

**SAW Filter 213.30MHz**  
**Part No: MP05866**

**Model: TB0939A**  
**Rev No: 2**

**A. MAXIMUM RATING:**

1. Operating temperature range: -40°C to 80°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level: 10dBm
4. Maximum DC Voltage: 10V

**B. CHARACTERISTICS:**

Item	Unit	Min.	Typ.	Max.
Center frequency Fc	MHz	-	213.3	-
Insertion Loss IL	dB	-	8.3	12.5
-3dB bandwidth	MHz	7.0	8.0	-
-10dB bandwidth	MHz	-	9.8	-
-30dB bandwidth	MHz	-	11.6	-
-40dB bandwidth	MHz	-	12.2	13.4
Passband Ripple Fc ± 2MHz	dB	-	0.5	1.0
Group Delay variation Fc ± 2MHz	nsec	-	70	120
Absolute Delay	unec	-	0.74	-
Attenuation (Reference level from minimum Insertion loss)				
DC ~ 193.3MHz	dB	40	52	-
233.3 MHz ~ 600MHz	dB	40	52	-
Temperature Coefficient	ppm/°C	-	-18	-
Source Impedance	Ohm	-	50	-
Load Impedance	Ohm	-	50	-

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**C. FREQUENCY CHARACTERISTICS:**

