

TMX W340

SAW Filter datasheet

3.0 x 3.0 mm, SMD

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Features

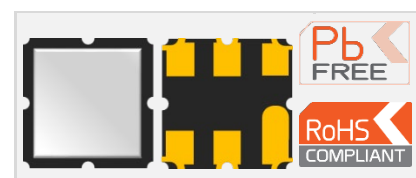
Features

- 866.0 MHz center frequency
- Ceramic package for Surface Mounted Technology
- Bandwidth at -1.5db : 12 MHz min / 35 MHz typ
- No external matching is required

Applications

- Remote control - RF
- Wireless applications

3.0 x 3.0 mm



Maximum ratings

Parameter	Min.	Typ.	Max.	Unit
Storage temperature range (T_{stg})	-40		85	°C
Operating temperature range (T_A)	-30		75	°C
DC permissive voltage			3	V
Maximum Input Power Handling			10	dBm

Frequency and electrical characteristics (Reference temperature @ 25°C)

Parameter	Min.	Typ. ¹	Max.	Unit
Center frequency (f_c)		866		MHz
Bandwidth @ -1.5 dB (BW, passband width)	12.00	35.00		MHz
Insertion Loss (IL, 860 – 872 MHz)		2.0	3.5	dB
Absolute Attenuation				dB
From 770 to 780 MHz	40	54		
From 815 to 825 MHz	40	59		
Source impedance ² (Single ended)		50		Ω
Load impedance ² (Single ended)		50		Ω

¹ Typical values are nominal performances at room temperature

² No external matching is required

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Model outline, pin connection and marking

TOP VIEW

3.0 ± 0.1 SQ

F E D

W340
T632
• AA

A B C

Marking		Note
Line 1	W340	RakonXpress designation
Line 2	S632	T = production Code 6 = Year 2016 32 = Week 32
Line 3	•AA	• = Identify black dot AA = Internal Code (Wafer Batch)

FRONT VIEW

1.0 max

1.4 max

SIDE VIEW

Pin	Connections
B	Input
E	Output
A, C, D, F	Case Ground

BOTTOM VIEW

2.8

0.6

1.5

0.85

1.6

1.3

A B C

F E D

RECOMMENDED PAD LAYOUT

TOP VIEW

3.2

1.7

1.05

1.1

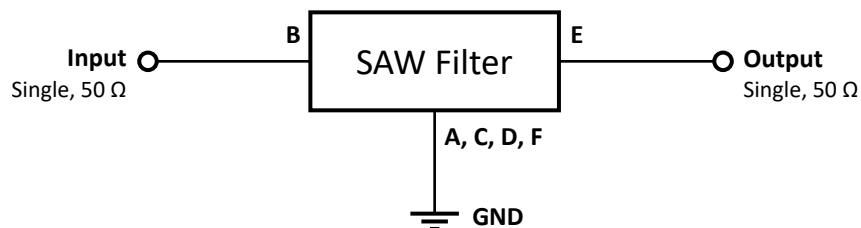
0.3

0.9

Unit: mm

Test circuit

50 Ω / 50 Ω Configuration



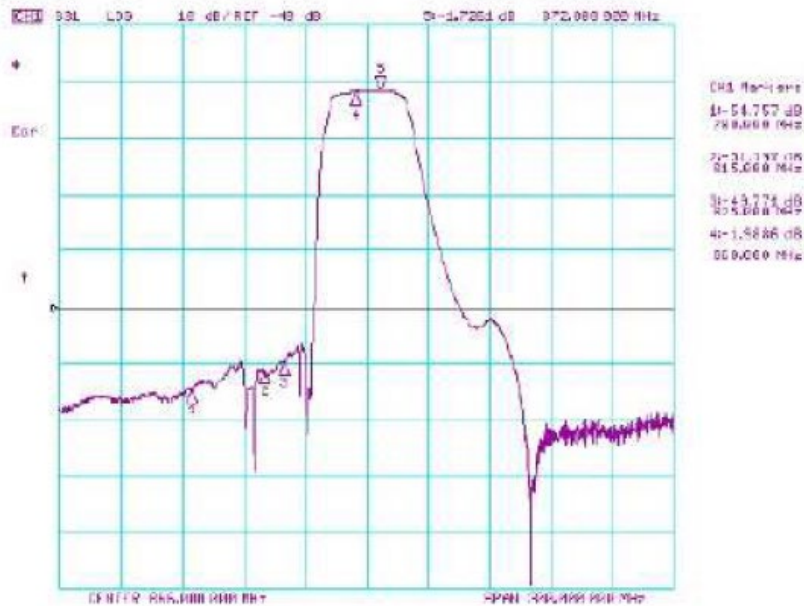
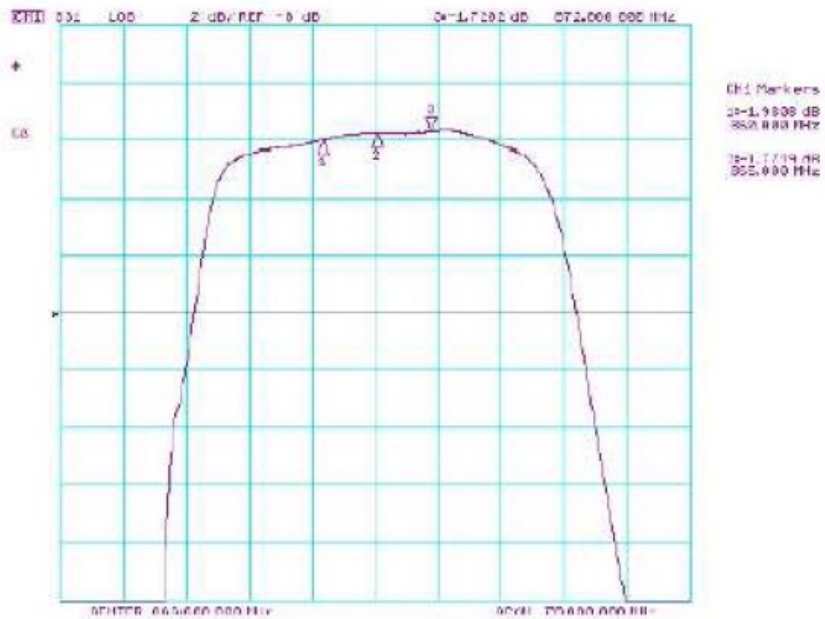
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Frequency characteristics

TYPICAL S21 RESPONSE

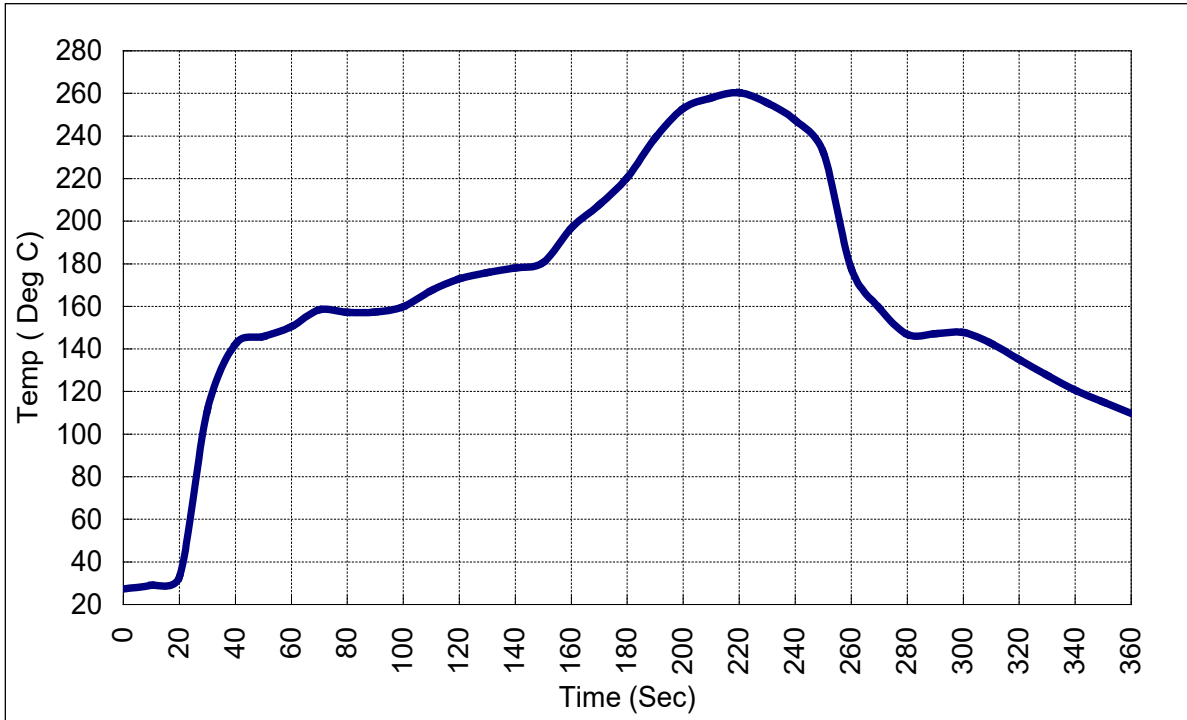


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Recommended reflow soldering profile



NOTE:

- The components shall remain within the electrical specifications after it soldered on the 1mm thickness PCB board and dipped in the solder at $260 \pm 5^{\circ}\text{C}$ during 10 ± 1 seconds.
- The components shall remain within the electrical specifications after it soldered by electric iron, solder at $350 \pm 10^{\circ}\text{C}$ during 3~4 seconds. Recovery time: $2 \pm 0.5\text{h}$.
- Ultrasonic cleaning may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning.
- Only leads of component may be soldered. Please avoid soldering another part of component.

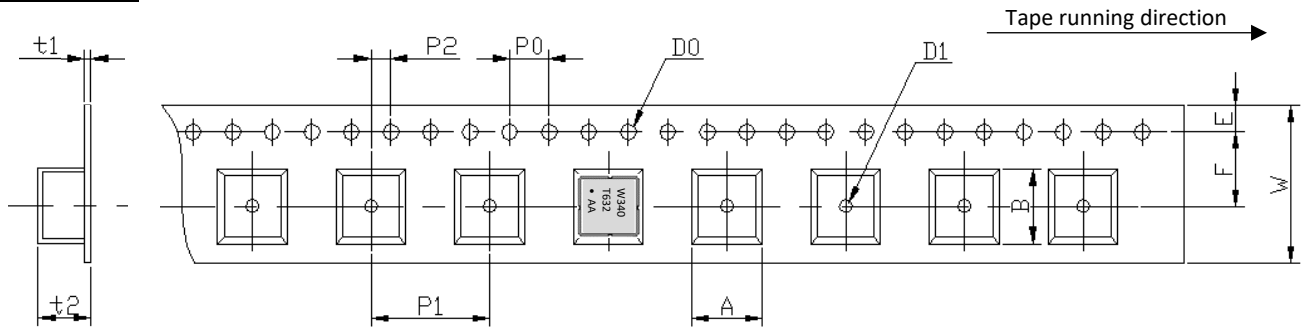
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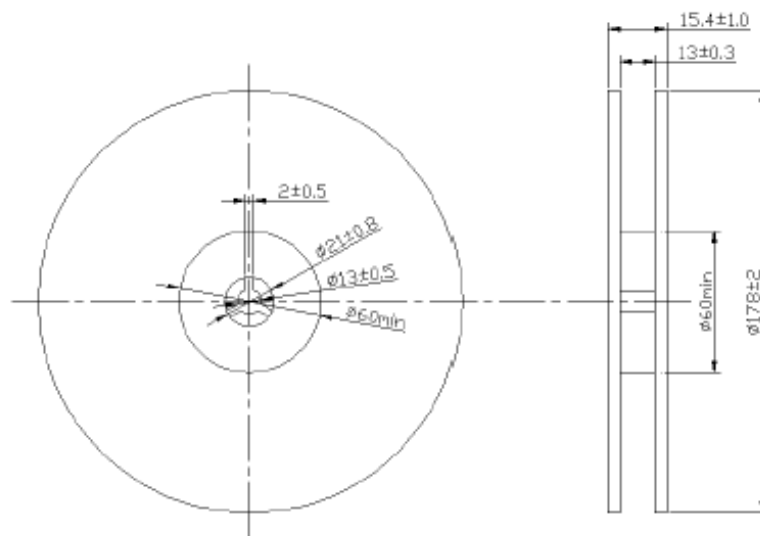
Tape and reel specifications

TAPE DETAILS:



Parameter	Code	Dimension	Tolerance
Height of component hole	A	3.35 max	
Width of component hole	B	3.35 max	
Diameter of sprocket hole	D ₀	Φ 1.5	± 0.1
Diameter of feed hole	D ₁	Φ 1.5	± 0.25
Pitch of sprocket hole	P ₀	4.0	± 0.2
Length from hole center to component center	P ₁	8.0	± 0.1
Length from Pocket hole center to sprocket hole center	P ₂	2.0	± 0.2
Width of carrier tape	W	12.0	± 0.3
Width of adhesive tape	F	5.5	± 0.3
Gap of hold down tape and carrier tape	E	1.75	± 0.1
Thickness of Embossed tape sheet	t ₁	0.31 max	
Thickness of Embossed tape	t ₂	1.7 max	

REEL DETAILS:



NOTE:

- Unit: mm
- Standard Packing Quantity (SPQ) is 1000 pieces/ reel

Reliability test

Parameter	Test condition / Description
Thermal Shock	The components shall remain within the electrical specifications after being kept at the condition of heat cycle conditions: TA=-40° C ± 3° C, TB=85° C ± 2° C, t1=t2=30min, switch time ≤ 3min & cycle time: 100 times, recovery time: 2h ± 0.5h.
Temperature Storage	High Temperature Storage: The components shall remain within the electrical specifications after being kept at the 85°C ± 2°C for 500 hours, recovery time: 2h ± 0.5h. Low Temperature Storage: The components shall remain within the electrical specifications after being kept at the -40°C ± 3°C for 500 hours, recovery time: 2h ± 0.5h.
Humidity test	The components shall remain within the electrical specifications after being kept at the condition of ambient temperature 60°C ± 2°C, and 90~95% RH for 500 hours.
Drop test	The components shall remain within the electrical specifications after random free drops 10 times from height of 1.0 meter onto concrete floor, and the specimens shall meet the electrical specifications.
Vibration Fatigue	The components shall remain within the electrical specifications after loaded vibration at 10~55Hz, amplitude 1.5mm, X, Y, Z, direction, during 2 hours.
Mechanical Shock	The components shall remain within the electrical specifications after 1000 shocks, acceleration 392 m/s ² , duration 6ms.
Note	As a result of the particularity of inner structure of SAW products, the components can easily be breakdown by electrostatic shock; so it's mandatory to pay attention to ESD protect during the tests.