

Product Specifications Approval Sheet

Product Description: 500MHz 0.15MHz BW SMD 3.8 x 3.8 mm SAW IF Filter

TST Parts No.:TB1157A

Customer Parts No.:_____

Company:_____
Division:_____
Approved by :_____
Date:_____

Checked by:_____Kazuma Lee *Kazuma Lee*

Approval by:_____Andy Yu *Andy Yu*

Date:_____04 / 21 / 2021

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.

SAW Filter 500 MHz

MODEL NO.:TB1157A

Rev No.2

A. MAXIMUM RATING:

1. Input Power Level: 10 dBm
2. DC Voltage : 3V
3. Operating Temperature: -30°C to +85°C
4. Storage Temperature: -40°C to +85°C
5. Implementation of IIP3: 30dBm min.
6. Moisture Sensitive Level (MSL): Level 1

RoHS Compliant

Lead-free soldering

Electrostatic Sensitive Device

B. ELECTRICAL CHARACTERISTICS:

Item	Unit	Min.	Typ.	Max.
Center frequency Fc	MHz	-	500	-
Max. Insertion loss (Fc ± 75 kHz) (excluding loss in matching elements) IL	dB	-	4.2	6.0
Max. Insertion loss (Fc ± 75 kHz) (Including loss in matching elements) IL	dB	-	4.7	7.5
Passband Ripple (Fc ± 75 kHz)	dB	-	0.3	2
Group Delay Ripple (Fc ± 75 kHz)	μ sec	-	0.4	2
Relative Attenuation (relative to IL)				
Fc - 100 to Fc - 1.5 MHz	dB	35	53	-
Fc - 1.5 to Fc - 0.8 MHz	dB	20	46	-
Fc - 0.8 to Fc - 0.6 MHz	dB	10	38	-
Fc - 0.6 to Fc - 0.4 MHz	dB	7	25	-
Fc + 0.4 to Fc + 0.6 MHz	dB	7	25	-
Fc + 0.6 to Fc + 0.8 MHz	dB	10	37	-
Fc + 0.8 to Fc + 1.5 MHz	dB	20	46	-
Fc + 1.5 to Fc + 100 MHz	dB	35	53	-
Turnover To °C		10	25	40
Temperature coefficient of frequency TCf		-0.036 ppm/K ²		

C. FREQUENCY CHARACTERISTICS:

(1) Wide band Response:

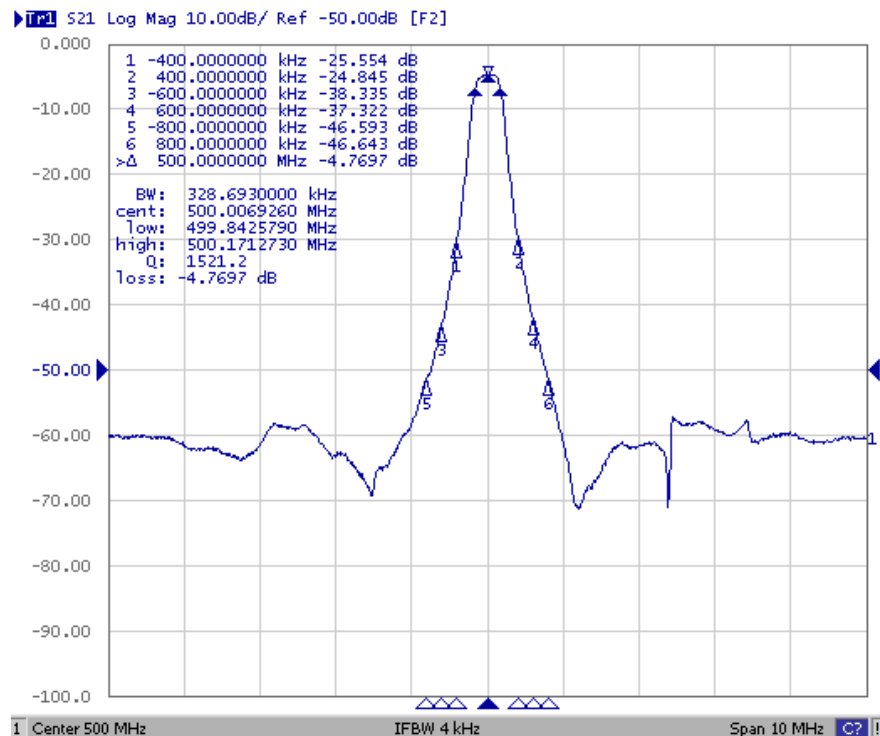


Fig1. Horizontal: 1MHz/Div Vertical: 10dB/Div

(2) Pass band Response and Group Delay Response:

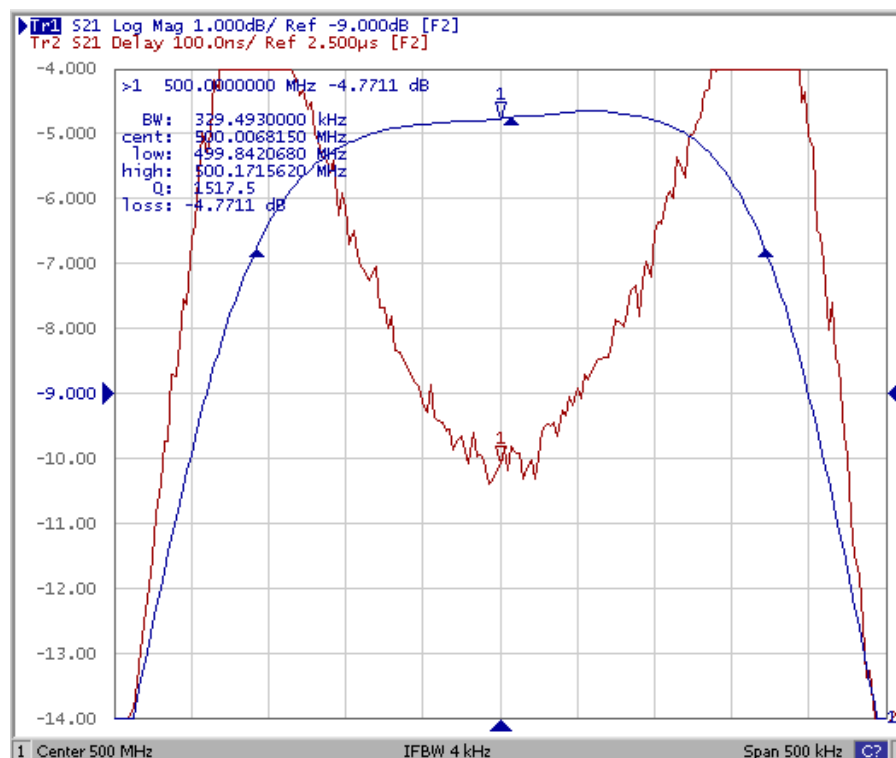
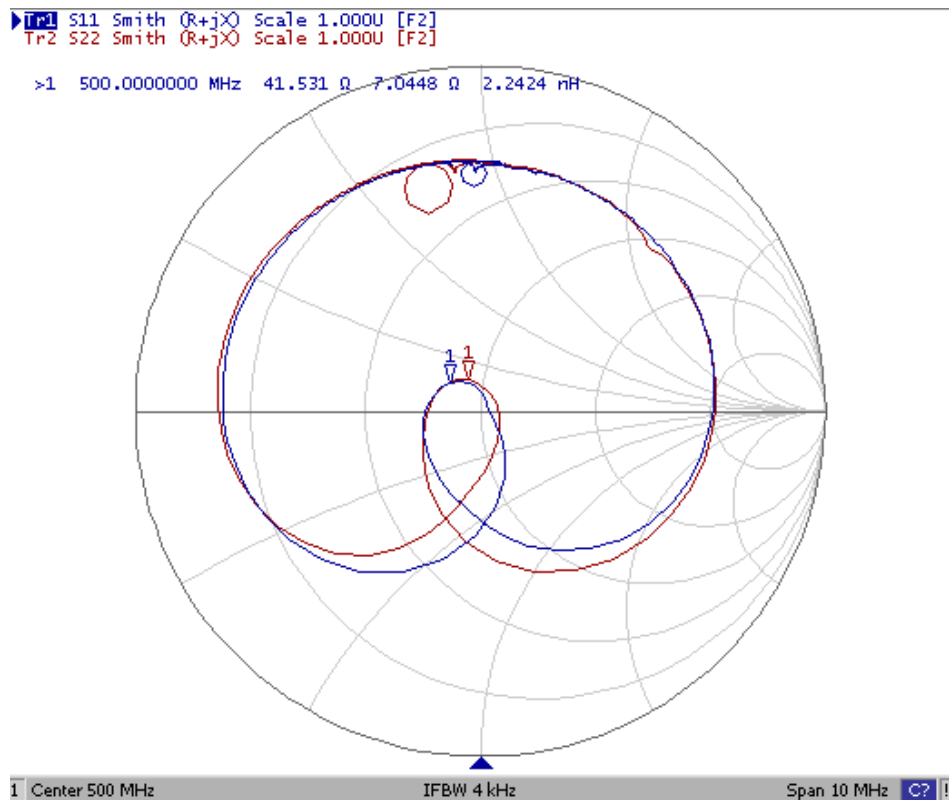


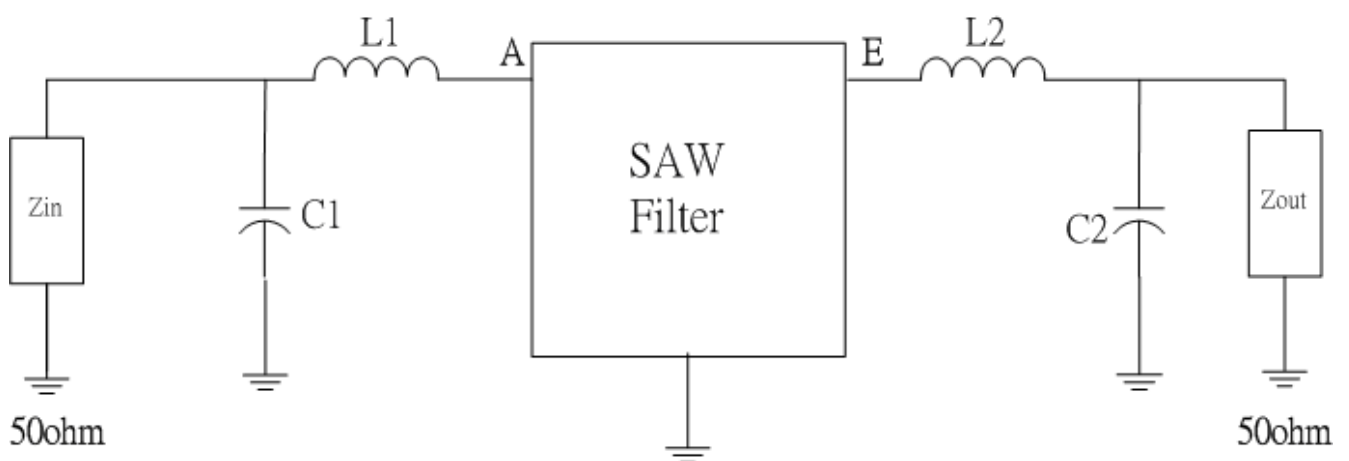
Fig2. Horizontal: 0.05MHz/Div Vertical: 1dB/Div
Vertical: 100ns/Div

(3) Smith Chart:



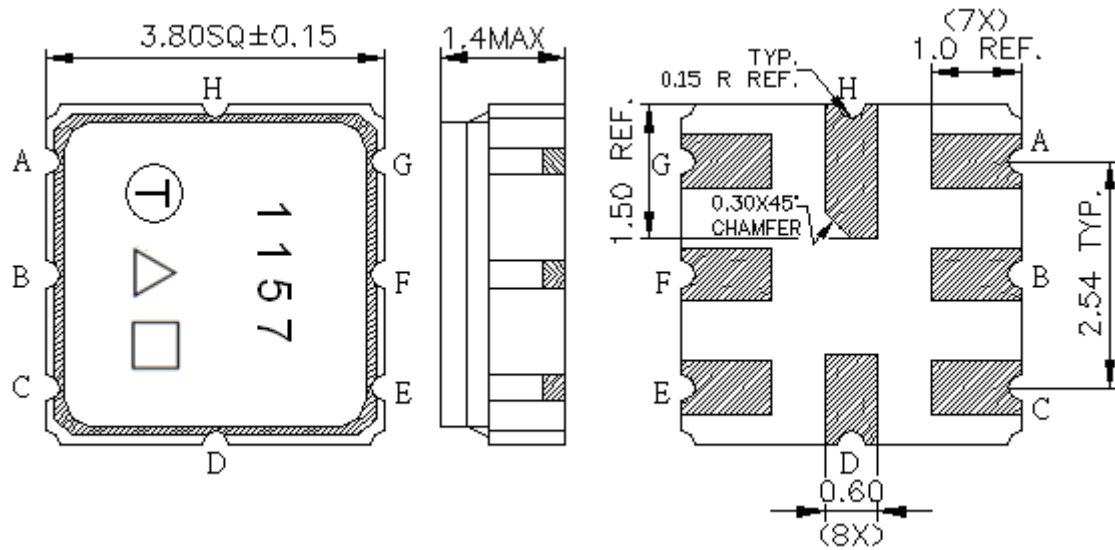
D. MEASUREMENT CIRCUIT:

50 Ohm Test circuit (single-ended / single-ended)



L1=47nH L2=47nH C1=4pF C2=4pF

E.OUTLINE DRAWING:



#A: Input
#B: Input ground
#E: Output
#F: Output ground
#C, D, G, H: To be grounded
△ Year code
□ Date code
Unit mm

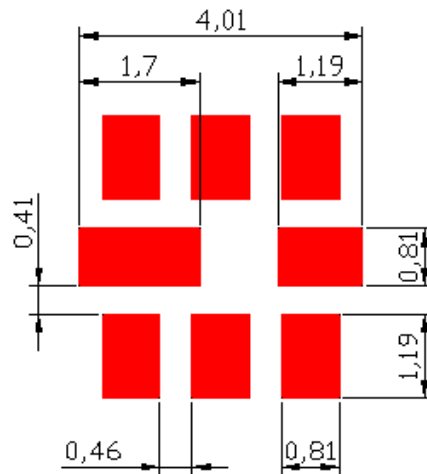
△ : Product Year Code: 2Year Cycle

Year	2021 2023	2022 2024
Product Code	B	b

□ : Data Code

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

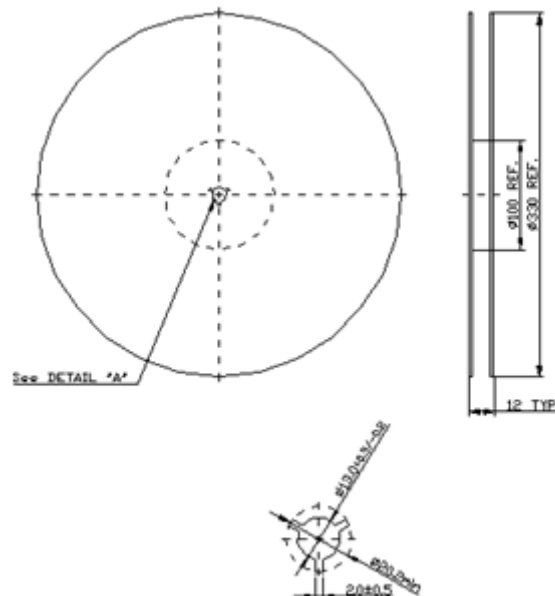
F. PCB FOOTPRINT:



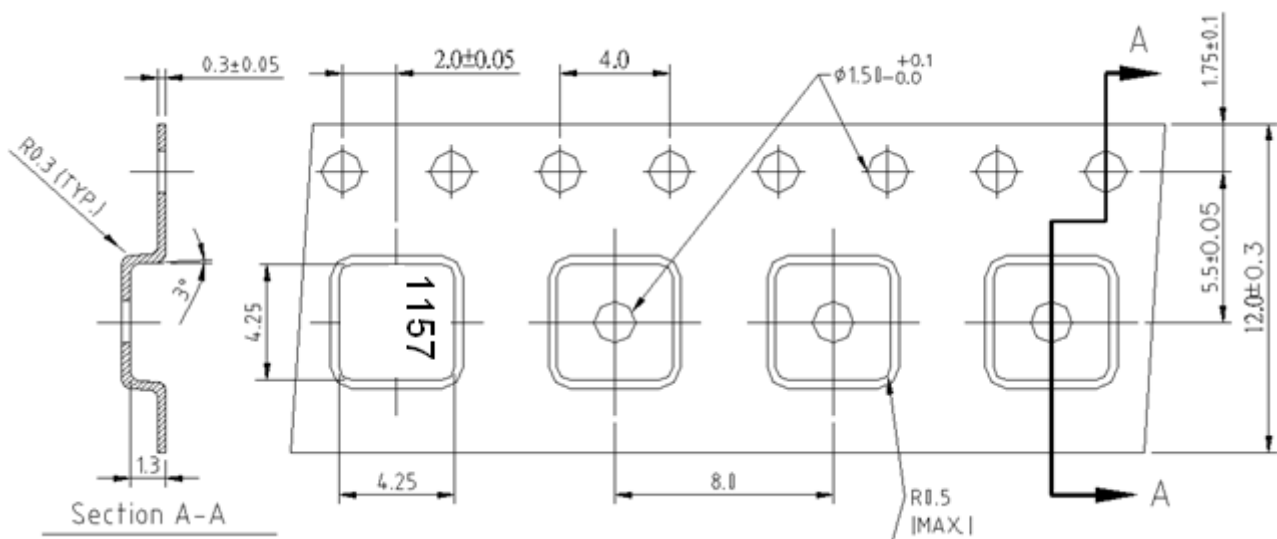
G. PACKING:

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°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.

