



TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
Taoyuan, 324, Taiwan, R.O.C.

TEL: 886-3-4690038 FAX: 886-3-4697532

E-mail: tstsales@mail.taisaw.com Web: www.taisaw.com

Approval Sheet For Product Specification

Issued Date: 5, 04, 2005

Product Name: SAW Filter 140 MHz SMD 19x6.5 mm

TST Parts No.:TB0218A Rev.4

Customer Parts No.: _____

Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: _____ Andy Lee

Approval by: _____ Francis Chen

Date: _____ 5, 04, 2005



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SAW Filter 140 MHz

MODEL NO.: TB0218A

REV. NO.4

A. MAXIMUM RATING:

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

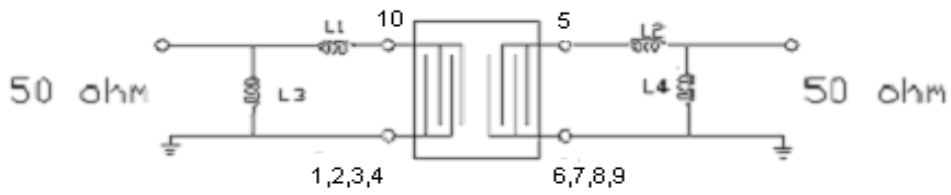
RoHS Compliant
Lead free
Lead-free soldering

B. ELECTRICAL CHARACTERISTICS:

1. Ambient Temperature: 25 °C

Item	Unit	Min.	Type.	Max.	Note
Center frequency, F_c	MHz	139.915	140	140.085	1
Minimum Insertion Loss, IL	dB	-	7	8	-
Amplitude Ripple in F_c±0.12MHz,AR	MHz	-	0.6	1.5	-
Group delay ripple in F_c±0.15MHz	ns	-	200	500	-
1dB Bandwidth	MHz	0.4	0.47	-	-
40dB Bandwidth	MHz	-	1.47	1.6	-
Relative attenuation (relative to min. IL)	-				
110 MHz ~ F_c-1MHz	dB	35	41	-	-
F_c+1MHz ~ 170MHz	dB	35	39	-	-