1. Near band Response: (span 100MHz)

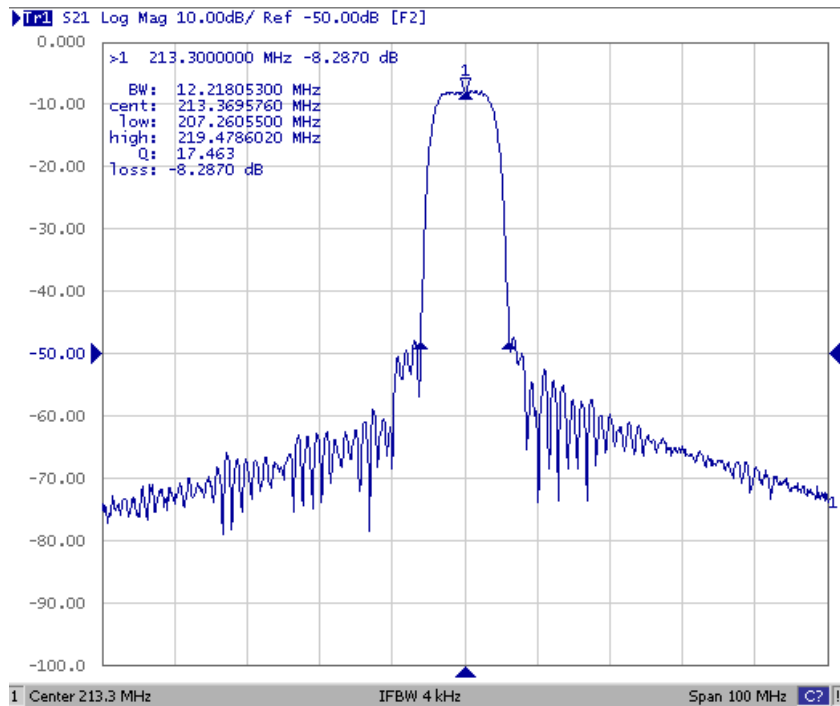


Fig. 1. Horizontal: 10MHz / Div, Vertical: 10Db / Div

2. Pass band Response and Group Time Delay response:

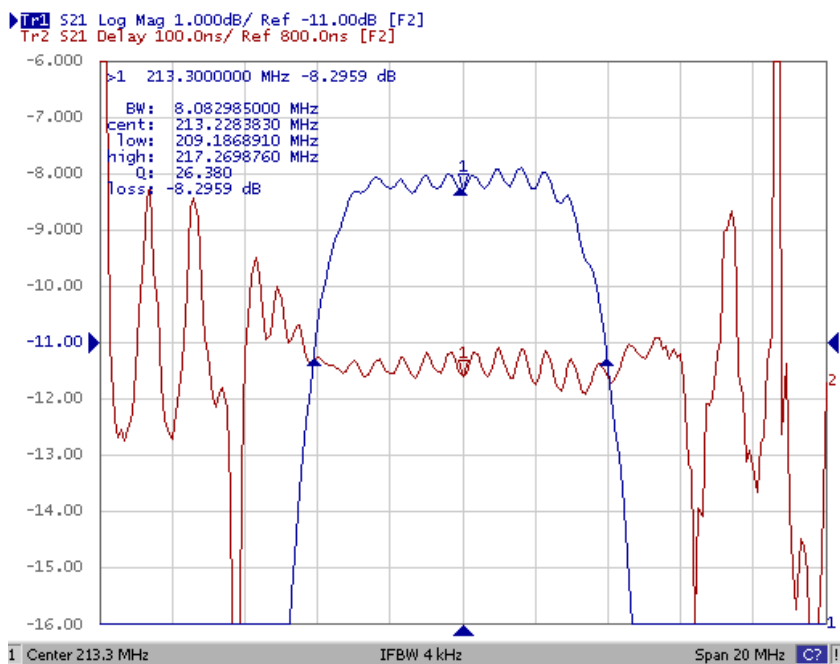
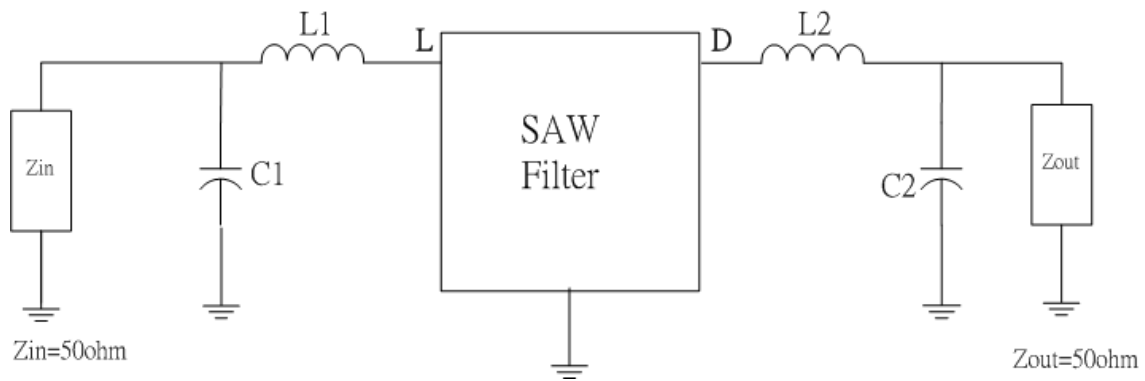


Fig. 2. Horizontal: 2MHz / Div, Vertical: 1dB / Div, Vertical: 100ns / Div

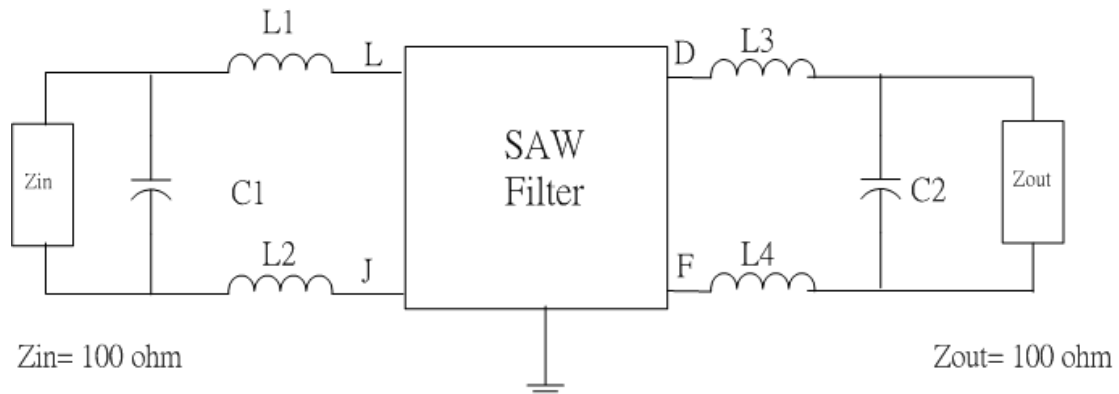
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**D. MATCHING CIRCUIT:**



$$L1 = 39\text{nH} \quad L2 = 43\text{nH} \quad C1 = 24\text{pF} \quad C2 = 24\text{pF}$$

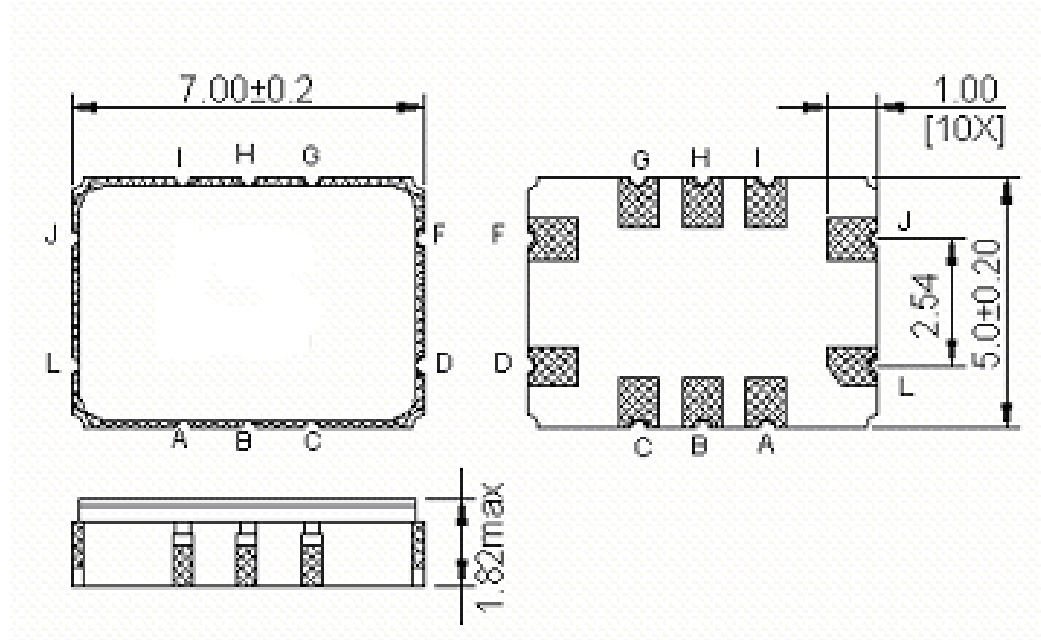


$$L1 = L2 = 27\text{nH} \quad L3 = L4 = 27\text{nH} \quad C1 = 18\text{pF} \quad C2 = 18\text{pF}$$

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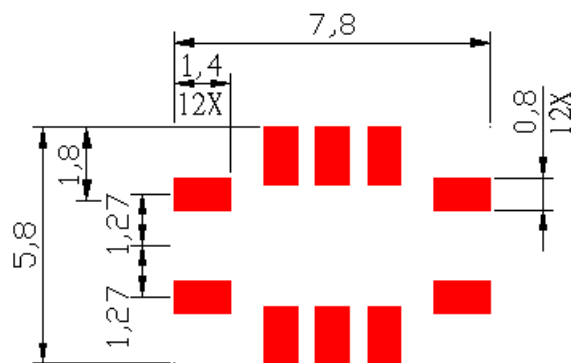
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**E. OUTLINE DRAWING:**



- L: RF input
  - J: RF balance input or to be ground
  - D: RF output
  - F: RF balance output or to be ground
  - A, B, C, G, H, I: Ground
- Unit: mm

