

SAW Filter 71.0MHz

Model: TB0630A

Part No: MP01948

Rev No: 2

A. MAXIMUM RATING:

Electrostatic Sensitive Device

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:

Item	Unit	Min.	Typ.	Max.
Center frequency Fc	MHz	-	71	-
Insertion Loss IL	dB	-	7.2	8.0
1dB Passband width	kHz	250	330	-
Amplitude Ripple Fc ± 125kHz	P-P dB	-	0.9	2.0
Group delay at Fc	usec	1.9	2.34	2.4
Group delay ripple Fc ± 125kHz	nsec	-	550	1500
Relative Attenuation				
Fc ± 300kHz ~ Fc ± 500kHz	dB	15	18	-
Fc ± 500kHz ~ Fc ± 700kHz	dB	30	34	-
Fc ± 700kHz ~ Fc ± 3MHz	dB	35	39	-
Fc ± 800kHz	dB	41	46	-
Fc ± 3MHz ~ Fc ± 35MHz	dB	43	50	-
Temperature Coefficient	ppm/°C ²	-0.036 200 200		
Source Impedance (Balanced)	Ohm			
Load Impedance (Balanced)	Ohm			

Note: The Insertion loss includes loss of balun

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C. FREQUENCY CHARACTERISTICS:

1. S21 Response: (Span 5MHz)

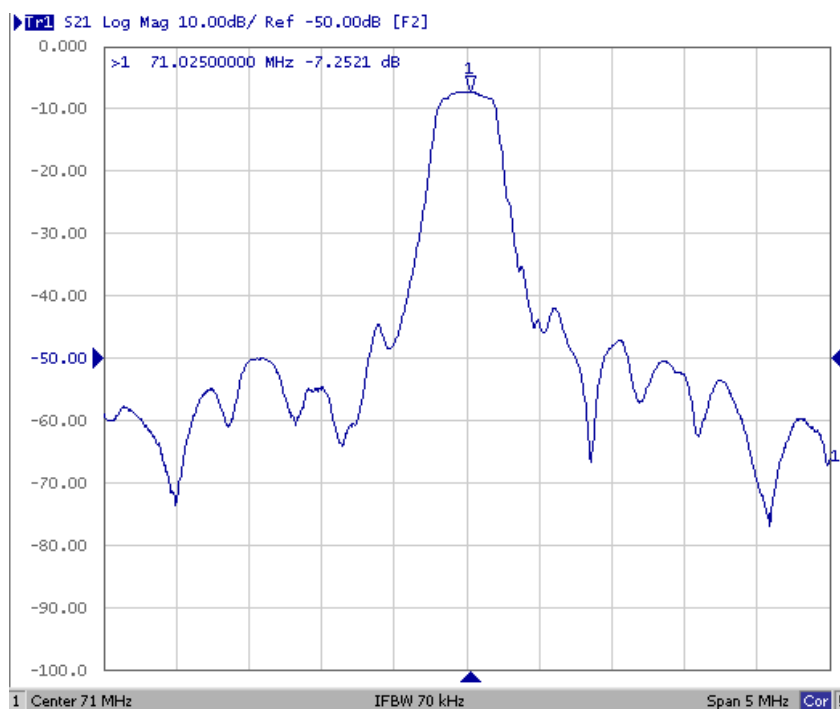


Fig. 1. Horizontal: 0.5MHz / Div, Vertical: 10dB / Div

2. S21 Response: (Span 1MHz)

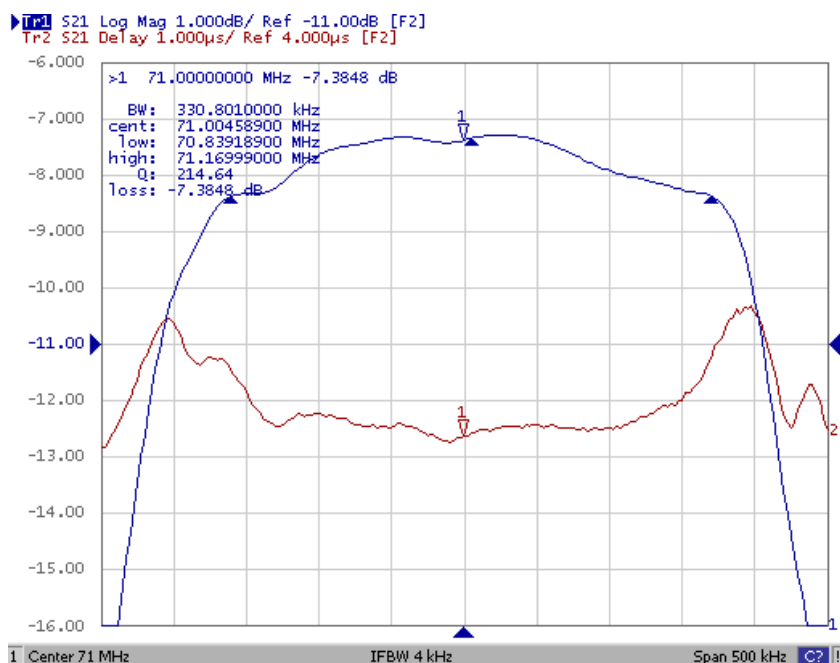


Fig. 2. Horizontal: 0.05MHz / Div; Vertical: 1dB / Div, Vertical: 1uS / Div

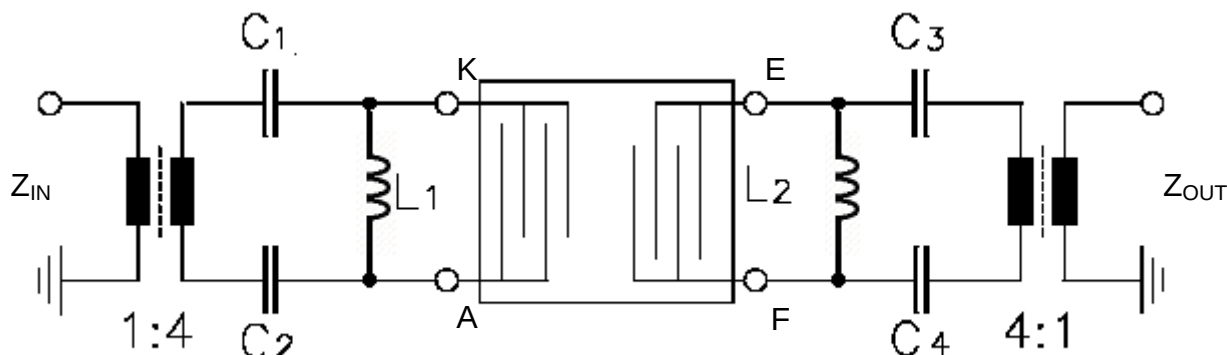
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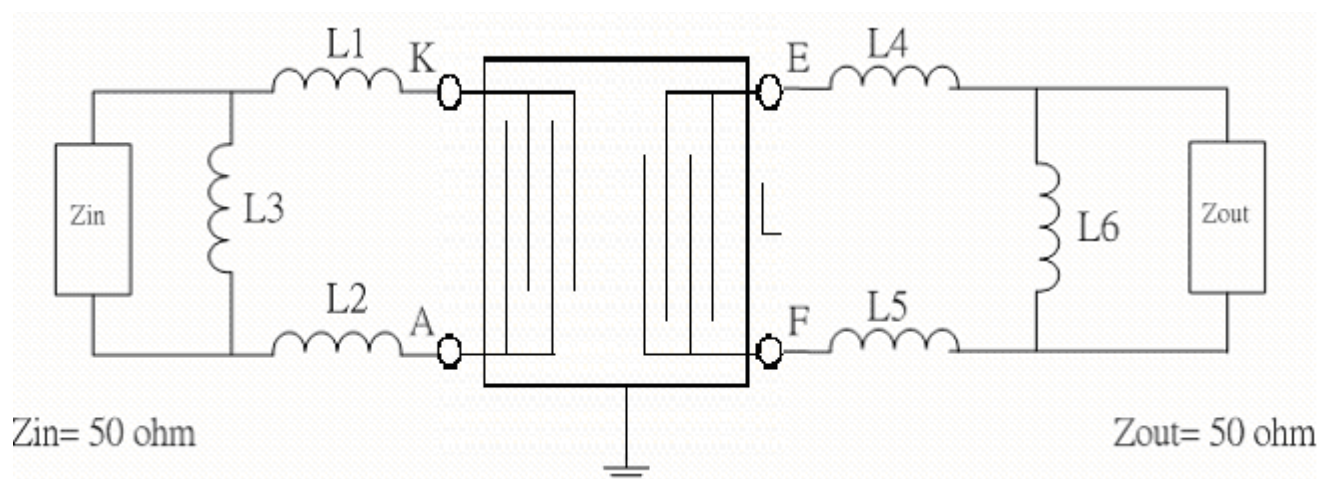
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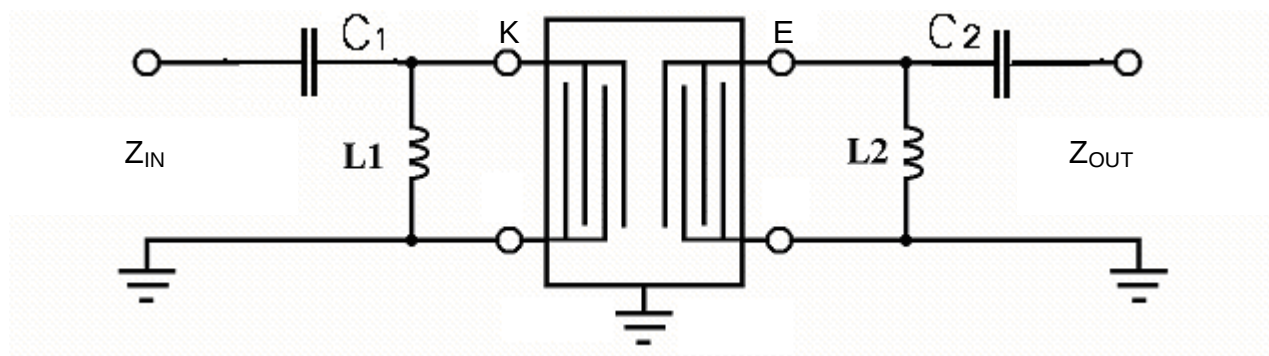
D. MEASUREMENT CIRCUIT:



$L1 = 297\text{nH}$, $C1 = C2 = 9\text{pF}$, $L2 = 306\text{nH}$, $C3 = C4 = 8\text{pF}$, $Z_{IN} = Z_{OUT} = 50\text{ohm}$



$L1 = L2 = 165\text{nH}$, $L3 = 68\text{pF}$, $L4 = L5 = 165\text{nH}$, $L6 = 82\text{pF}$

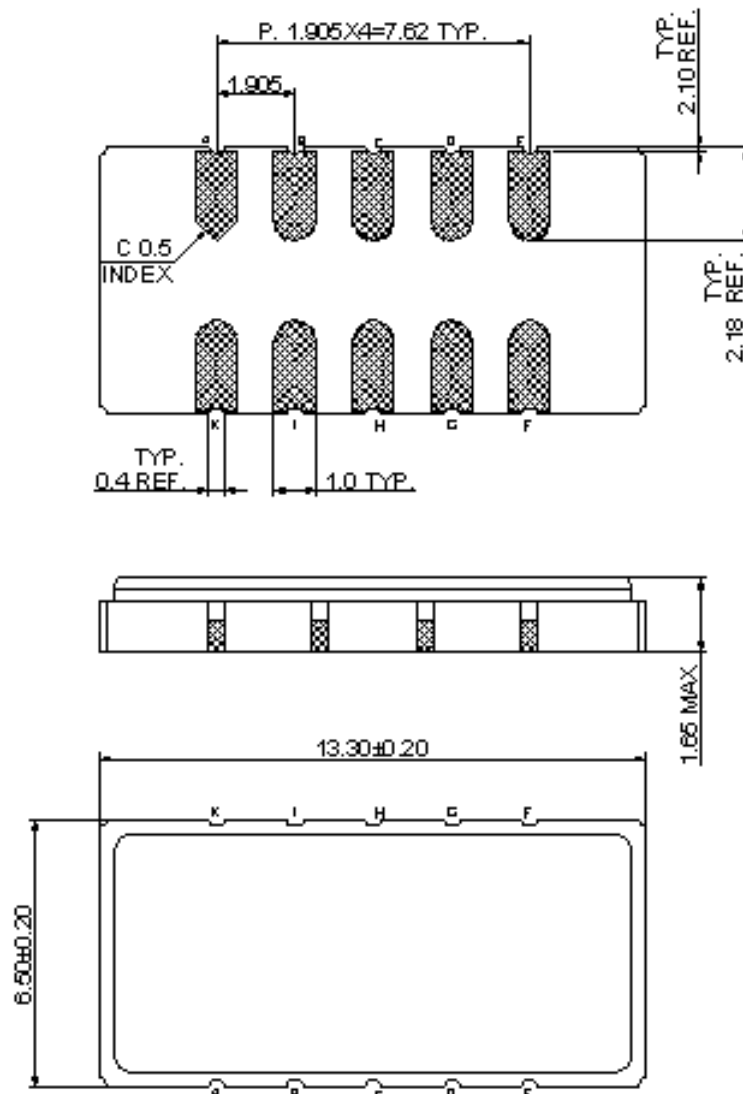


$L1 = 220\text{nH}$, $C1 = 9\text{pF}$, $L2 = 220\text{nH}$, $C2 = 9\text{pF}$, $Z_{IN} = Z_{OUT} = 50\text{ohm}$

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E. OUTLINE DRAWING:



K: RF input
 A: RF balance input or to be ground
 E: RF output
 F: RF balance output or to be ground
 B, C, D, G, H, I: Ground

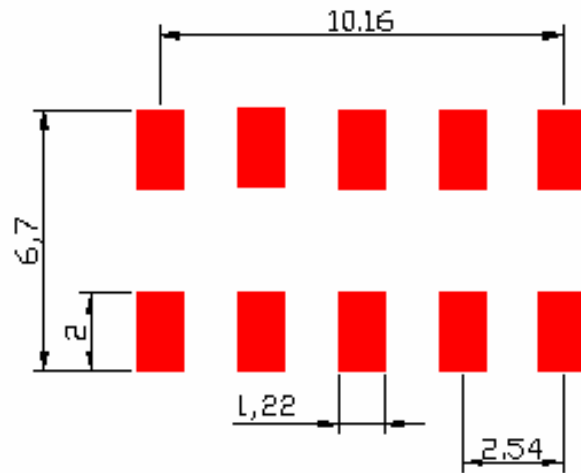
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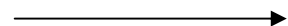
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F. PCB FOOTPRINT:



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H. RECOMMENDED REFLOW PROFILE:

