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

Product Specifications Approval Sheet

Product Description: SAW Filter 860.5+938 MHz SMD 3.0X2.5 mm

TST Part No.: TE0111A

Customer Part No.:_____

Customer signature required

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by:_____ Bob Chau _____

Approved by:_____ Francis Chen _____

Date:_____ 9,28, 2010 _____

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the changes.

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SAW Filter 860.5+938 MHz

MODEL NO.:TE0111A REV. NO.:1

Filter 1

A. MAXIMUM RATING:

1. Input Power Level: +10 dBm
2. DC Voltage : 3V
3. Operating Temperature: -30°C to +70°C
4. Storage Temperature: -40°C to +85°C

RoHS Compliant
Lead free
Lead-free soldering

B. ELECTRICAL CHARACTERISTICS:

Item		Unit	Min.	Typ.	Max.	Note
Center Frequency	**Fc**	MHz	-	860.5	-	-
Insertion Loss (851~870 MHz)	**IL**	dB	-	2.5	3.2	-
Amplitude Ripple (851~870 MHz)		dB	-	0.9	1.3	-
Return Loss (851~870 MHz)		dB	10	12	-	
Group Delay Variation (851~870 MHz)		ns	-	10	50	
Attenuation (Reference level from 0 dB)						
769 ~ 788 MHz		dB	40	43	-	-
932 ~ 953 MHz		dB	42	46	-	-
688 ~ 705 MHz		dB	41	45	-	-
1013 ~ 1036 MHz		dB	41	45	-	-
1740 ~ 3000 MHz		dB	27	32	-	-
D.C ~ 688 MHz		dB	41	45	-	-
806 ~ 825 MHz		dB	25	40	-	-
896 ~ 902 MHz		dB	25	30	-	-
1702 ~ 1740 MHz		dB	33	42	-	-
Temperature Coefficient of Frequency		Ppm/℃	-	-36	-	-

Filter 2

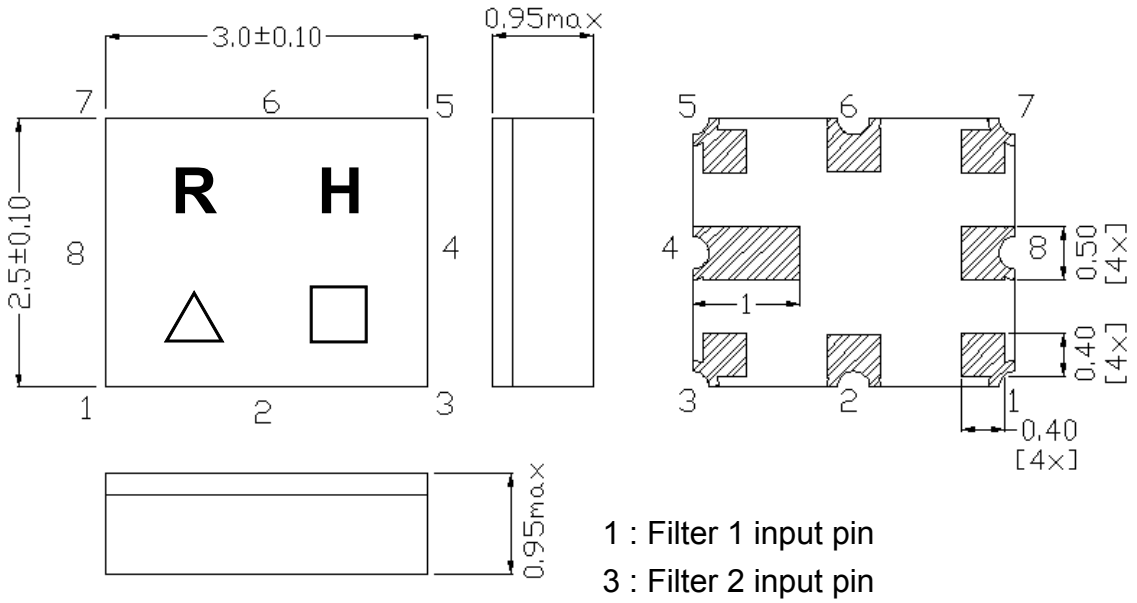
A. MAXIMUM RATING:

3. Input Power Level: +10 dBm
4. DC Voltage : 3V
3. Operating Temperature: -30°C to +70°C
5. Storage Temperature: -40°C to +85°C

