

**SAW Filter 113.0MHz**  
**Part No: MP05708**

**Model: TB0890A**  
**Rev No: 1**

**A. MAXIMUM RATING:**

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

**B. CHARACTERISTICS:**

Ambient Temperature: 25°C

Item	Unit	Min.	Typ.	Max.
Center frequency Fc	MHz	-	113	-
Insertion Loss IL	dB	-	13.0	14.5
-1.5dB bandwidth	MHz	-	1.0	-
-35dB bandwidth	MHz	-	2.8	3.8
Passband Ripple Fc ± 100kHz	MHz	-	0.1	1.0
Group Delay Variation Fc ± 100kHz	nsec	-	40	150
Absolute Delay	usec	-	0.8	1.2
Temp. Coefficient	ppm/°C <sup>2</sup>	-	-0.036	-
Source Impedance	Ohm	-	50	-
Load Impedance	Ohm	-	50	-

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**C. FREQUENCY CHARACTERISTICS:**

1. Wide band Response: (span 50MHz)

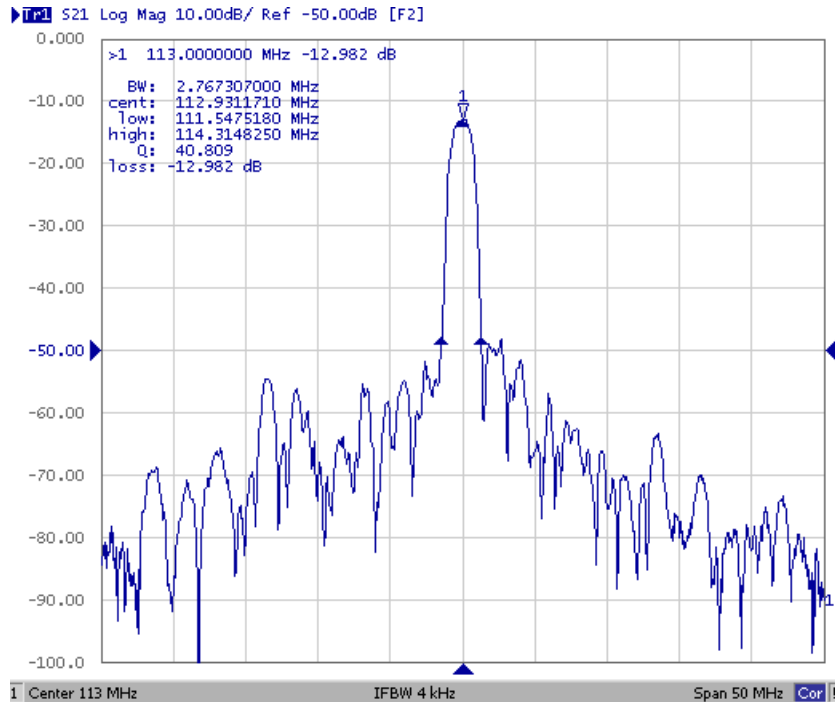


Fig. 1. Horizontal: 5MHz/Div, Vertical: 10dB/Div

2. Pass band Response and Group Delay Response:

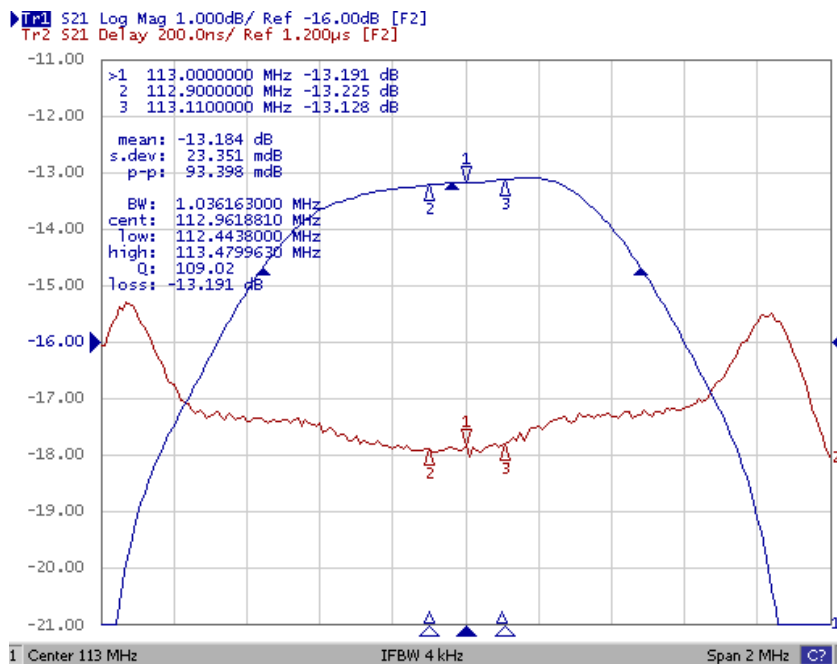
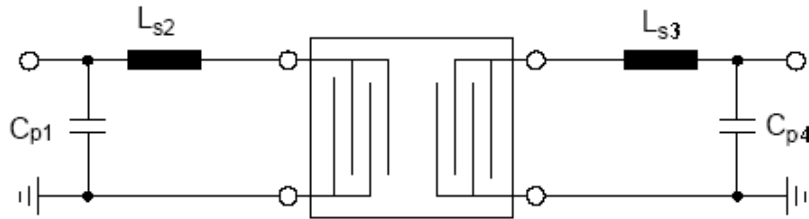


Fig. 2. Horizontal: 0.2MHz/Div, Vertical: 1dB/Div, Vertical: 200ns/Div

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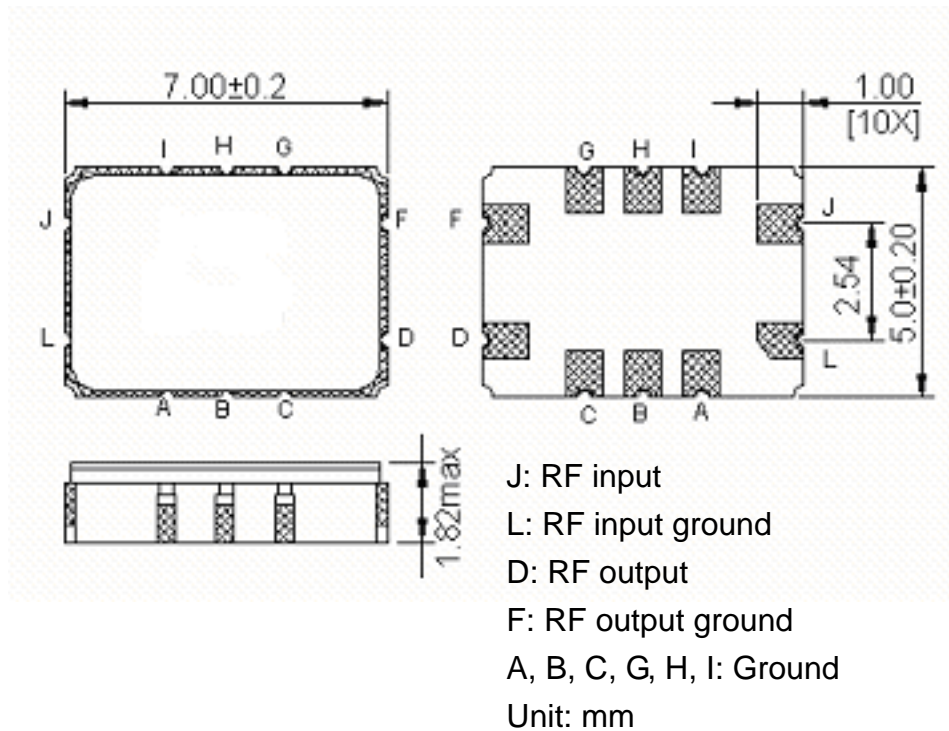
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**D. MATCHING CIRCUIT:**

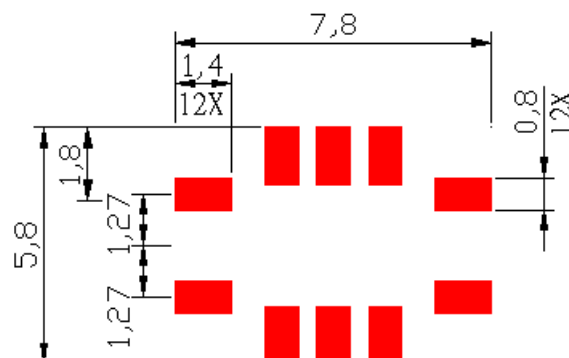


$$L_{s2} = 390\text{nH} + 12\text{nH} \quad L_{s3} = 390\text{nH} + 390\text{nH} \quad C_{p1} = 47\text{pF} \quad C_{p4} = 39\text{pF}$$

**E. OUTLINE DRAWING:**



**F. PCB FOOTPRINT:**

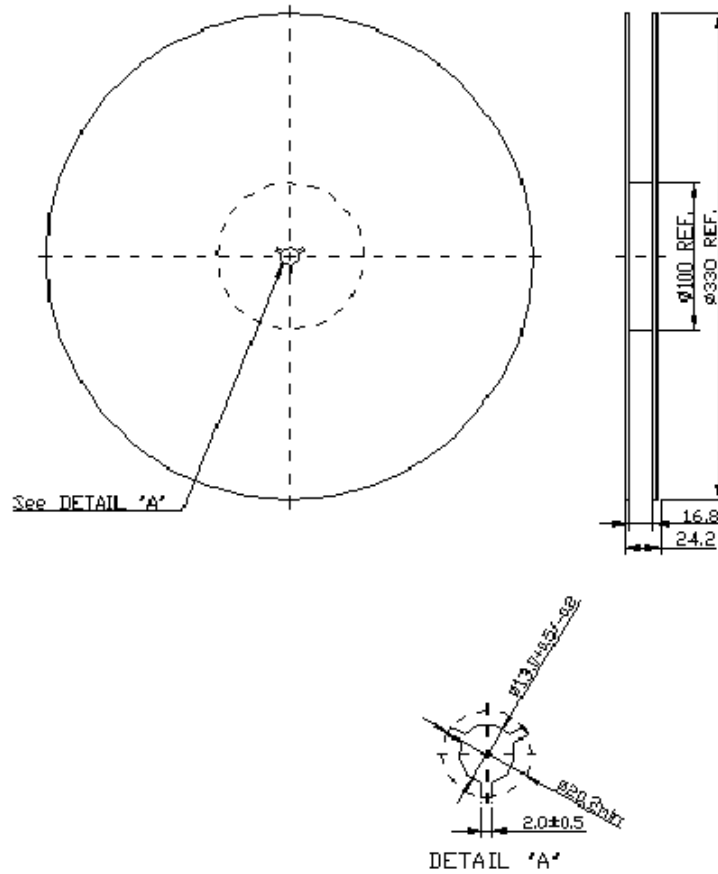


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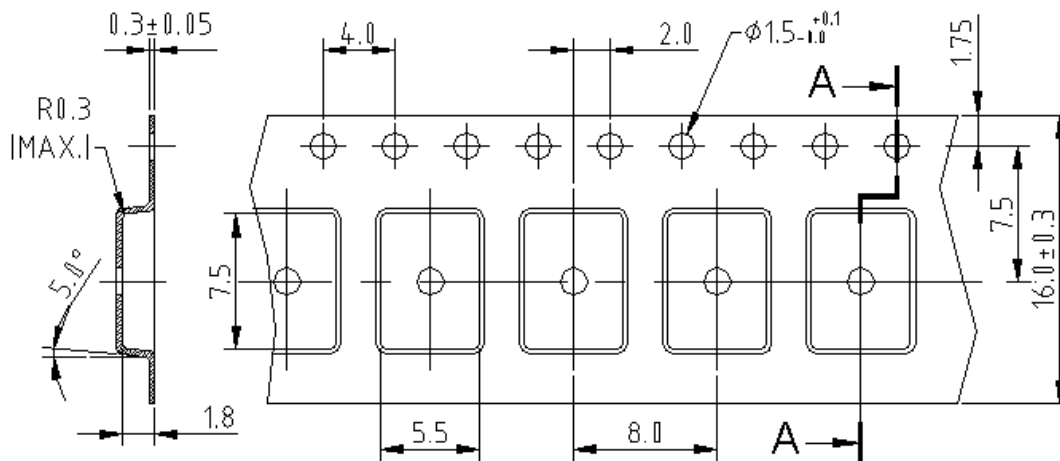
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**G. PACKING:**

1. Reel Dimension



2. Tape Dimension



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**H. RECOMMENDED REFLOW PROFILE:**