**F. PCB FOOTPRINT:**

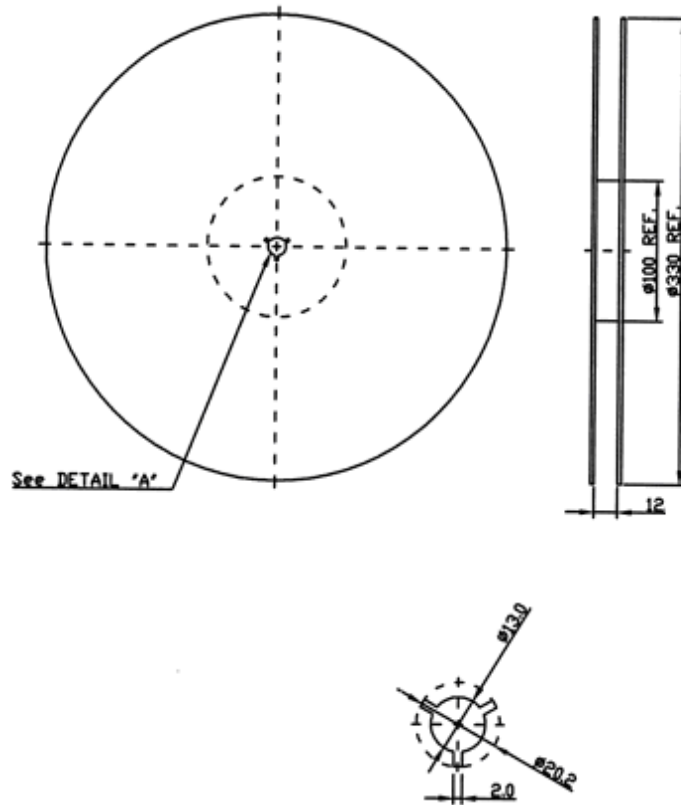


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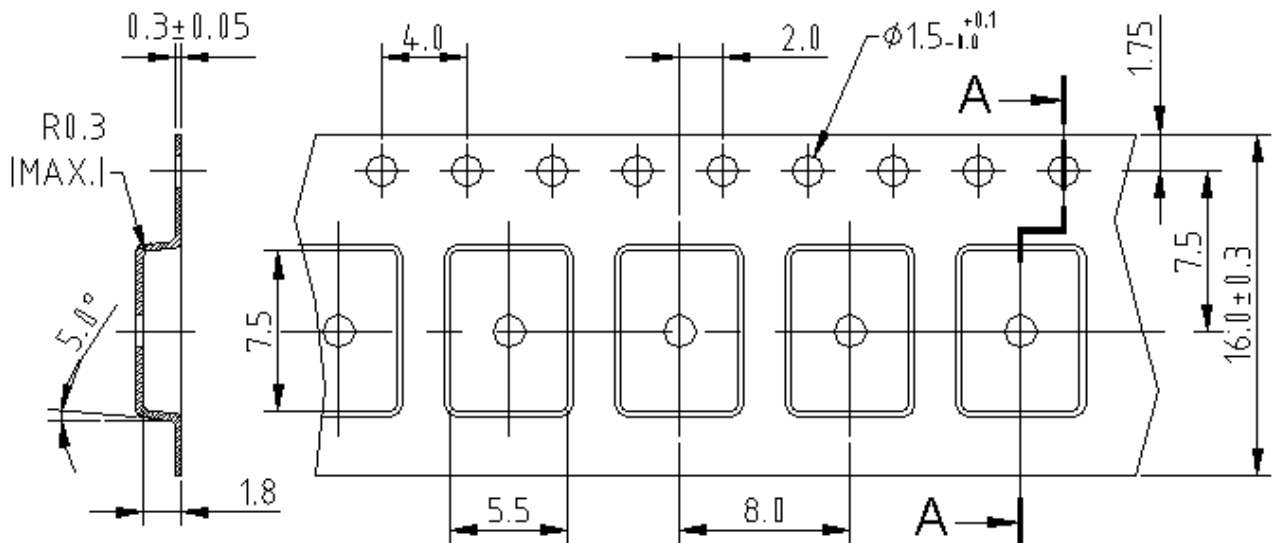
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**G. PACKING:**

1. Reel Dimension



2. Tape Dimension



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**H. RECOMMENDED REFLOW PROFILE:**

