TMX JT07

SAW Filter datasheet

5.0 x 5.0 x 1.35 mm, SMD

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Issue: Rev 3, 22 December 2022

TMX JT07

SAW Bandpass Filters | Wireless Communications

Features

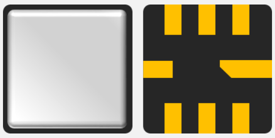
Features

- 480 MHz center frequency
- Ceramic package for Surface Mounted Technology
- Typical Passband Width: 36 MHz
- No matching network required for operation at 50 Ω

Applications

- Telecommunications
- Repeater

5.0 x 5.0 x 1.35 mm



Pb FREE

RoHS COMPLIANT

Maximum Ratings

Parameter	Min.	Typ.	Max.	Unit
Storage temperature range (T_{stg})	-40		85	°C
Operating temperature range (T_A)	-25		85	°C
AC Voltage between any two pins			5	V
DC Voltage between any two pins			0	dBm

Frequency and Electrical Characteristics (Reference temperature @ 25°C)

Parameter	Min.	Typ.[1]	Max.	Unit
Center frequency (f_C)	479.00	480.00	481.00	MHz
Insertion attenuation at 480 MHz (α)		21.5	23.0	dB
Bandwidth α_{rel} ≤3dB (BW, passband width)		36		MHz
Relative attenuation (α_{rel})				dB
462.00 MHz	-	2.4	4.2	
498.00 MHz	-	3.8	5.6	
Lower sidelobe: From 430.00 to 450.00 MHz	38.0	42.0	-	
Upper sidelobe: From 510.00 to 530.00 MHz	38.0	42.0	-	
Reflected wave signal suppression (0.1µs to 2.0 µs after main pulse)	40.0	48.0		dB
Amplitude ripple (pk-pk, 467.00 – 493.00 MHz)		0.8	1.5	dB
Amplitude tilt (467.00 – 493.00 MHz)		0.05		dB / MHz
Group Delay (480.00 MHz)		274.0		ns
Group delay ripple (pk-pk, 466.50 – 493.50 MHz)		15	25	ns
Temperature coefficient of frequency (TC_f)		-86		ppm/K

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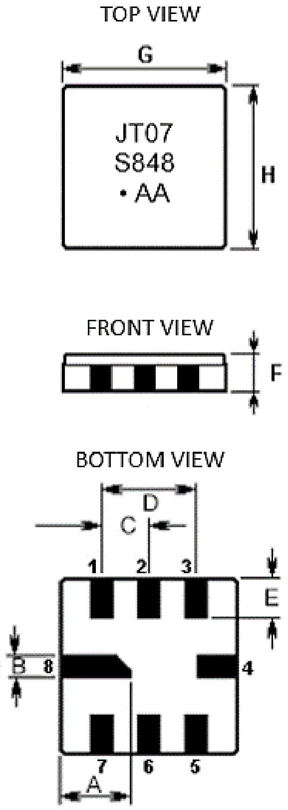
[1] Typical values are nominal performances at room temperature

Model Outline, Pin Connection and Marking



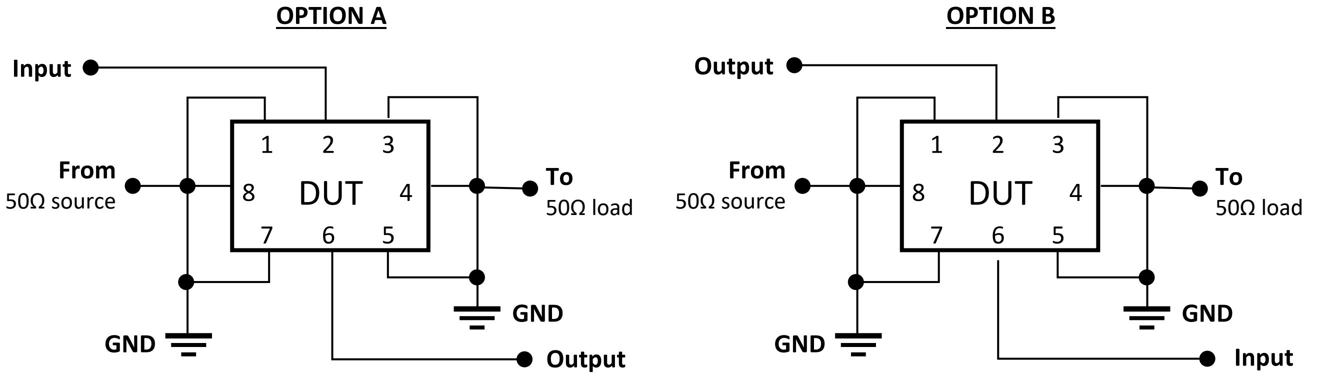
Marking		Note
Line 1	JT07	Rakonxpress designation
Line 2	S848	S = Production code 8 = The last digit of year 2018 48 = Week 48
Line 3	• AA	• = Identify black dot AA = Internal Code (Wafer Batch)

