

SAW Filter 138.240MHz
Part No: MP03445

Model: TB0820A
Rev No: 1

A. MAXIMUM RATING:

1. Operating Temperature: -10°C ~ 80°C
2. Storage Temperature: -40°C ~ +85°C
3. Input Power Level: 10dBm

B. CHARACTERISTICS:

Item	Unit	Min.	Typ.	Max.
Center Frequency	MHz	-	138.24	-
Insertion Loss IL	dB	-	25.0	26.0
Upper -0.6dB frequency	MHz	176.74	178.77	-
Lower -0.6dB frequency	MHz	-	97.78	99.74
Upper -30dB frequency	MHz	-	186.90	190.4
Lower -30dB frequency	MHz	86.08	94.80	-
Amplitude Ripple Fc ± 38.5MHz	dB	-	0.52	0.85
Amplitude Ripple at any 5MHz adjacent segment within 77MHz	dB	-	0.3	0.5
Group delay variation at any 5MHz adjacent segment within 77MHz	nS	-	10	20
Relative Attenuation				
DC ~ 80MHz	dB	30	40	-
195 ~ 280MHz	dB	30	34	-
280 ~ 420MHz	dB	20	24	-
420 ~ 600MHz	dB	30	35	-
Source/Load Impedance	Ω	-	50	-
Temperature coefficient	ppm/°C	-	-72	-

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C. FREQUENCY CHARACTERISTICS:

1. Narrow band Response: (span 200MHz)

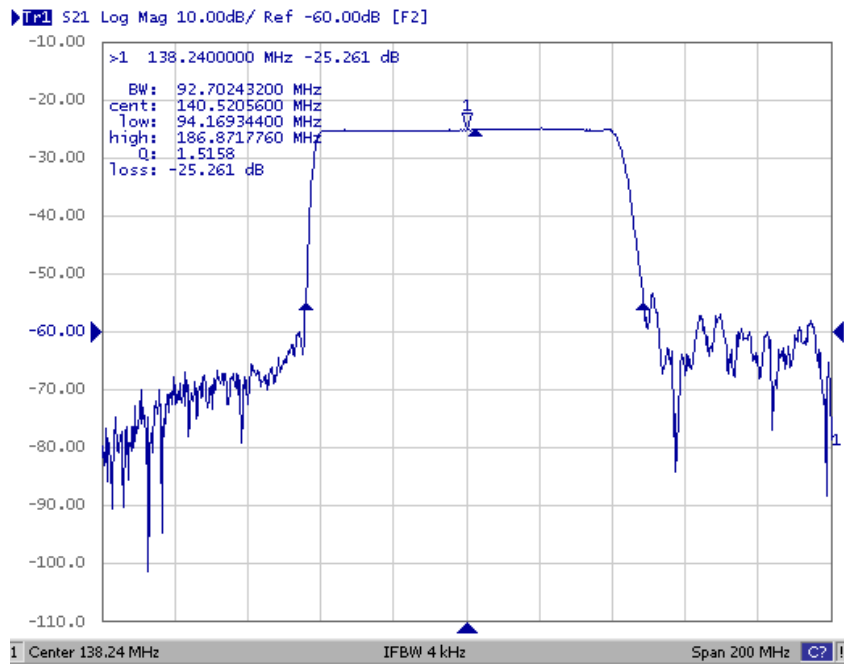


Fig. 1. Horizontal: 20MHz/Div, Vertical: 10dB/Div

2. Pass band Response and Group Time Delay response:

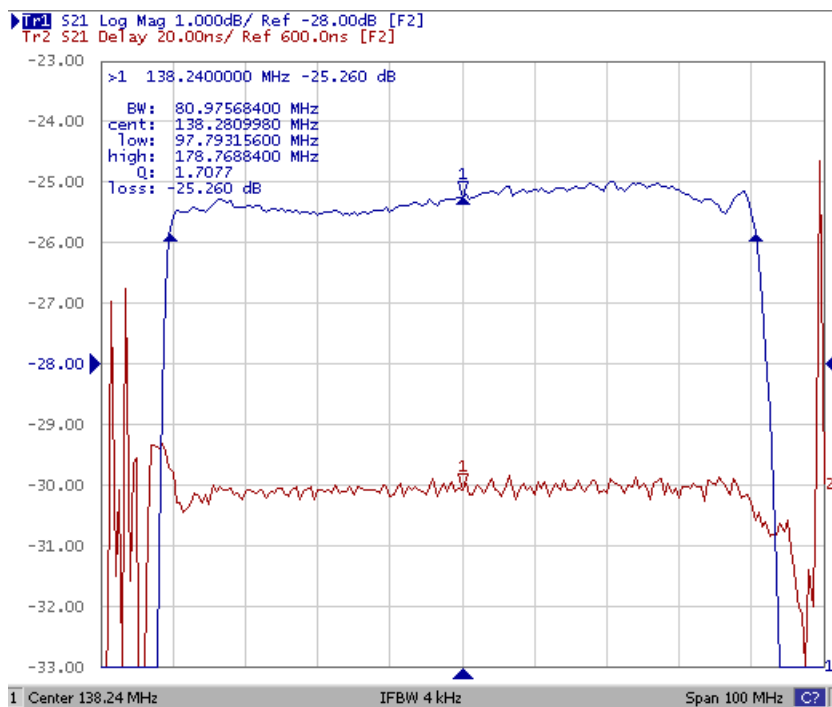


Fig. 2. Horizontal: 10MHz/Div, Vertical: 1dB/Div, Vertical: 20ns/Div

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3. Wide band Response: (span 600MHz)

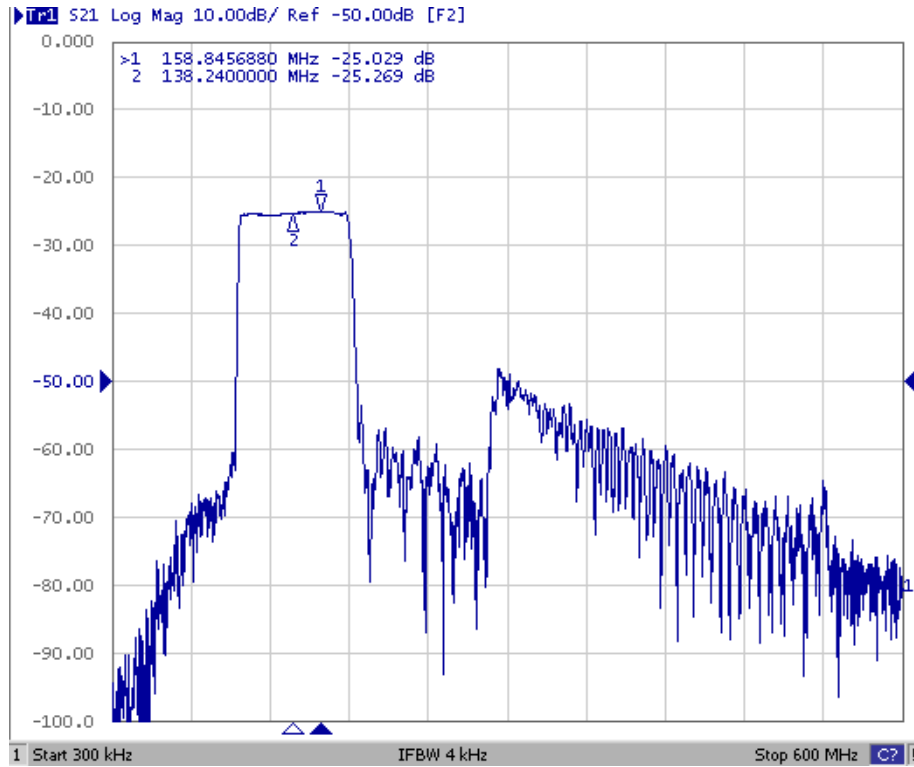
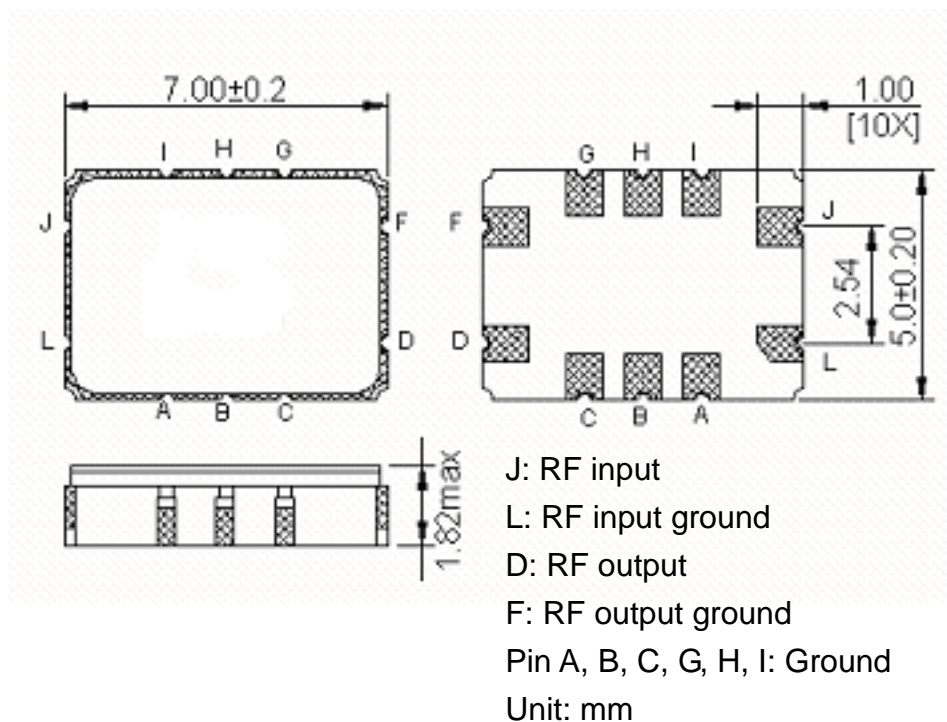


