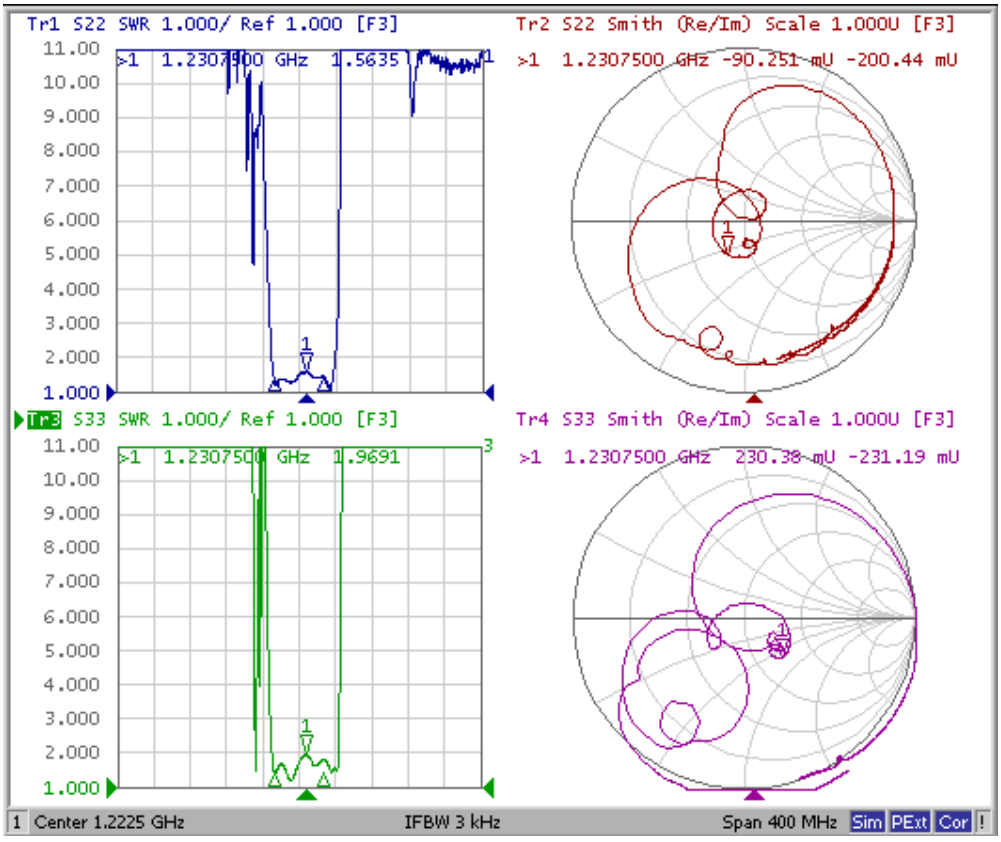
L2 Full Range



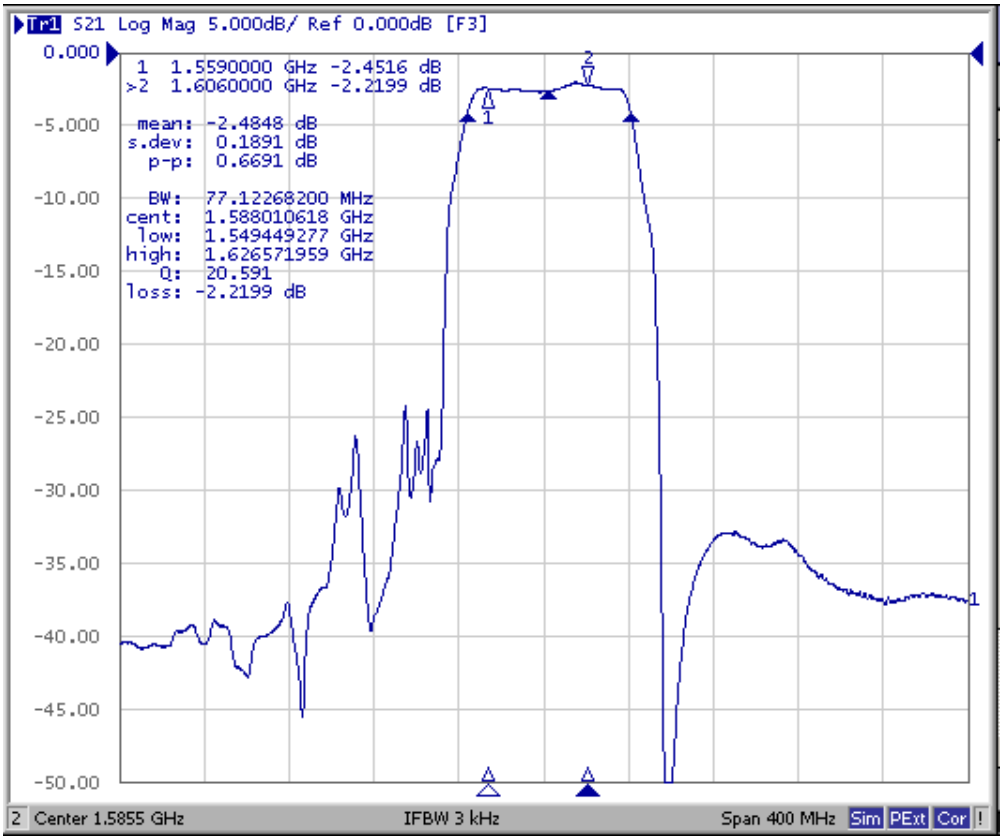
L2 Group Delay



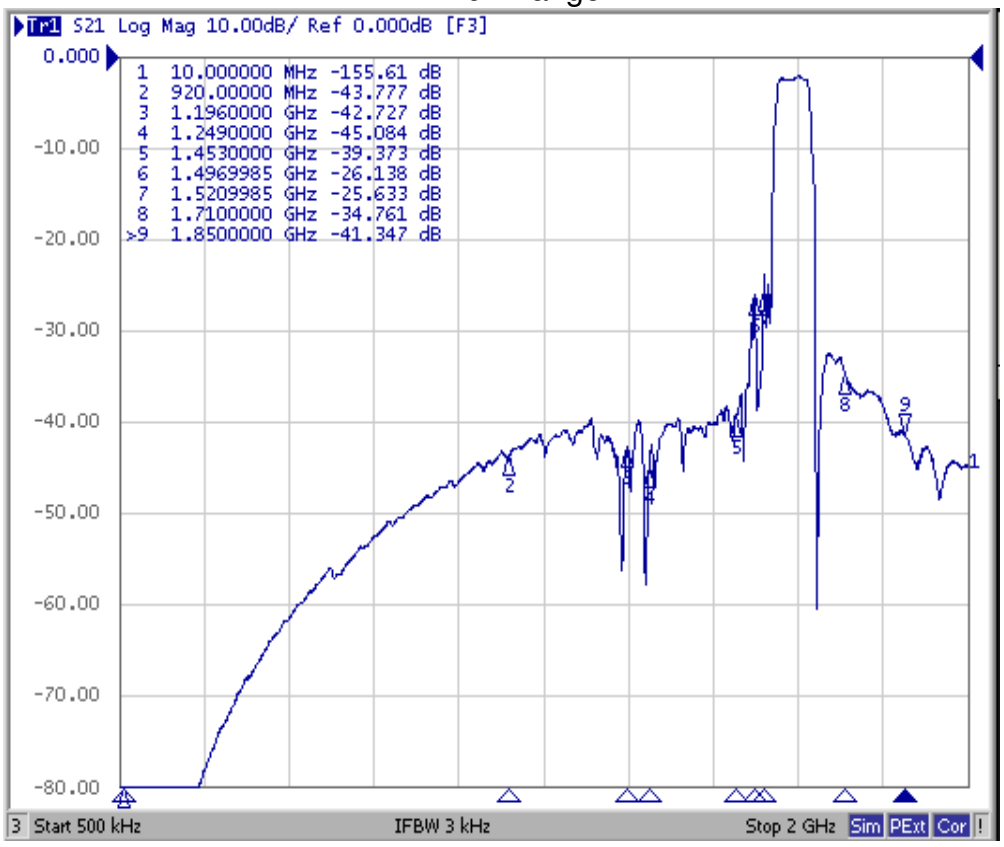
L2 Reflective Characteristic



L1 Pass Band

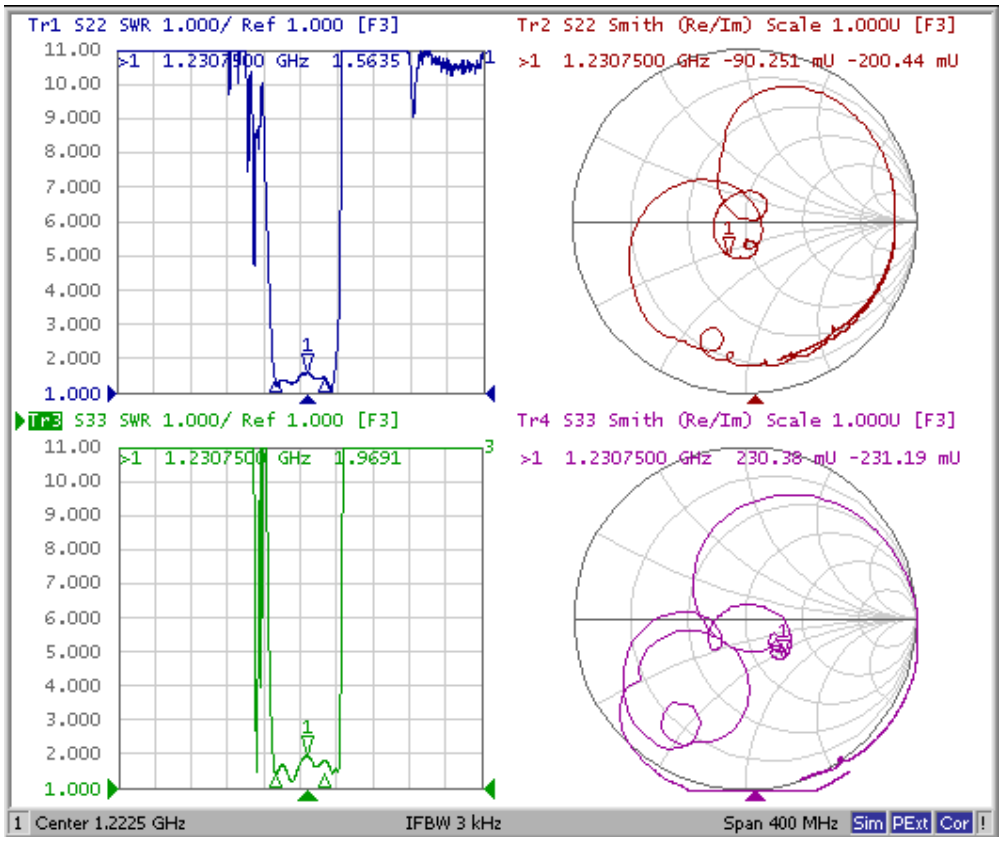