C. MEASUREMENT CIRCUIT:



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

D. FREQUENCY CHARACTERISTICS :

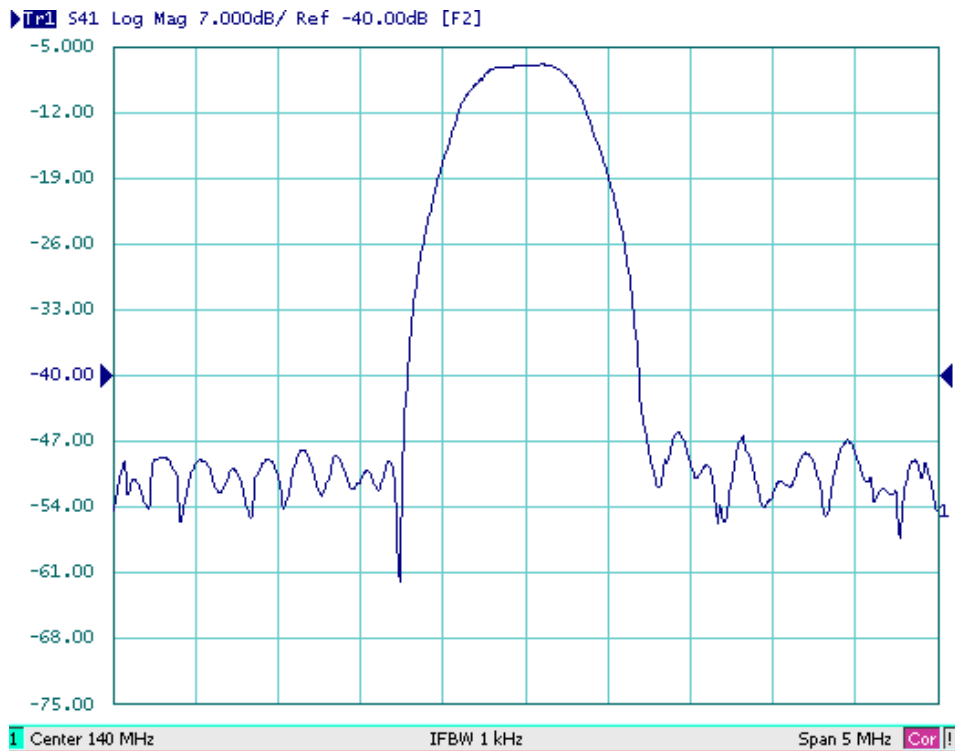


Fig-1 S21 Response Horizontal: 0.5MHz/Div
Vertical: 7dB/Div

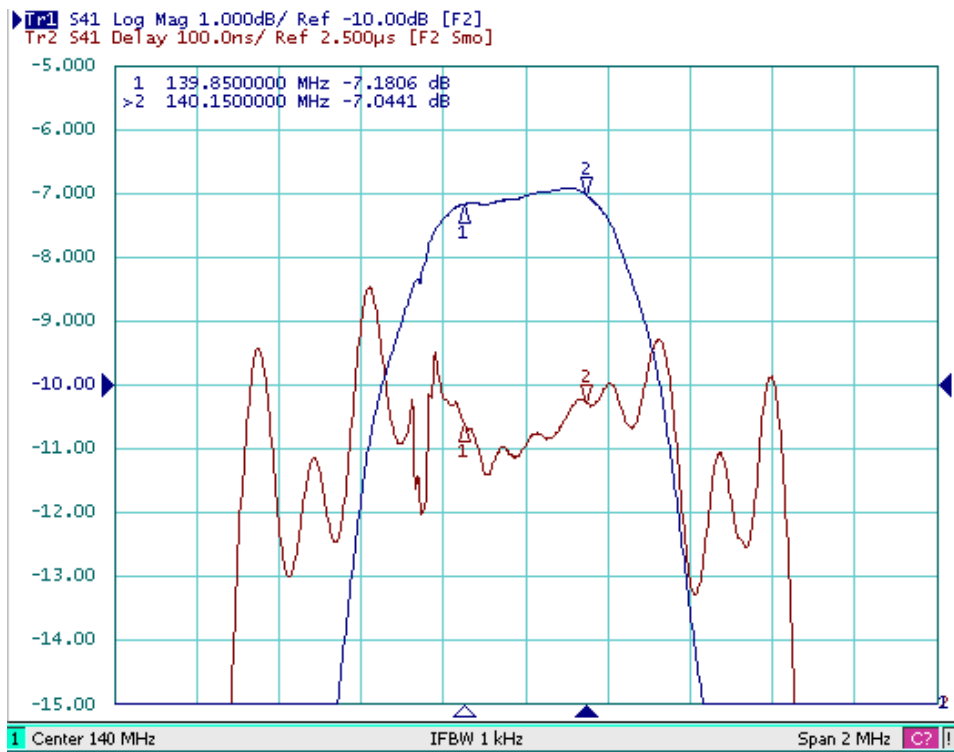
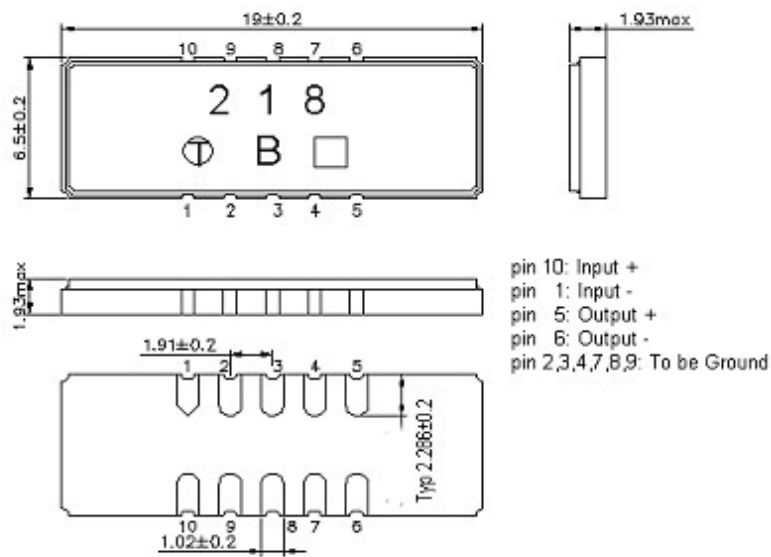
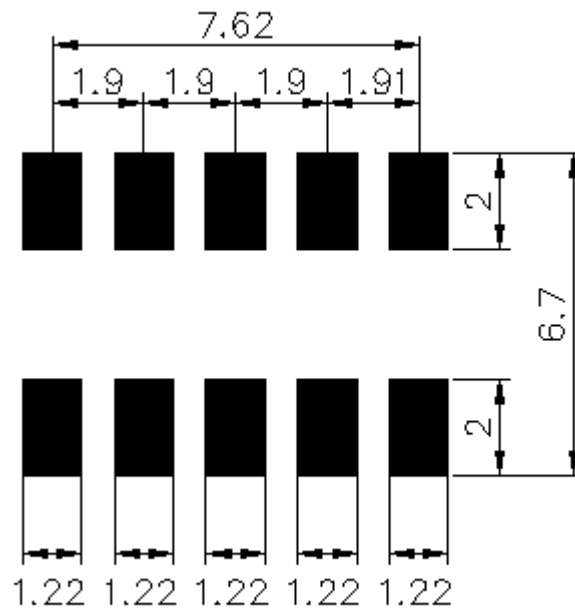