B. ELECTRICAL CHARACTERISTICS:

Item		Unit	Min.	Typ.	Max.	Note
Center Frequency	**Fc**	MHz	-	938	-	-
Insertion Loss (935~941 MHz)	**IL**	dB	-	2.7	3.3	-
Amplitude Ripple (935~941 MHz)		dB	-	0.6	1.2	-
Return Loss (935~941 MHz)		dB	8.5	10	-	-
Group Delay Variation (935~941 MHz)		ns	-	5	50	-
Attenuation (Reference level from 0 dB)						
845 ~ 852 MHz		dB	40	44	-	-
1024 ~ 1031 MHz		dB	42	46	-	-
756 ~ 762 MHz		dB	41	45	-	-
1113 ~ 1121 MHz		dB	42	46	-	-
1882 ~ 3000 MHz		dB	27	32	-	-
D.C ~ 756 MHz		dB	41	45	-	-
806 ~ 825 MHz		dB	25	44	-	-
896 ~ 902 MHz		dB	25	40	-	-
1870 ~ 1882 MHz		dB	33	43	-	-
Temperature Coefficient of Frequency		Ppm/℃	-	-36	-	-

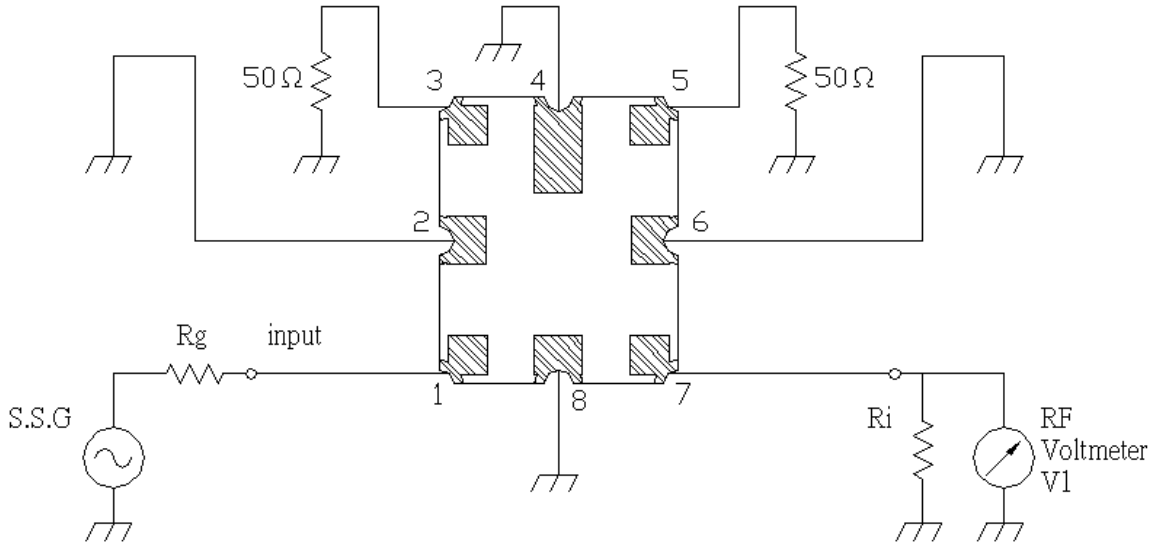
C.OUTLINE DRAWING:



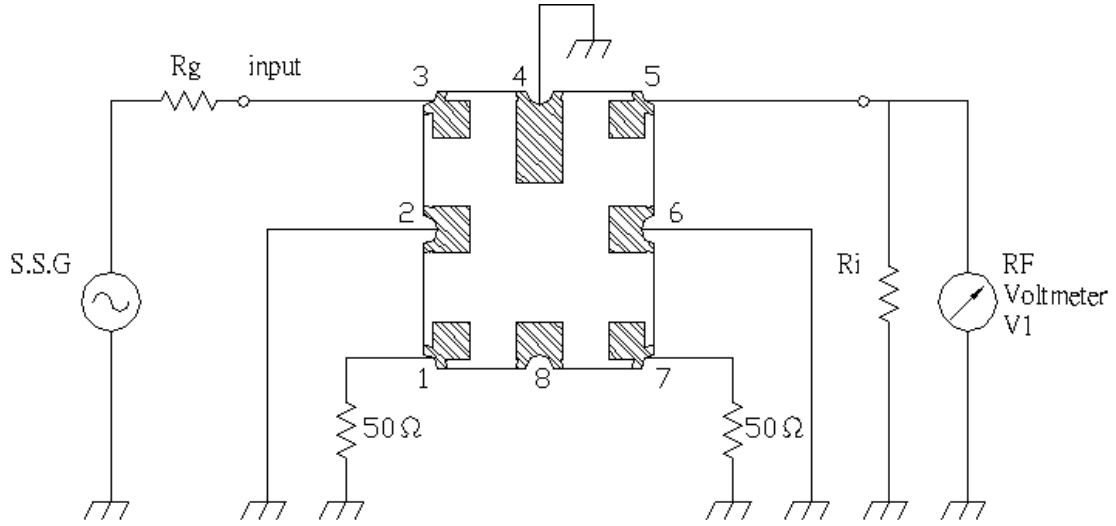
1 : Filter 1 input pin
3 : Filter 2 input pin
5 : Filter 2 output pin
7 : Filter 1 output pin
2,4,6,8 : Ground pin
△ : Year Code(2010->0,…,2018->8)
□ : Date Code(W01->A,…,W26->Z,…,W52->z)
Unit: mm

