

SAW Filter: 70.0MHz
Part No: MP02964

Model: TB0691A
Rev No: 2

A. MAXIMUM RATING:

Electrostatic Sensitive Device (ESD)

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:

Parameters	Sign	Unit	Min	Typ	Max
Center Frequency	F ₀	MHz	69.9	70	70.1
Insertion Loss	IL	dB	-	9.8	12
-1dB Pass Bandwidth	BW1	MHz	-	1.0	-
-3dB Pass Bandwidth	BW3	MHz	1.26	1.32	-
-40dB Pass Bandwidth	BW40	MHz	-	2.84	2.9
Amplitude Ripple F _c ±0.35MHz	AR	dB	-	0.3	1.0
Group Delay Time Deviation in Pass Band F _c ±0.35MHz	GDV	nsec	-	160	280
Relative Attenuation					
DC ~ 65MHz	dB	UR	45	55	-
75MHz ~ 200MHz	dB	UR	45	55	-
Source and Load Impedances	RS/RL	Ohm	50		

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C. FREQUENCY CHARACTERISTICS:

1. Wide band Response: (span 10MHz)

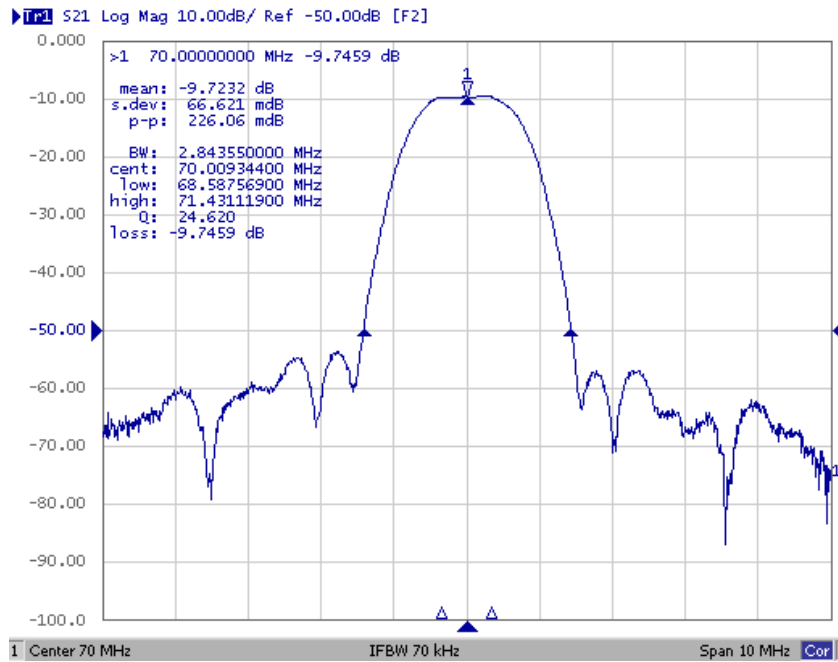


Fig. 1. Horizontal: 1MHz / Div, Vertical: 10dB / Div

2. Pass band Response and Group Time Delay response:

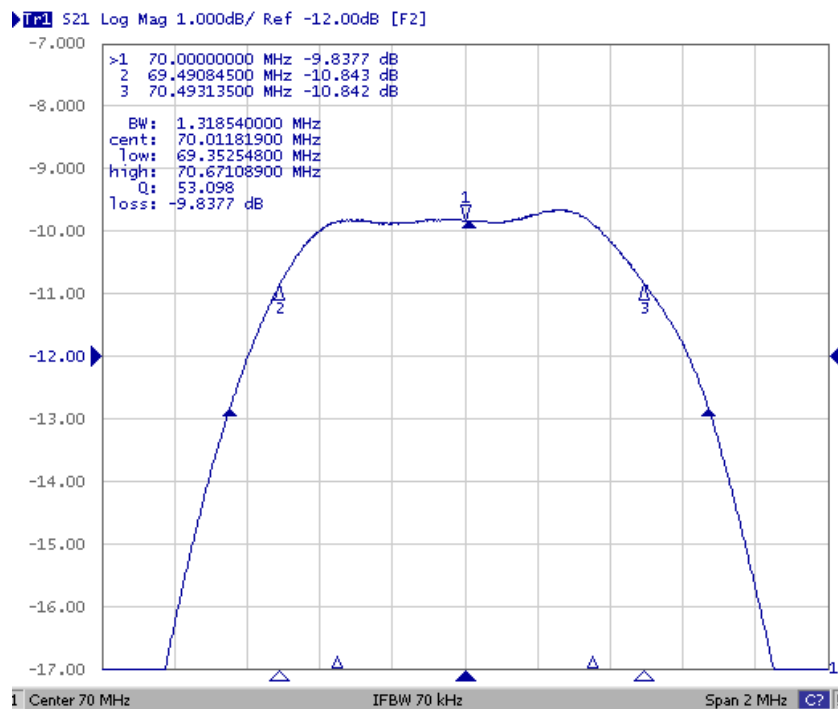


Fig 2. Horizontal: 0.2MHz / Div, Vertical: 1dB / Div

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3. Group Time Delay response:

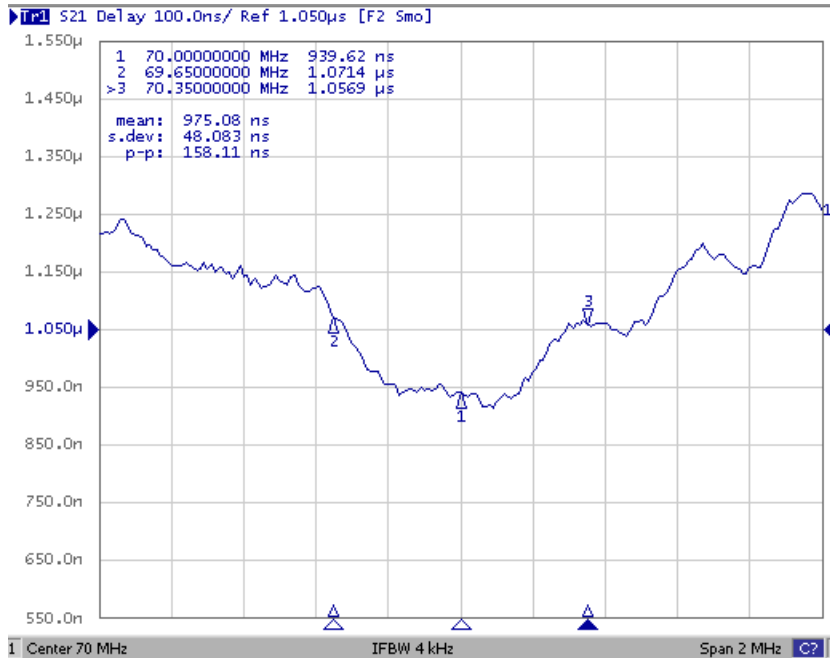
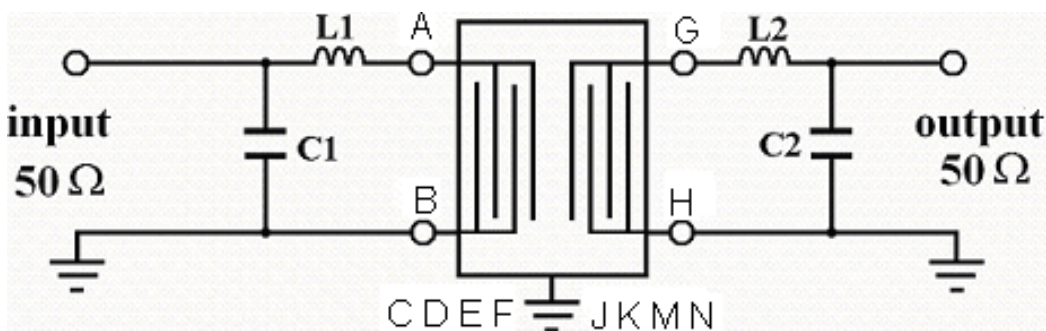