L1 Full Range

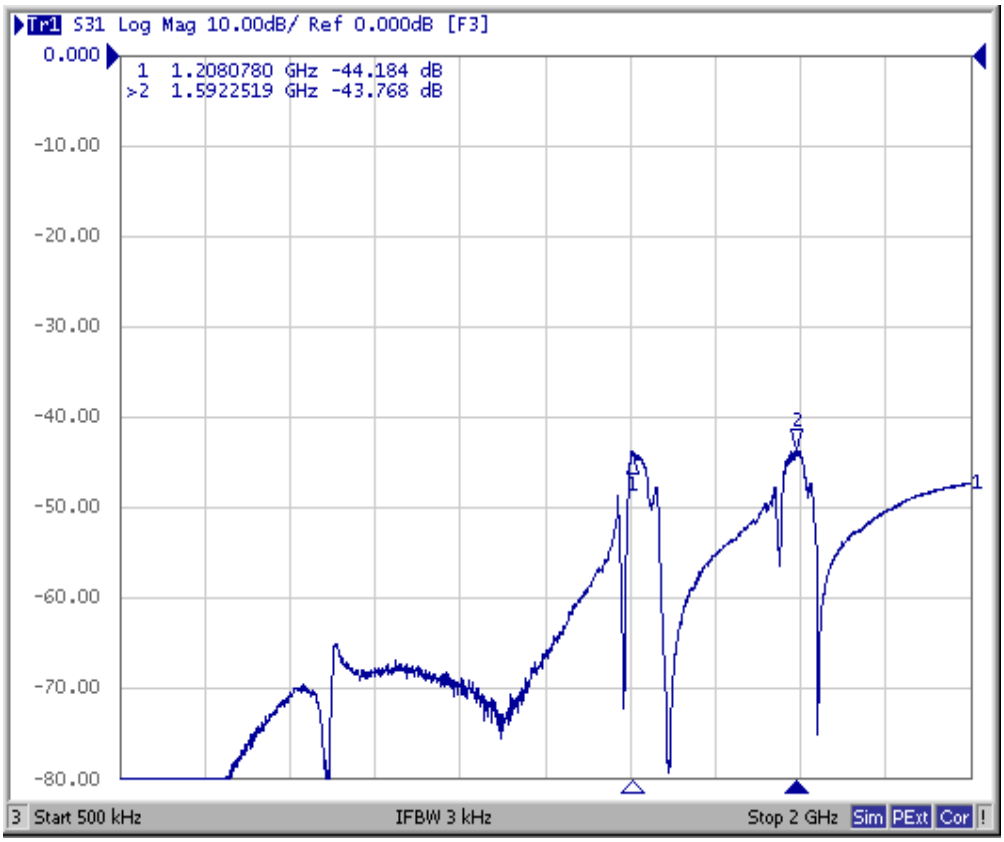


L1 Group Delay

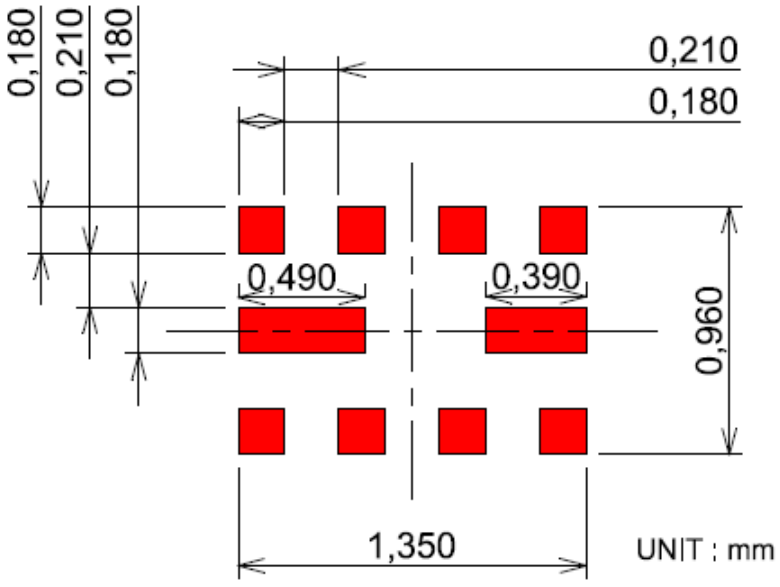
L1 Reflective Characteristic



Isolation

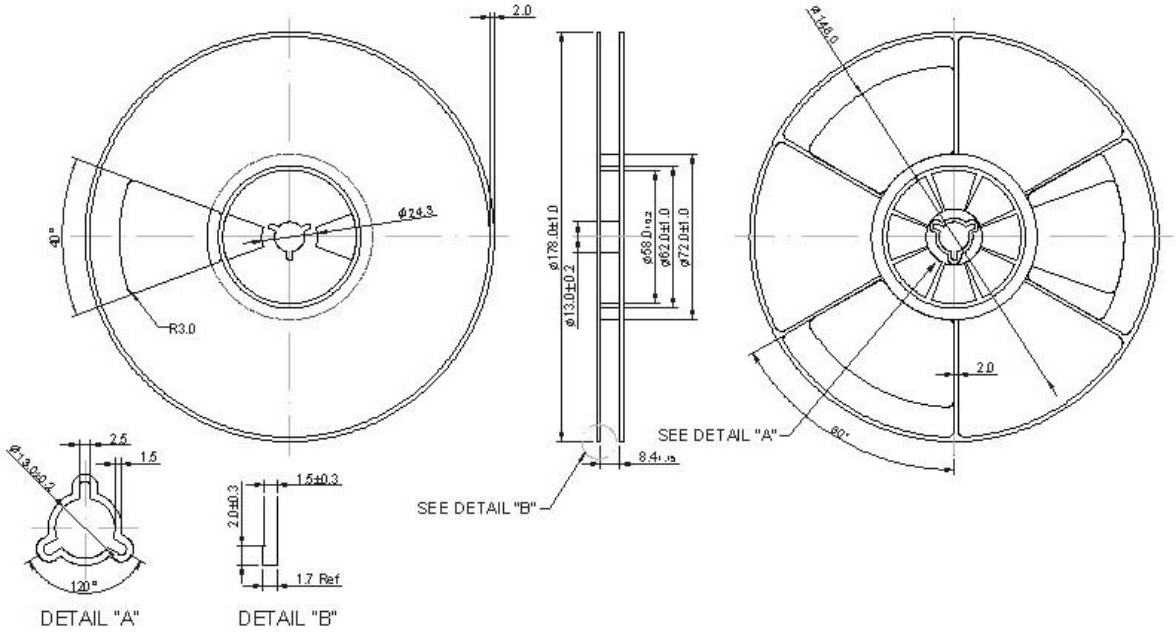


F. PCB FOOTPRINT:

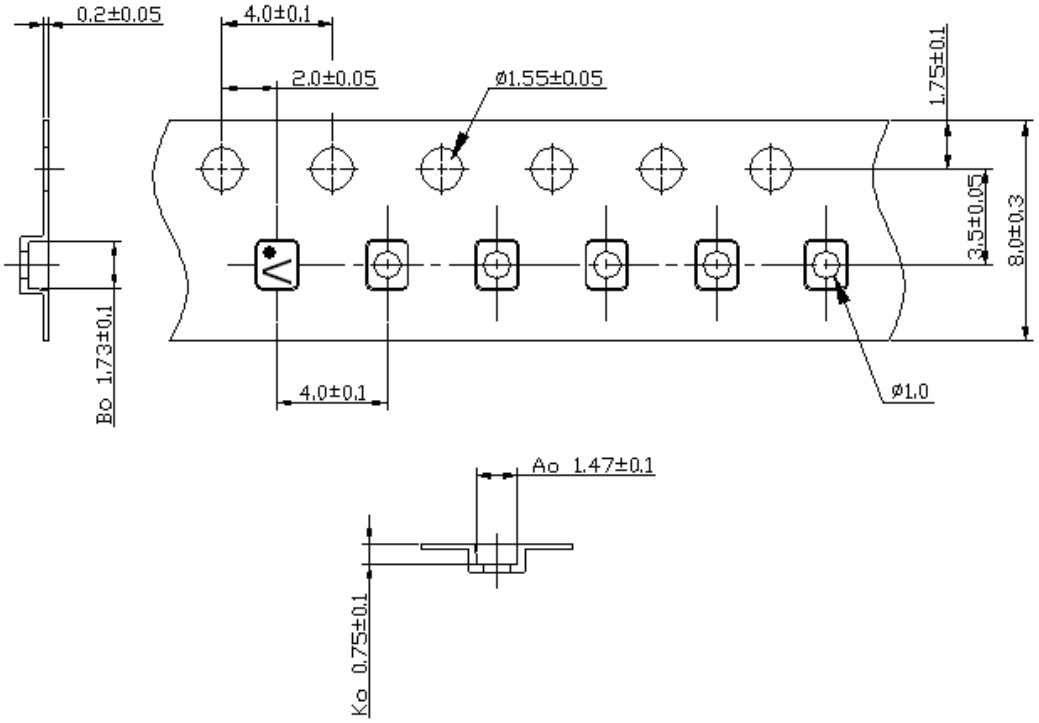


G. PACKING:

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.