D. MEASUREMENT CIRCUIT:

Filter 1

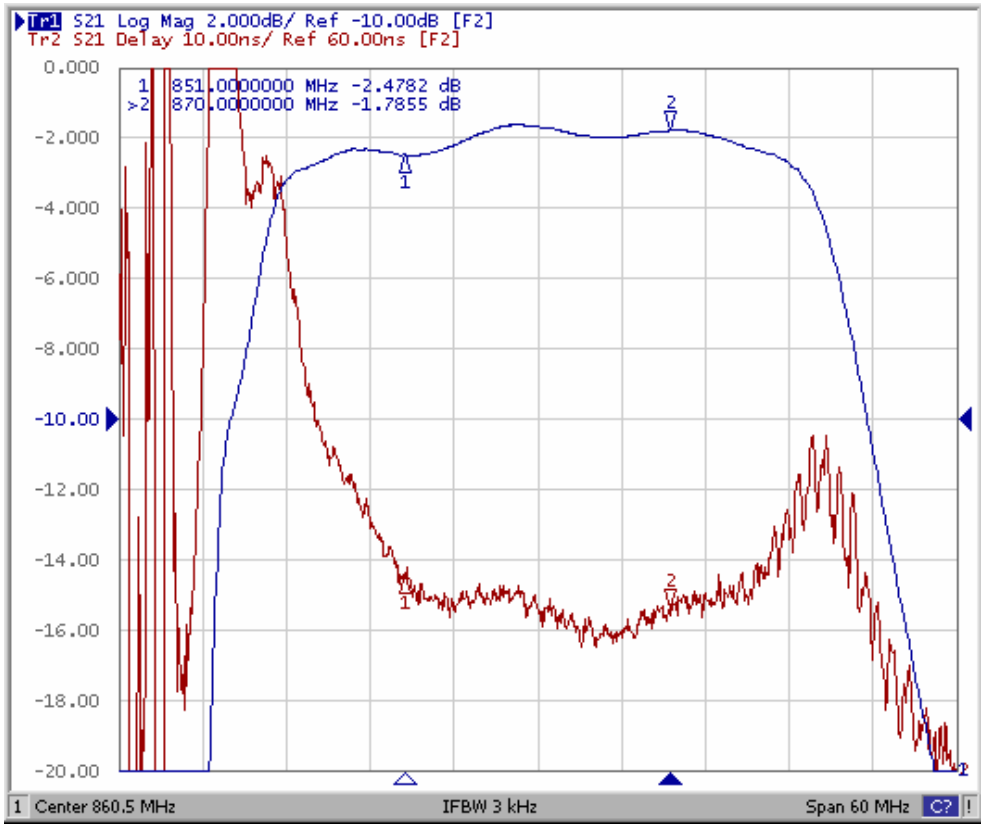


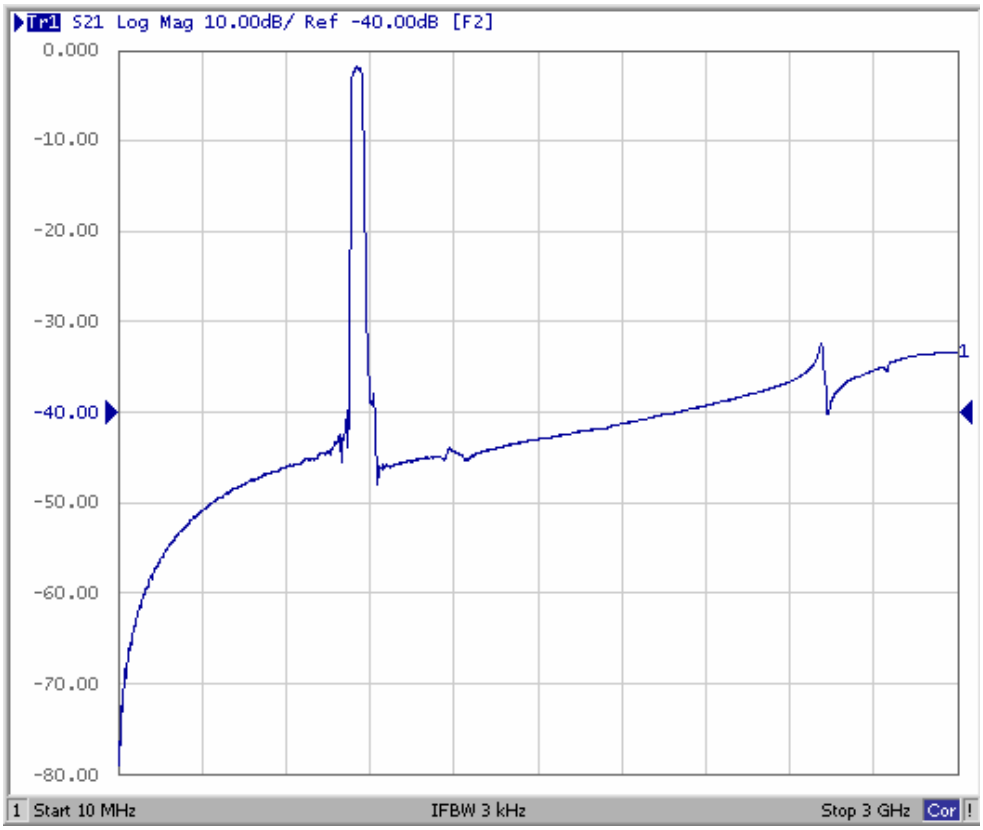
Filter 2

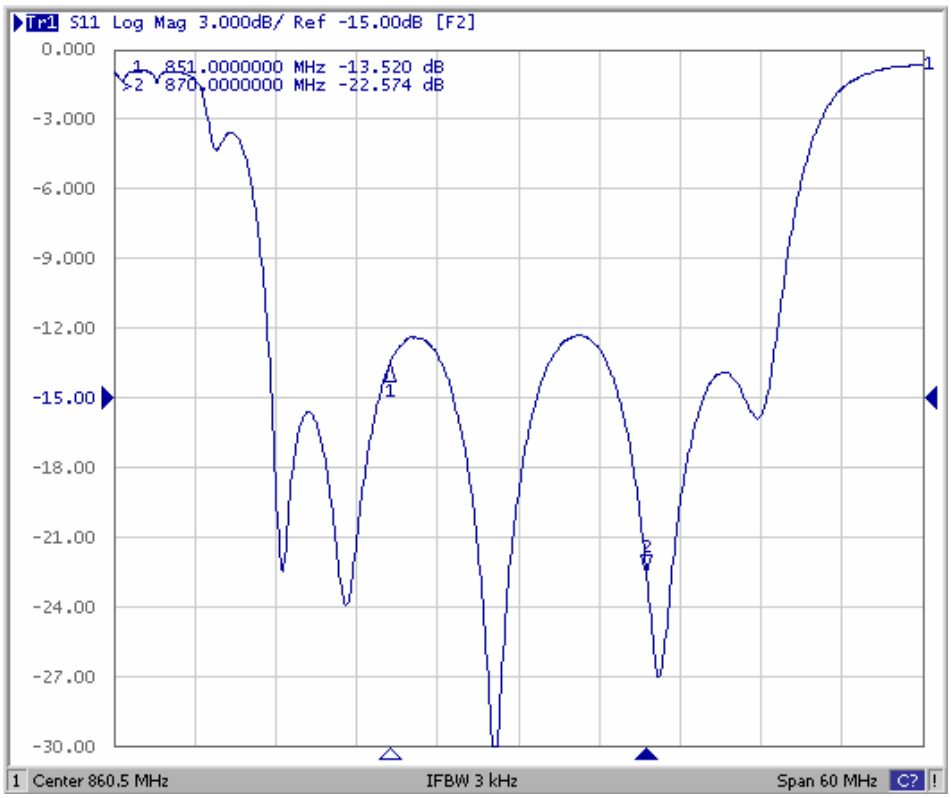