Fig 3. Horizontal: 0.2MHz / Div, Vertical: 100ns / Div

D. MATCHING CIRCUIT:

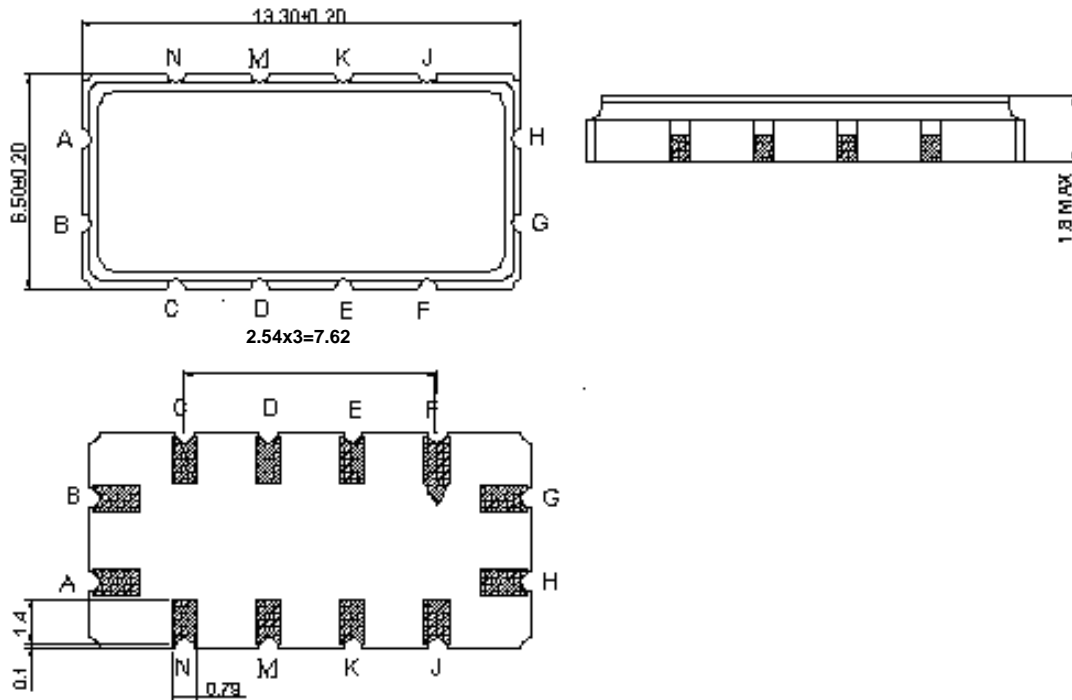


$L1 = 330 \sim 480\text{nH}$, $C1 = 82\text{pF}$, $L2 = 330 \sim 480\text{nH}$, $C2 = 82\text{pF}$
 $Z_{IN} = 50\text{ohm}$, $Z_{OUT} = 50\text{ohm}$

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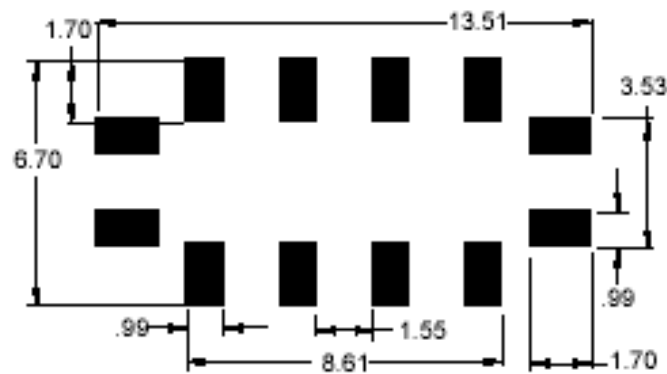
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E. OUTLINE DRAWING:



- A: RF input
 - B: RF input ground
 - G: RF output
 - H: RF output ground
 - C, D, E, F, J, K, M, N: Ground
- Unit: mm

F. PCB FOOTPRINT:



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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.