Pin	Connections
1	Input / Output ground
2	Input/ Output
5	Output / Input ground
6	Output / Input
3, 7	To be Grounded
4, 8	Case Ground

Code	Dimensions (mm)
A	2.08
B	0.60
C	1.27
D	2.54
E	1.20
F	1.35
G	5.00
H	5.00

Unit: mm

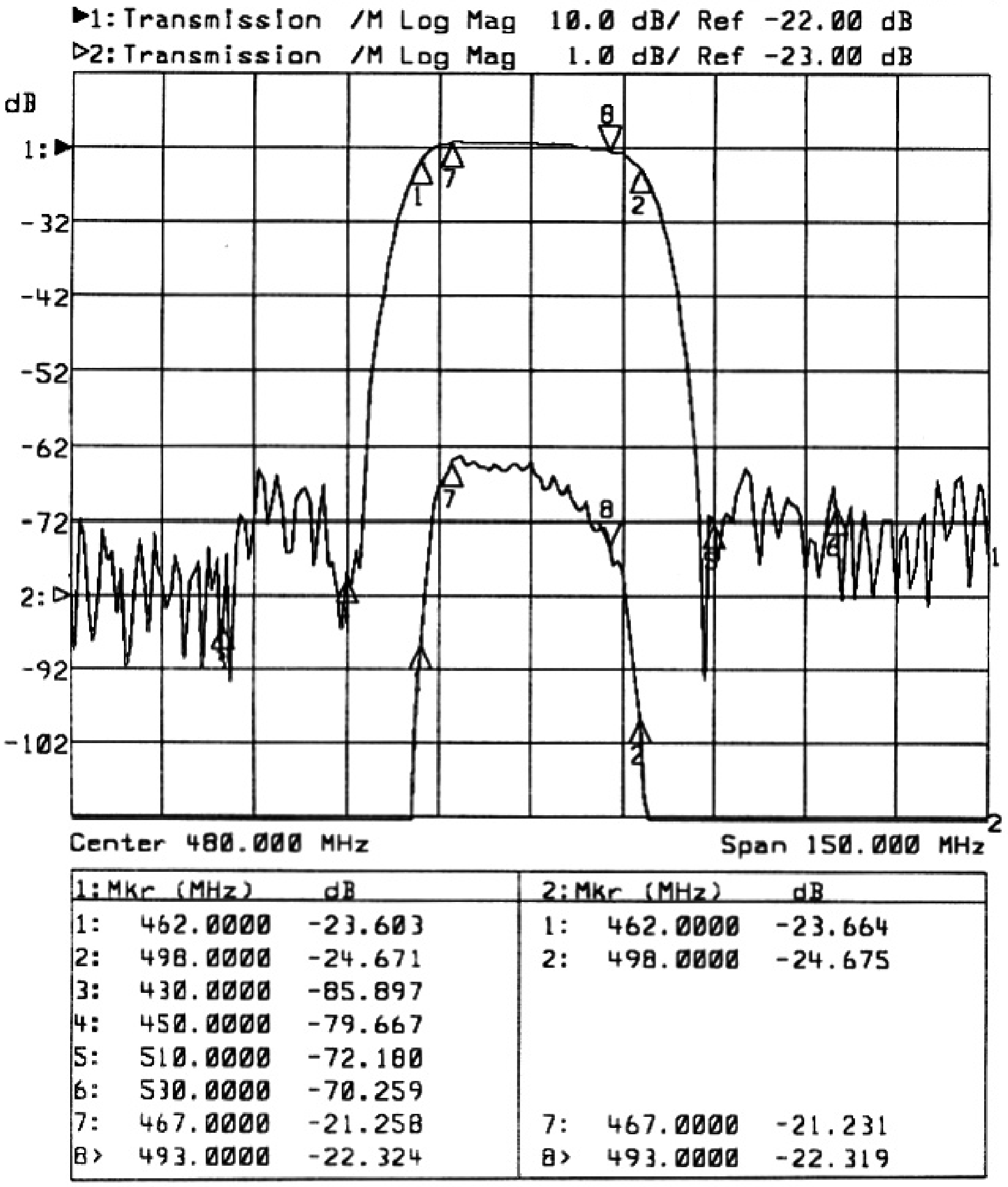
Test Circuit


OPTION A

OPTION B

Frequency Characteristics

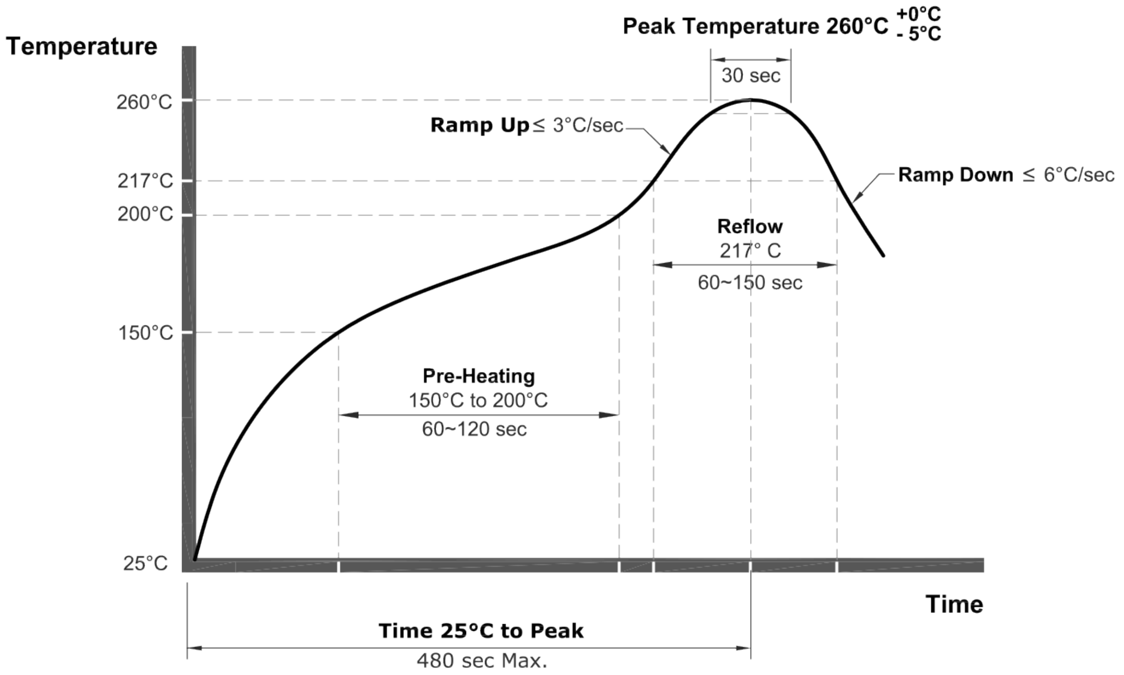
TYPICAL FREQUENCY RESPONSE



1: Mkr	(MHz)	dB
1:	462.0000	-23.603
2:	498.0000	-24.671
3:	430.0000	-85.897
4:	450.0000	-79.667
5:	510.0000	-72.180
6:	530.0000	-70.259
7:	467.0000	-21.258
8>	493.0000	-22.324

2: Mkr	(MHz)	dB
1:	462.0000	-23.664
2:	498.0000	-24.675
7:	467.0000	-21.231
8>	493.0000	-22.319

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 ± 5°C during 10 ± 1 seconds.
- The components shall remain within the electrical specifications after it soldered by electric iron, solder at 350 ± 10 °C during 3~4 seconds. Recovery time: 2 ± 0.5 hour.
- Ultrasonic cleaning may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning.
- Only leads of components may be soldered. Please avoid soldering another part of the component.