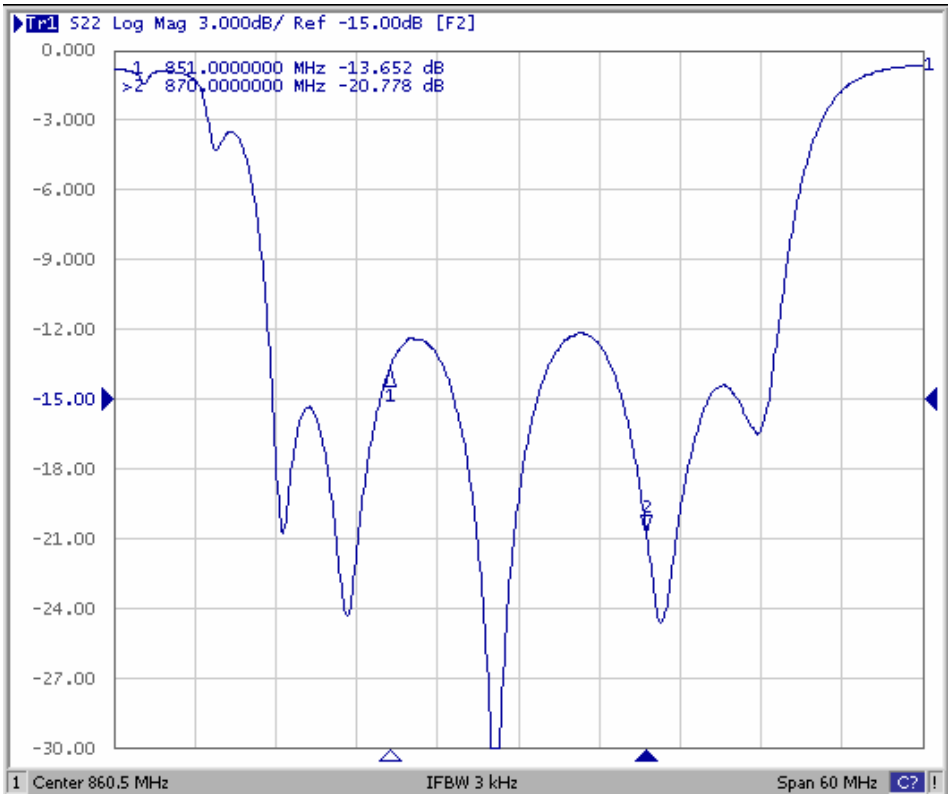
Rg=50Ω
Ri=50Ω

E. Frequency Characteristics : (Filter 1)

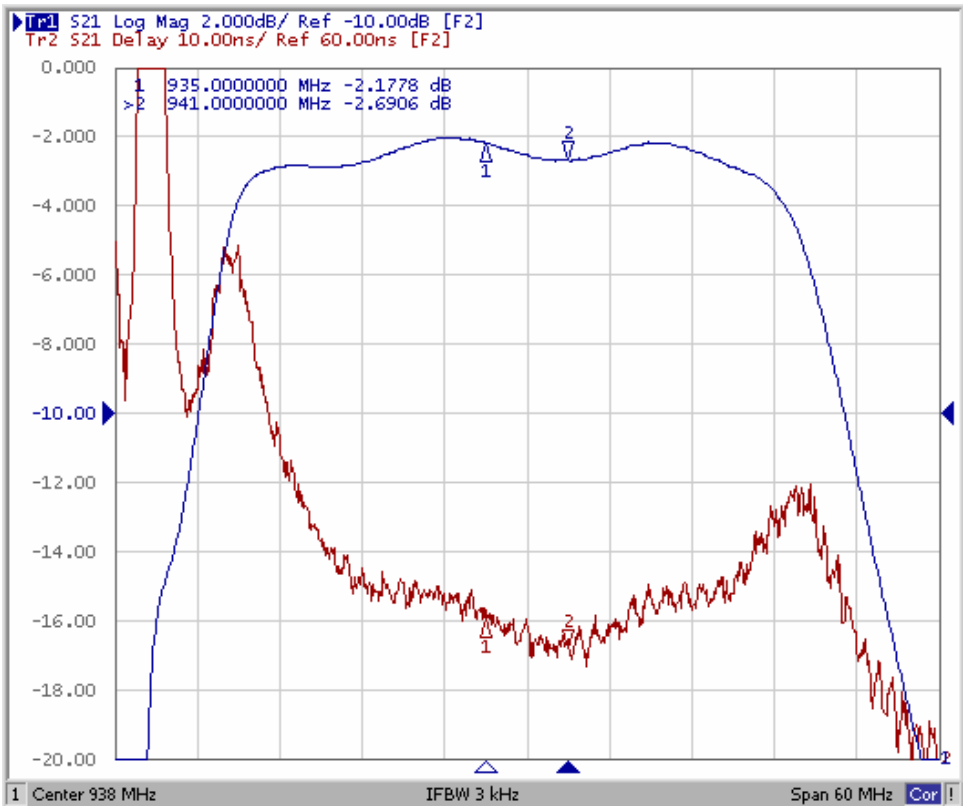


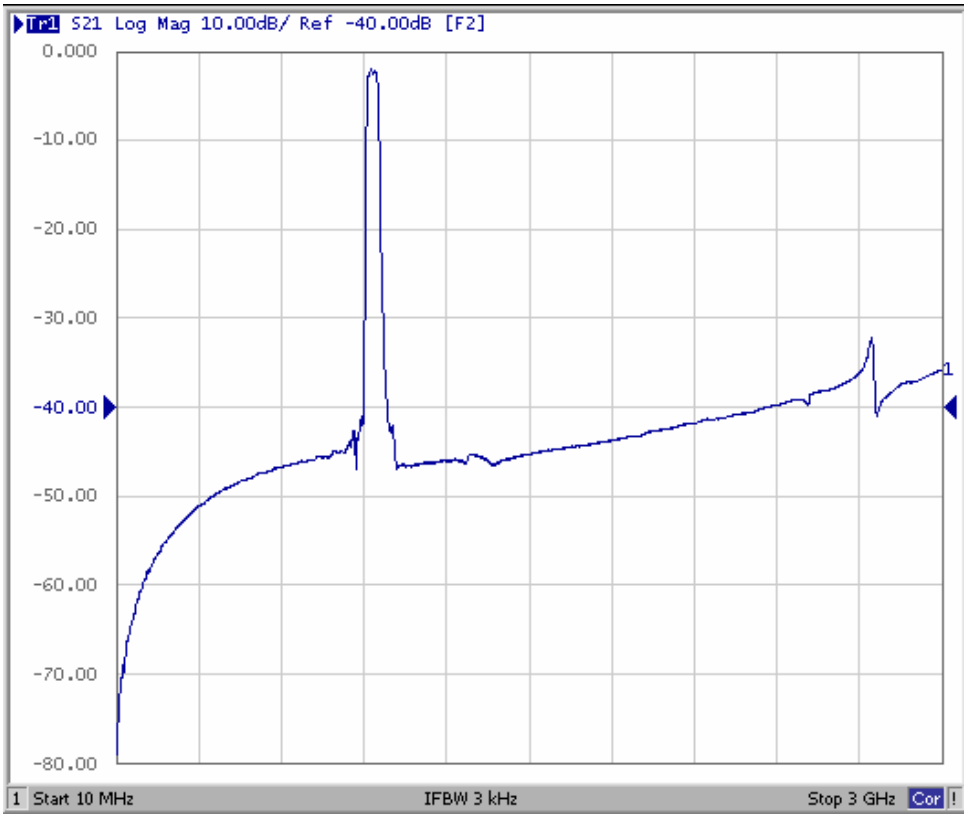


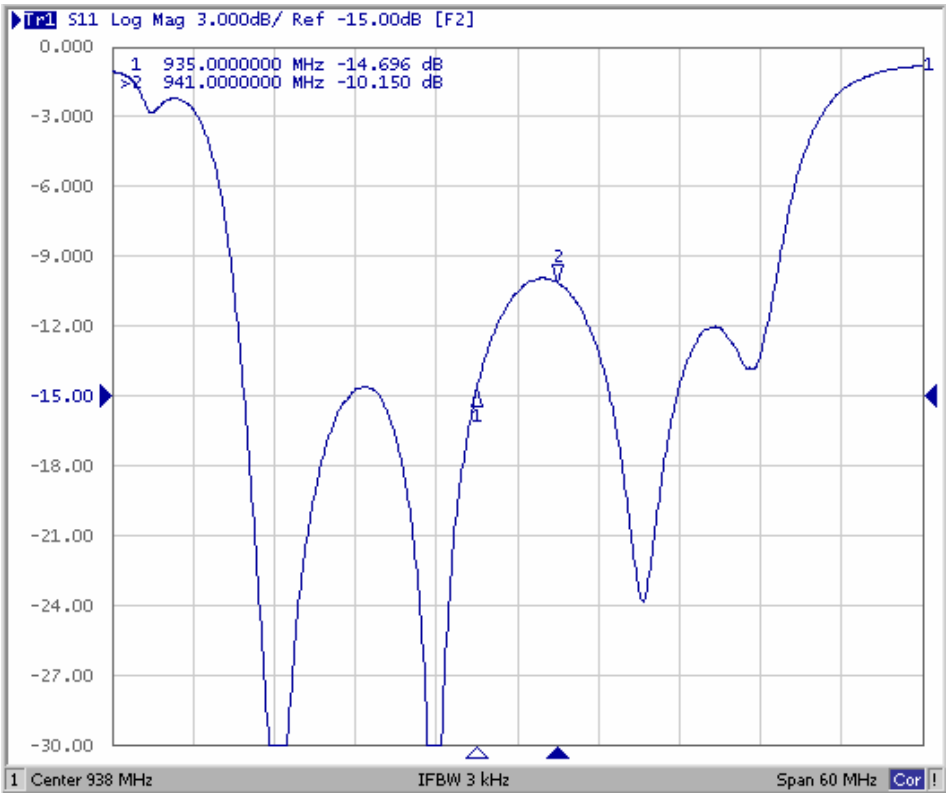

Tr1 S11 Log Mag 3.000dB/ Ref -15.00dB [F2]
1 851.0000000 MHz -13.520 dB
>2 870.0000000 MHz -22.574 dB
0.000
-3.000
-6.000
-9.000
-12.00
-15.00
-18.00
-21.00
-24.00
-27.00
-30.00
1 Center 860.5 MHz
IFBW 3 kHz
Span 60 MHz
C?