Fig. 3. Horizontal: 60MHz/Div, Vertical: 10dB/Div

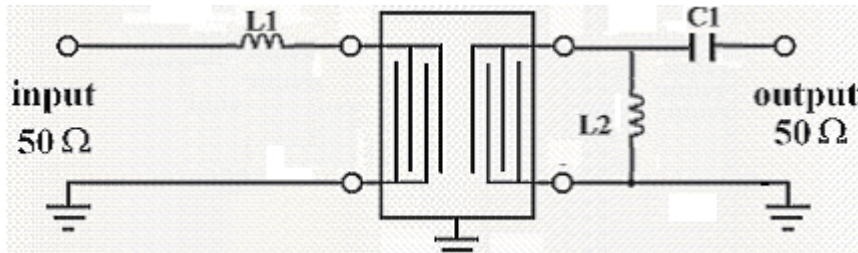
D. OUTLINE DRAWING:



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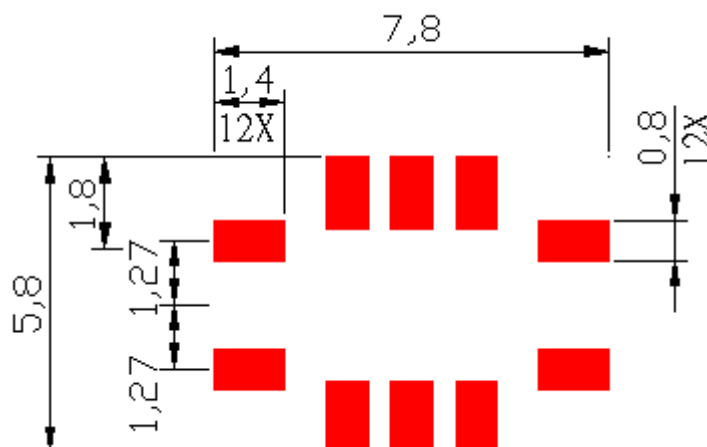
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E. MATCHING CIRCUIT:



$L1 = 47\text{nH}$ $L2 = 120\text{nH}$ $C1 = 56\text{pF}$
 $Z_{IN} = 50\Omega$ $Z_{OUT} = 50\Omega$

