



ANATECH ELECTRONICS INC
RF & Microwave Filters & Products

140 MHz Saw Filter

Part Number: AM140S808



Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	139.915	140.00	140.085
Minimum Insertion Loss	dB	-	7.00	8.00
Amplitude Ripple in Fo ± 0.20 MHz	dB _{p-p}	-	0.60	1.50
Group Delay Variation in Fo ± 0.15 MHz	nsec	-	200	500
1 dB Bandwidth	MHz	0.40	0.47	-
40 dB Bandwidth	MHz	-	1.47	1.60
Relative Attenuation:				
110.0 MHz – Fo-1.0 MHz	dB	35	41	-
Fo+1.0 MHz – 170 MHz	dB	35	39	-
Ambient Temperature	°C	-	25	-
Maximum Ratings:				
Operation Temperature Range	°C	-40	-	+85
Storage Temperature Range	°C	-40	-	+85
Maximum Input Power	dBm	-	-	10

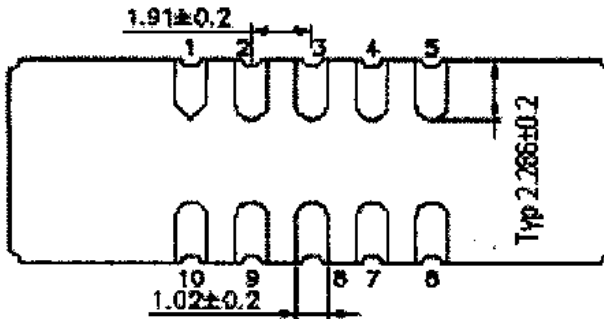
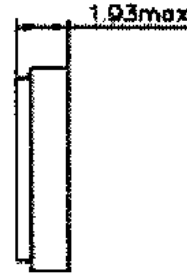
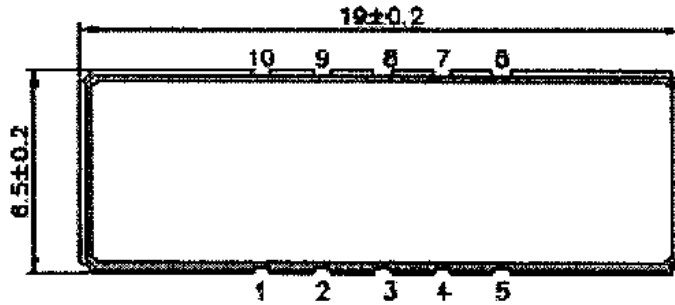


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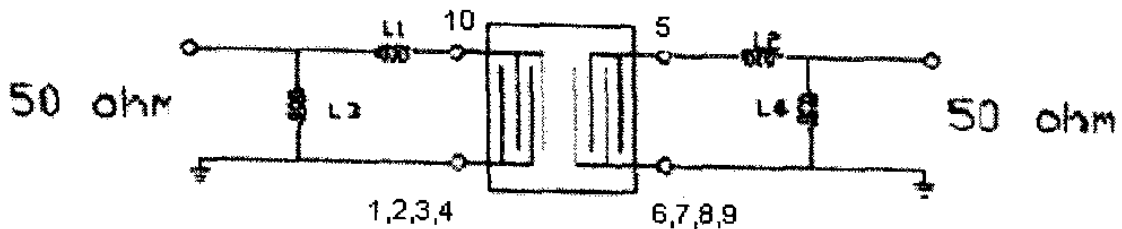
Outline Drawing:



- Pin 10: Input +
- Pin 1: Input -
- Pin 5: Output +
- Pin 6: Output -
- Pin 2, 3, 4, 7, 8, 9: To be ground

Unit: mm

Testing Environment:



Input L1=39nH, L3=22nH
Output L2=33nH, L4=22nH

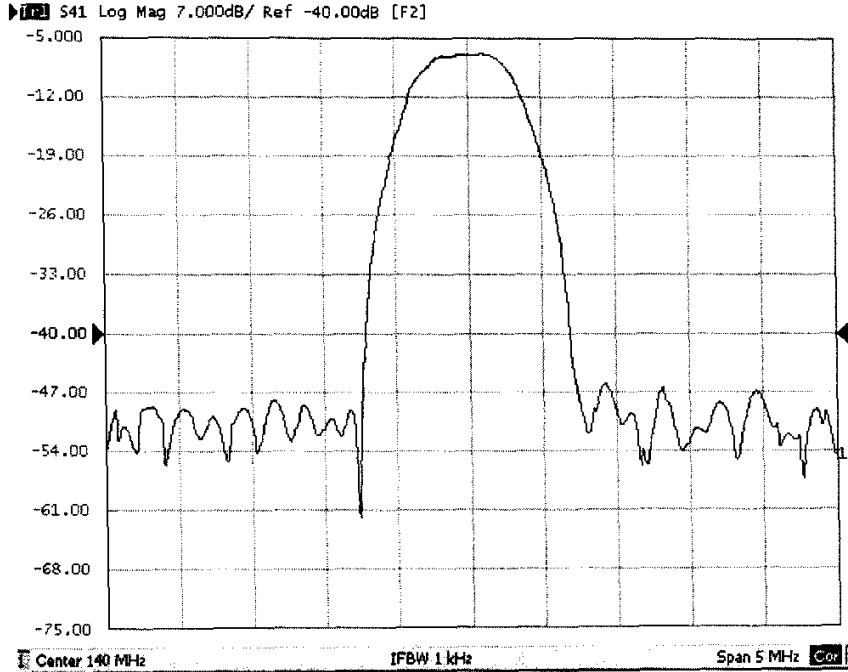


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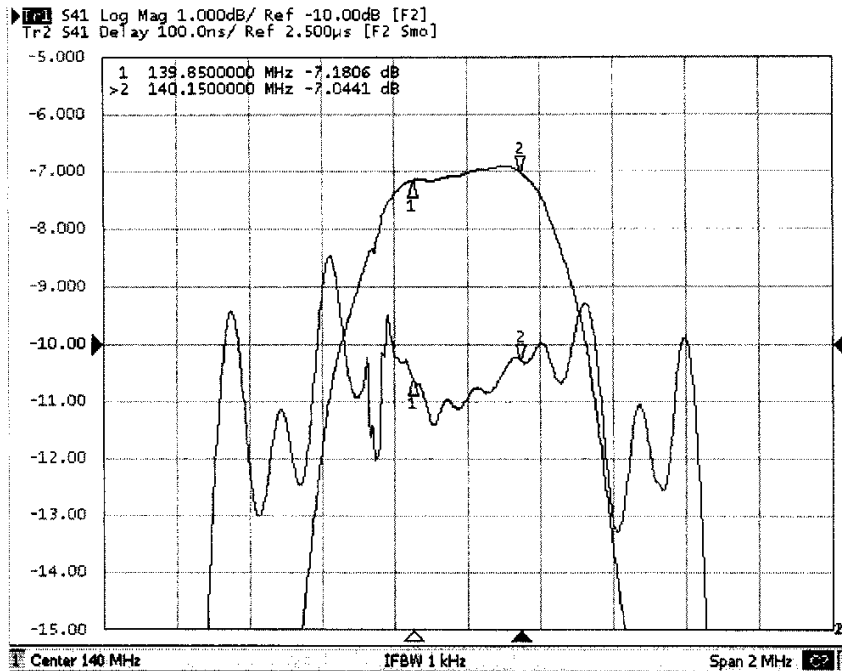


Frequency Response:



Horizontal: 0.5 MHz/Div

Vertical: 7 dB/Div



Horizontal: 200 kHz/Div

Vertical: 1 dB/Div

Vertical: 100 ns/Div

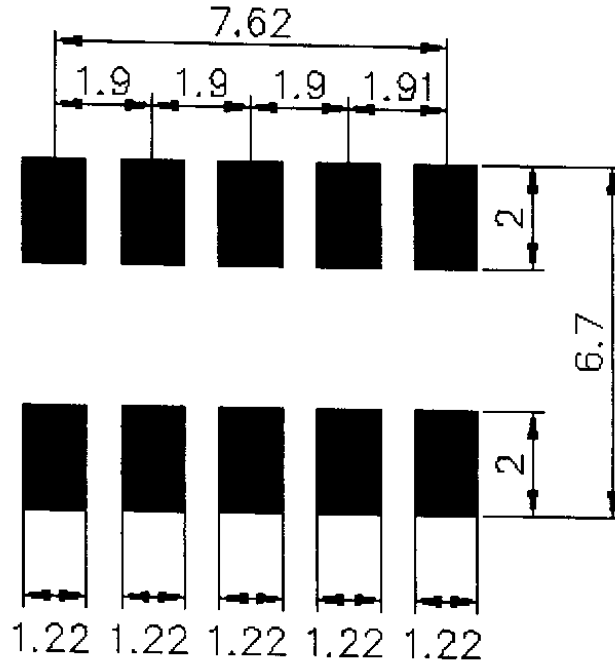


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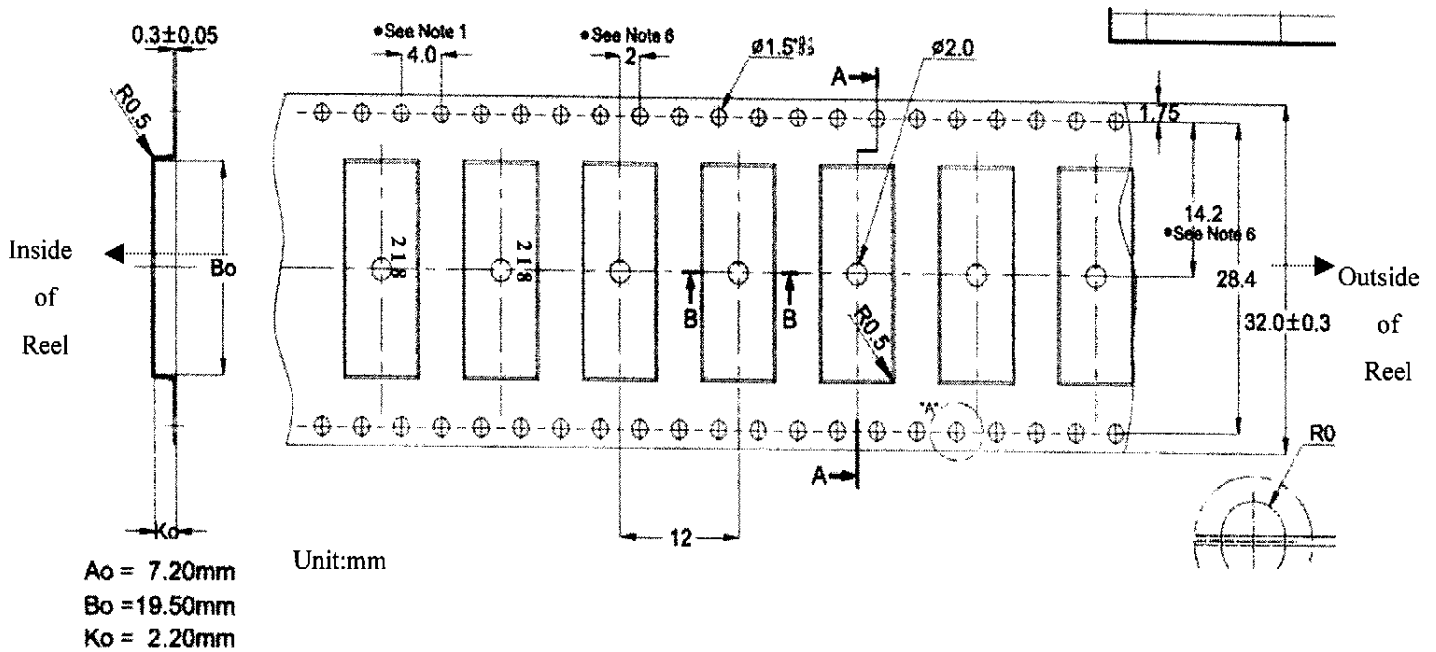
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PCD Footprint:



Tape Dimensions:





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Mechanical & Environmental Characteristics:

Test Item:	Condition Test:	Requirements					
Shock (Drop Test)	Random free drops 3 times from height of 1.0 meter onto hard wood	The specimens shall meet the electrical specifications					
Vibration	Total Peak Amplitude: 1.5mm Vibration Frequency: 10 to 55 Hz Sweep Period: 1.0 minute Vibration Directions: 3 mutually perpendicular Duration: 2 hr/ direc.						
Solderability	Immersed pad in soldering bath at $245 \pm 5^{\circ}\text{C}$ for 5 ± 0.5 seconds	75% or more of the immersed surface shall be covered with solder					
Temperature Characteristics	Specimens shall be measured within -40°C to $+85^{\circ}\text{C}$ temperature range	The specimens shall meet the electrical specifications					
Dry Heat (Aging Test)	Temperature: $125 \pm 2^{\circ}\text{C}$ Duration: 250 hours						
Cold Resistance	Temperature: $-40 \pm 3^{\circ}\text{C}$ Duration: 96 hours						
Thermal Shock	Heat Cycle Conditions <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">-55°C</td> <td style="text-align: center;">25°C</td> <td style="text-align: center;">85°C</td> </tr> <tr> <td style="text-align: center;">(30 min)</td> <td style="text-align: center;">(5 min)</td> <td style="text-align: center;">(30 min)</td> </tr> </table> Cycle time: 5 times		-55°C	25°C	85°C	(30 min)	(5 min)
-55°C	25°C	85°C					
(30 min)	(5 min)	(30 min)					



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Reflow Profile:

1. Preheating shall be fixed at 140-160°C for 60-90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min
3. Heating shall be fixed at 200°C for 50-60 seconds and at 230 ± 10°C peak