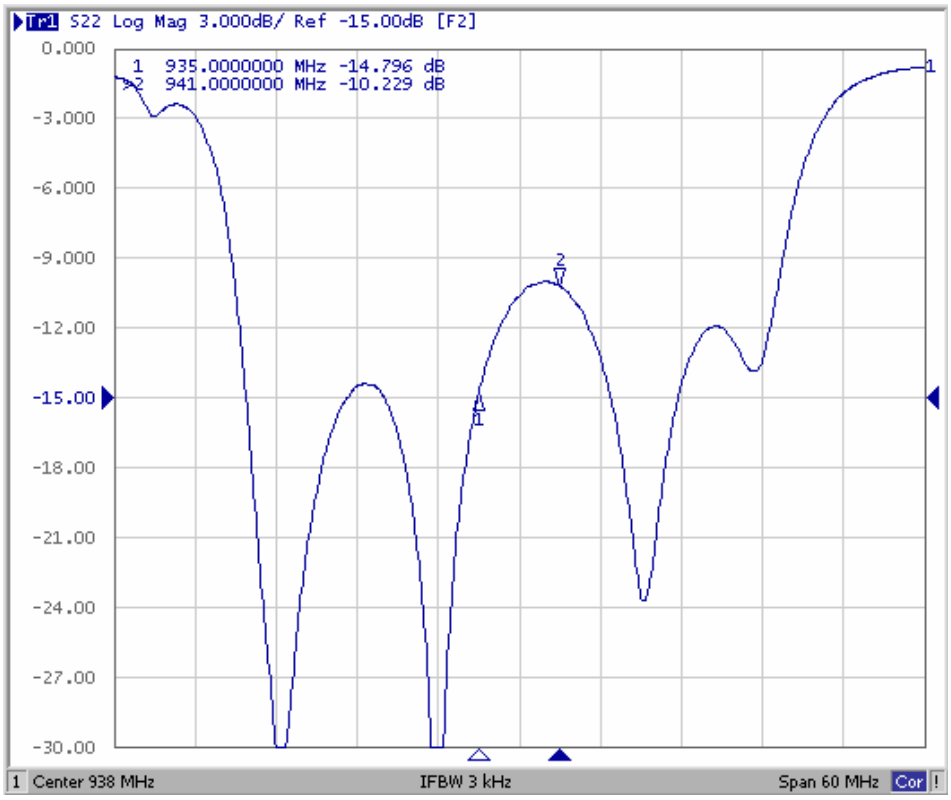

Tr1 S22 Log Mag 3.000dB/ Ref -15.00dB [F2]
1 851.0000000 MHz -13.652 dB
>2 870.0000000 MHz -20.778 dB
0.000
-3.000
-6.000
-9.000
-12.00
-15.00
-18.00
-21.00
-24.00
-27.00
-30.00
1 Center 860.5 MHz
IFBW 3 kHz
Span 60 MHz
C?

(Filter 2)


Tr1 S21 Log Mag 2.000dB/ Ref -10.00dB [F2]
Tr2 S21 Delay 10.00ns/ Ref 60.00ns [F2]
1 935.0000000 MHz -2.1778 dB
>2 941.0000000 MHz -2.6906 dB
0.000
-2.000
-4.000
-6.000
-8.000
-10.00
-12.00
-14.00
-16.00
-18.00
-20.00
1 Center 938 MHz
IFBW 3 kHz
Span 60 MHz
Cor

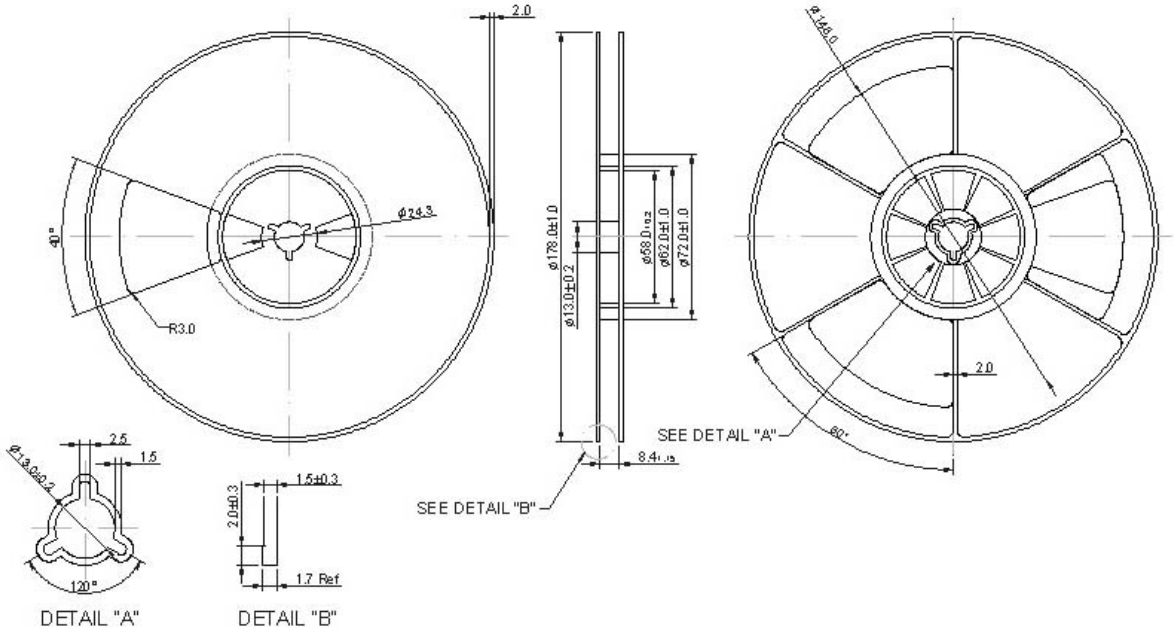

Tr1 S21 Log Mag 10.00dB/ Ref -40.00dB [F2]
0.000
-10.00
-20.00
-30.00
-40.00
-50.00
-60.00
-70.00
-80.00
1 Start 10 MHz
IFBW 3 kHz
Stop 3 GHz
Cor


Tr1 S11 Log Mag 3.000dB/ Ref -15.00dB [F2]
1 935.0000000 MHz -14.696 dB
>2 941.0000000 MHz -10.150 dB
0.000
-3.000
-6.000
-9.000
-12.00
-15.00
-18.00
-21.00
-24.00
-27.00
-30.00
1 Center 938 MHz
IFBW 3 kHz
Span 60 MHz
Cor

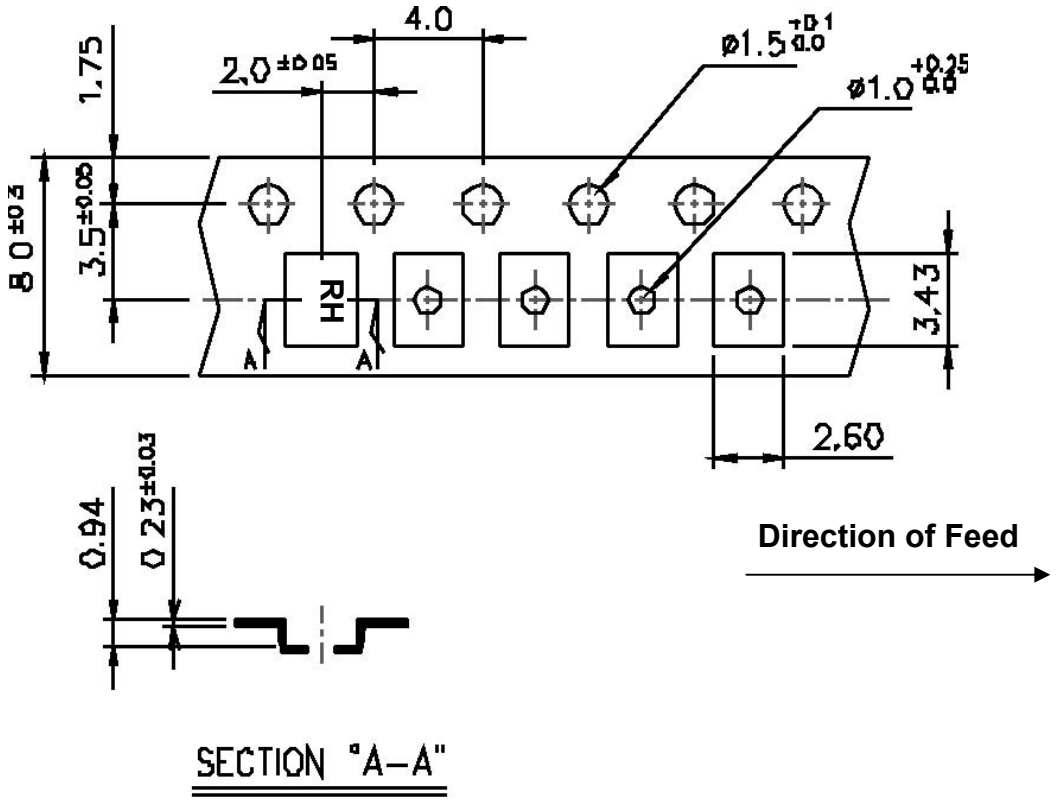

Tr1 S22 Log Mag 3.000dB/ Ref -15.00dB [F2]
1 935.0000000 MHz -14.796 dB
>2 941.0000000 MHz -10.229 dB
0.000
-3.000
-6.000
-9.000
-12.00
-15.00
-18.00
-21.00
-24.00
-27.00
-30.00
1 Center 938 MHz
IFBW 3 kHz
Span 60 MHz
Cor

F. PACKING:

1. REEL DIMENSION



2.TAPE DIMENSION



TST DCC
Release document

G. RECOMMENDED REFLOW PROFILE :