F. PCB FOOTPRINT:

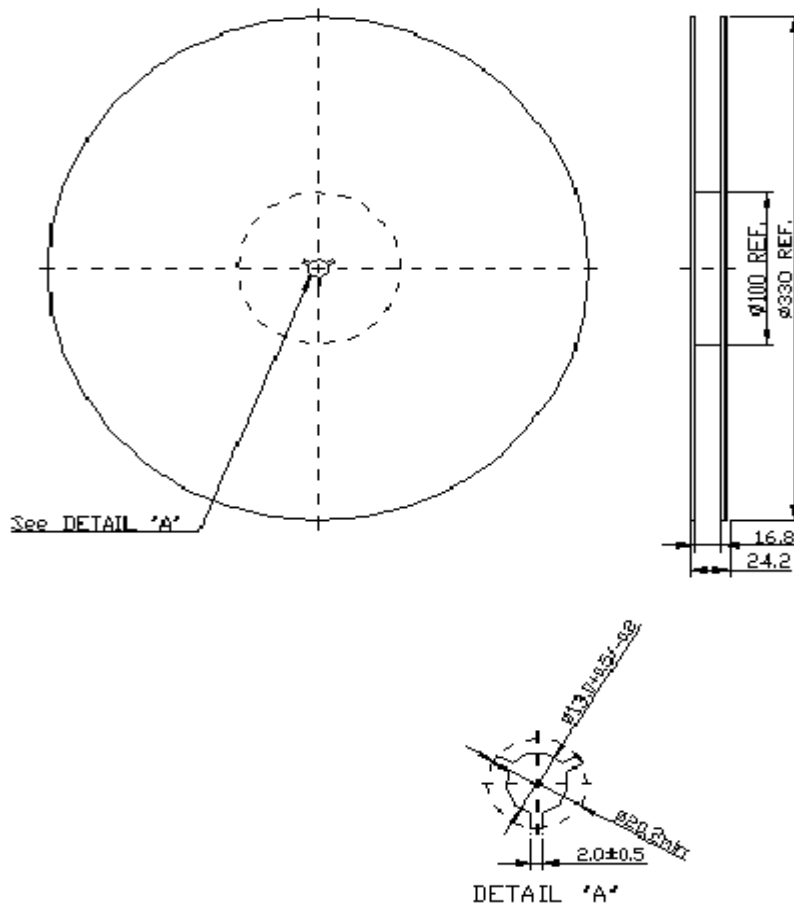


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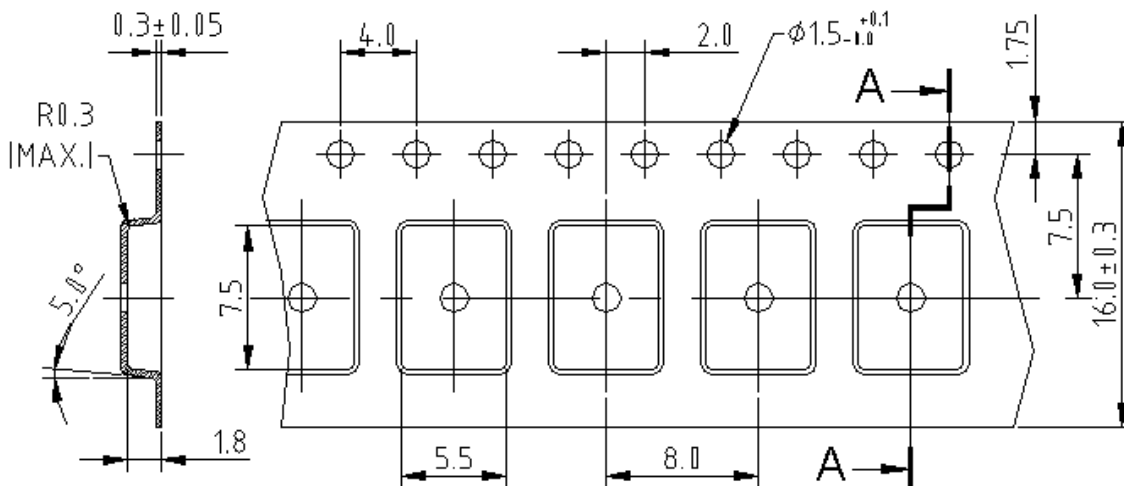
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G. PACKING:

1. REEL DIMENSION



2. TAPE DIMENSION



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H. RECOMMENDED REFLOW PROFILE:

