

SAW Filter 500.0MHz
Part No: MP08392

Model: TB1157A
Rev No: 1

A. MAXIMUM RATING:

Electrostatic Sensitive Device

1. Input Power Level: 10dBm
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.

B. ELECTRICAL CHARACTERISTICS:

Item	Unit	Min.	Typ.	Max.
Center frequency Fc	MHz	-	500	-
Max. Insertion loss (Fc ±75kHz) IL (excluding loss in matching elements)	dB	-	4.2	6.0
Max. Insertion loss (Fc ±75kHz) IL (including loss in matching elements)	dB	-	4.7	7.5
Passband Ripple (Fc ±75 kHz)	dB	-	0.3	2
Group Delay Ripple (Fc ±75 kHz)	µsec	-	0.4	2
Relative Attenuation (relative to IL)				
Fc -100 to Fc -1.5MHz	dB	35	53	-
Fc -1.5 to Fc -0.8MHz	dB	20	46	-
Fc -0.8 to Fc -0.6MHz	dB	10	38	-
Fc -0.6 to Fc -0.4MHz	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 +1.5MHz	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			

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C. FREQUENCY CHARACTERISTICS:

1. Wide band Response:

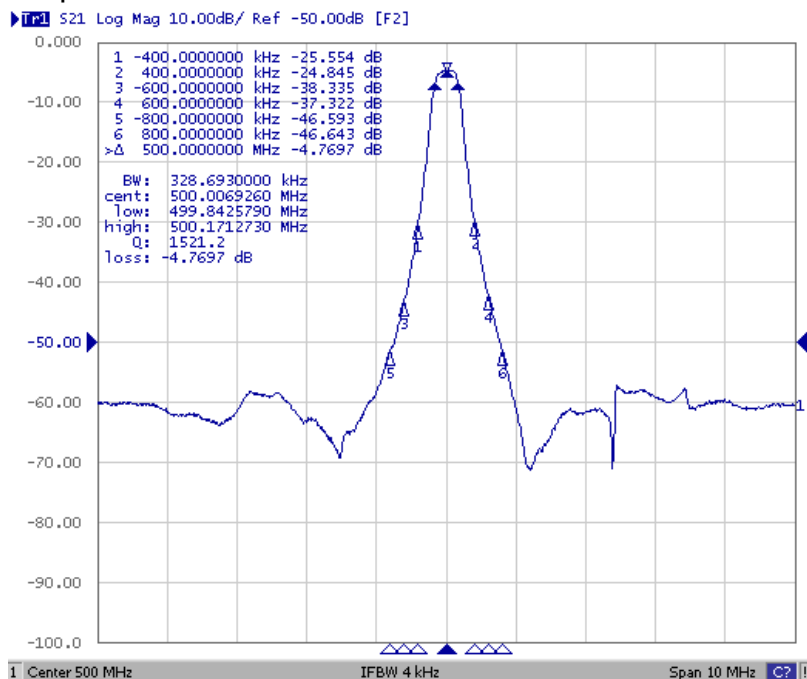


Fig. 1: Horizontal: 1MHz / Div, Vertical: 10dB / Div

2. Pass band Response and Group Delay Response:

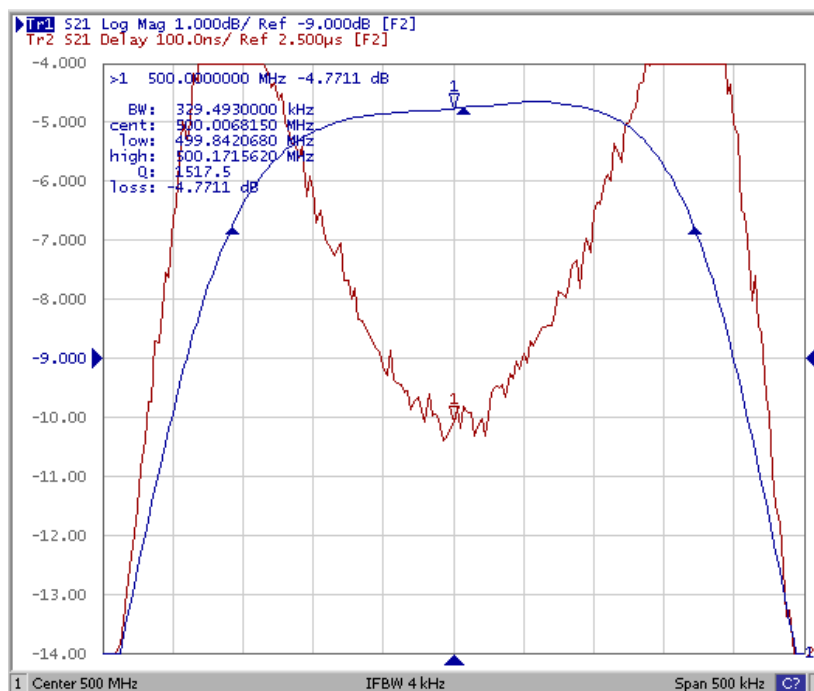
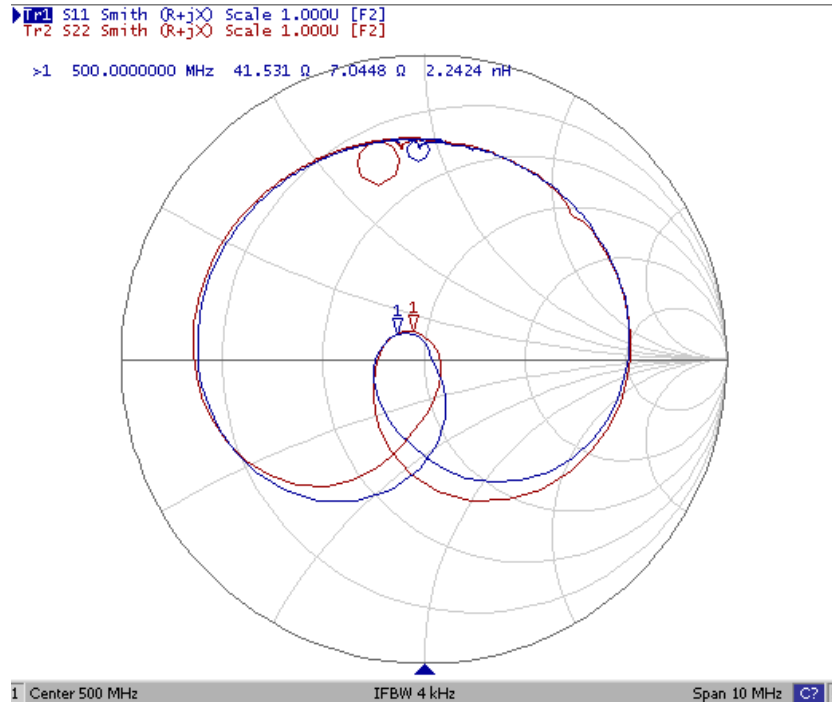


Fig. 2: Horizontal: 0.05MHz / Div, Vertical: 1dB / Div, Vertical: 100ns / Div

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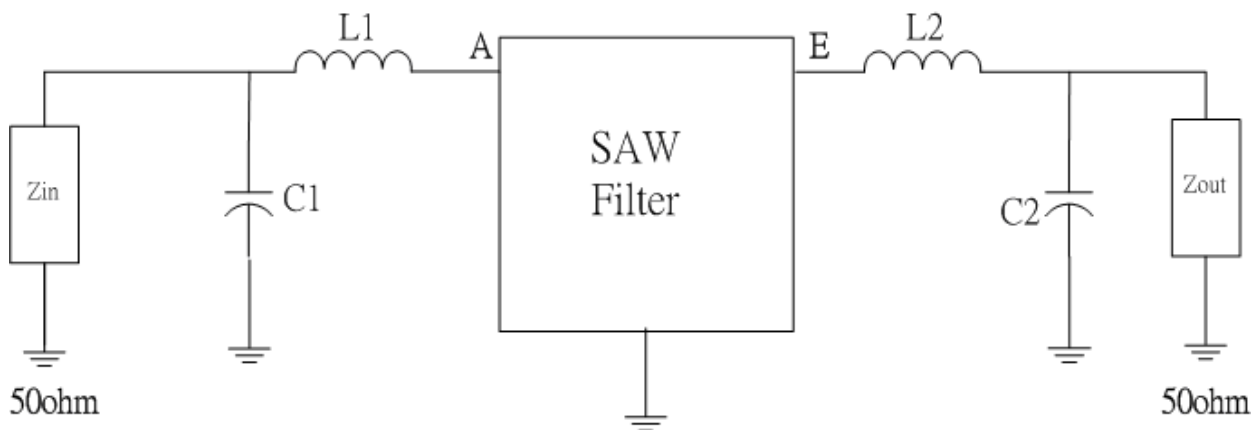
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3. Smith Chart:



D. MEASUREMENT CIRCUIT:

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

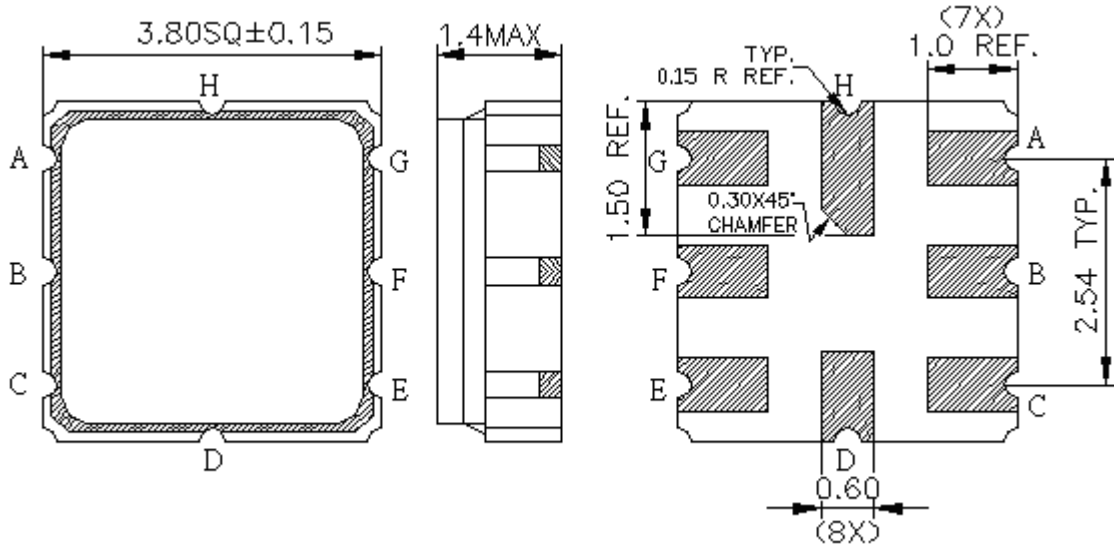


L1 = 47nH, L2 = 47nH, C1 = 4pF, C2 = 4pF

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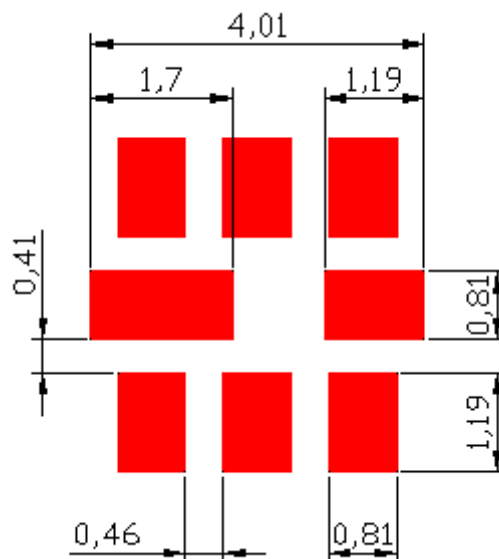
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E. OUTLINE DRAWING:



- A Input
 - B Input ground
 - E Output
 - F Output ground
 - C, D, G, H: To be grounded
- Unit mm