Fig-2 Horizontal: 200KHz/Div Vertical: 1dB/Div
Vertical: 100ns/Div

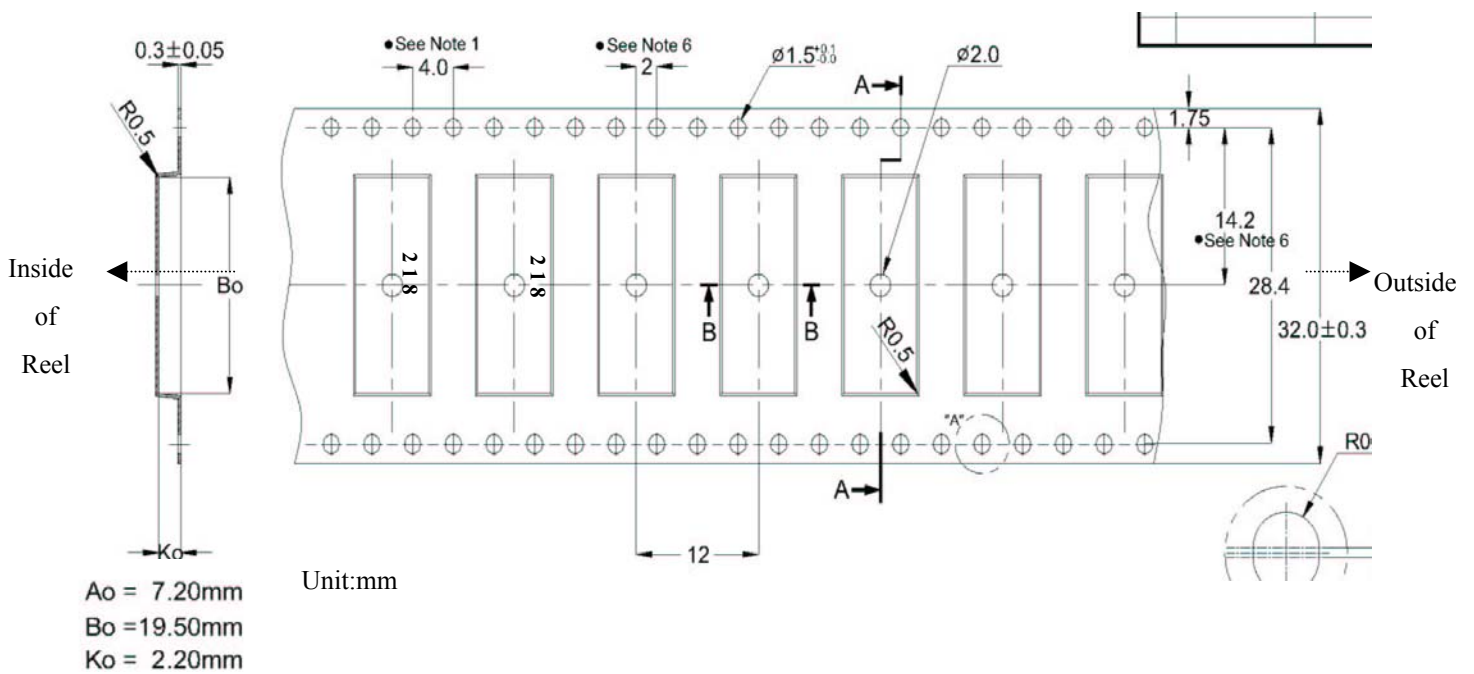
E. OUTLINE DRAWING :



F. PCB FOOTPRINT



G. TAPE DIMENSION



H. MECHANICAL & ENVIRONMENT CHARACTERISTICS

Test Item	Condition of 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 -55 C 25 C 85 C (30 min) (5 min) (30 min) Cycle time : 5 times	

I. 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.

