TMX U394

SAW Filter datasheet

5.0 x 5.0 x 1.35 mm, SMD

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Issue: Rev 2, 22 December 2022

TMX U394

SAW Bandpass Filters | Wireless Communications

Features

Features

- 433.9 MHz center frequency
- Ceramic package for Surface Mounted Technology
- Maximum pulse power: 18dBm

Applications

- Remote control - RF
- Wireless applications

5.0 x 5.0 x 1.35 mm

Maximum Ratings

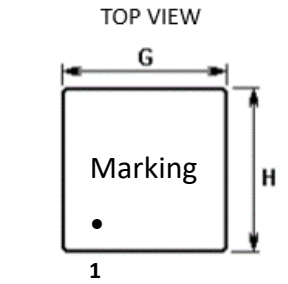
Parameter	Min.	Typ.	Max.	Unit
Storage temperature range (T_{stg})	-40		85	°C
Operating temperature range (T_A)	-40		85	°C
DC Voltage (V_{DC})			12	V
Input Power			18	dBm

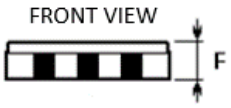
Frequency and Electrical Characteristics

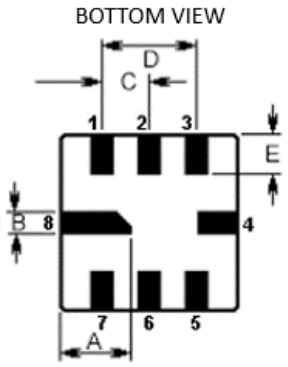
Parameter	Min.	Typ.[1]	Max.	Unit
Source impedance[2] (Single ended)		50		Ω
Load impedance[2] (Single ended)		50		Ω
Center Frequency (fc)		868.3		MHz
Rejection				
At (fc – 21.4) MHz (Image)	30	40		dB
At (fc – 10.7) MHz (LO)	15	30		
Ultimate		60		
Insertion Loss		4.0	5.5	dB
Bandwidth @ 3 dB (BW, passband width)		1.2	1.5	MHz
Temperature				
Turnover Temperature	25	40	55	°C
Turnover Frequency		(fc)		MHz
Frequency Temperature Coefficient		0.032		ppm/°C²
Frequency Ageing				
Absolute Value during the First Year		10		ppm/yr

[1] Typical values are nominal performances at room temperature
[2] External matching circuit is required (see drawing hereunder)

Model Outline, Pin Connection and Marking







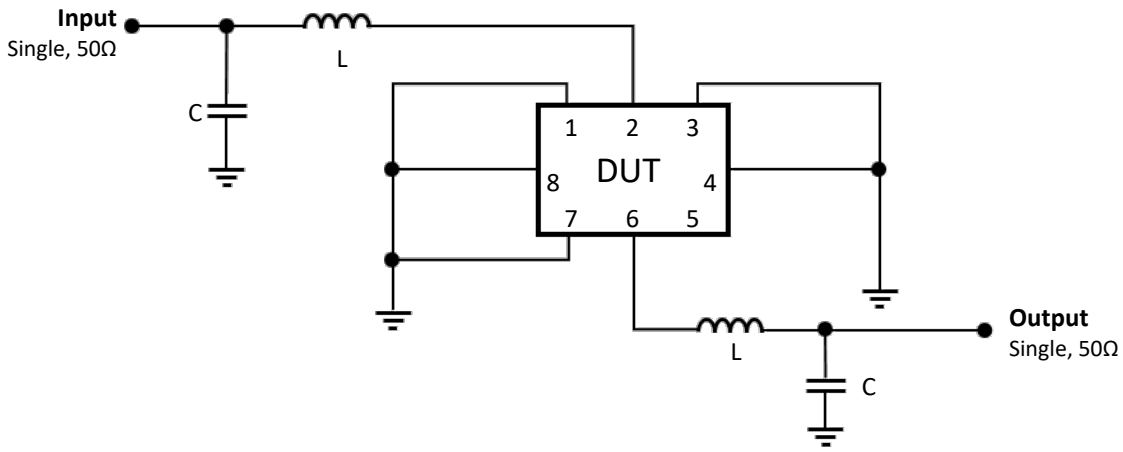
Marking		Note
Line 1	U394	Reference to RakonXpress part number with only the last 4 digits
Line 2	TYWWLL	T = Partner identifier Y = Last digit of the year WW = Number of week in the year LL = Lot number in the week (from AA to ZZ)
Line 3	•	• = Identify black dot

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

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

Test Circuit

50 Ω / 50 Ω Configuration



NOTE:

- C = 4 ~ 8 pF, L = 3.0 nH.
- These components values have to be adjusted to the customer PC Board, due to parasitics inductors and capacitors.

Frequency Characteristics

TYPICAL S21 RESPONSE