F. PCB FOOTPRINT:

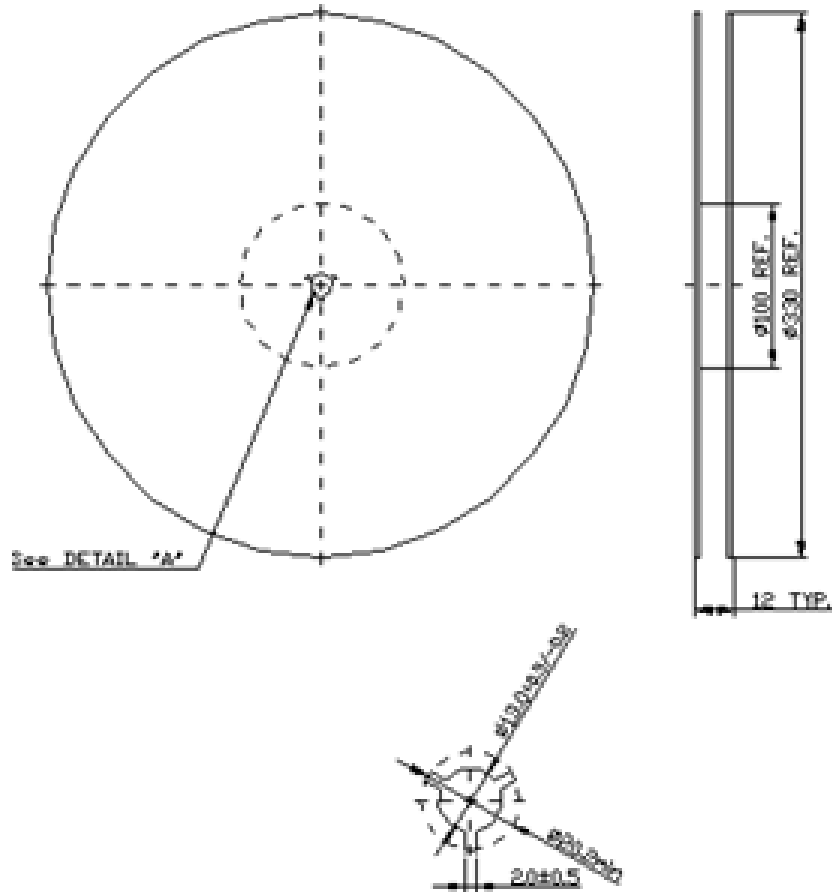


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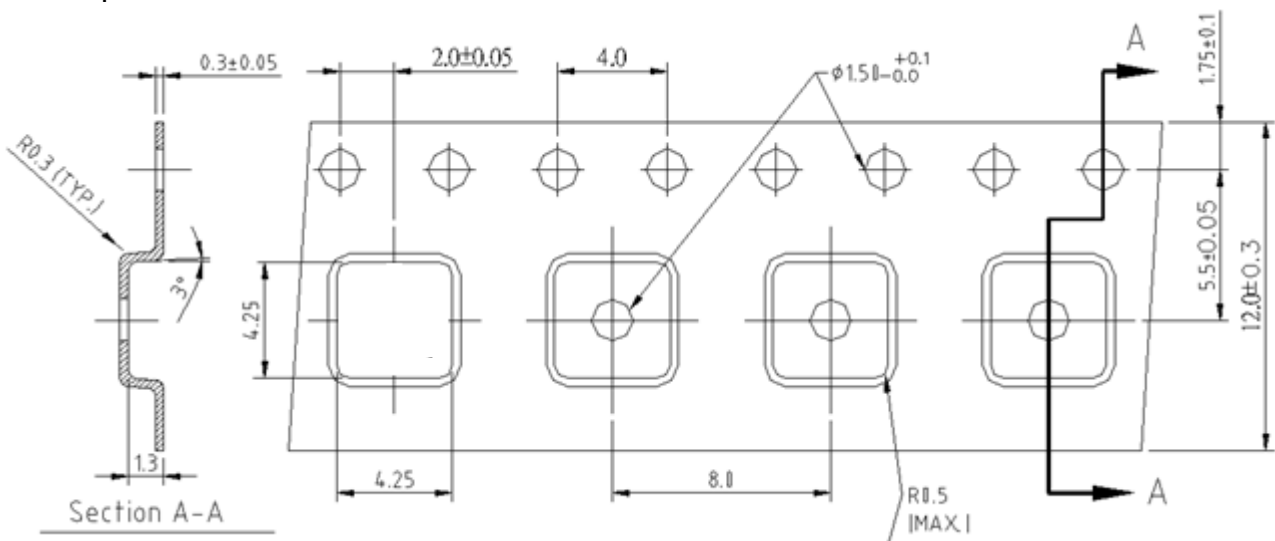
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G. PACKING:

1. Reel Dimensions



2. Tape Dimensions



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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 245 ~ 260°C peak (min. 10 sec).
4. Time: 2 times.

