



TMX U381

SAW Bandpass Filter – US DVB-C
Specification (Rev-4)

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Reference Temperature: +25°C (+45°C)

Electrical Parameters	Unit	Minimum	Typical	Maximum
Source Impedance (single ended)	Ω	-	50	-
Load Impedance (balanced drive)	Ω / pF	-	2000 / 3	-
Center Frequency fo (center between 3dB points)	MHz	-	43.75	-
Relative Attenuation α_{rel}				
41.28 (41.22) MHz	dB	-	0.3	-
46.34 (46.28) MHz	dB	-0.8	0.2	1.2
40.81 (40.75) MHz	dB	1.5	2.7	3.9
46.81 (46.75) MHz	dB	1.5	2.7	3.9
39.81 (39.75) MHz	dB	38	53	-
47.81 (47.75) MHz	dB	37	48	-
Lower sidelobe				
35.06 ... 39.81 (35.00 ... 39.75) MHz	dB	38	46	-
Upper sidelobe				
47.81 ... 55.06 (47.75 ... 55.00) MHz	dB	36	41	-
Insertion attenuation IL Reference level for the following data 43.81 (43.75) MHz	dB	13.3	14.8	16.3
Pass bandwidth				
$\alpha_{\text{rel}} \leq 3\text{dB}$ BW _{3dB}	MHz	-	6	-
$\alpha_{\text{rel}} \leq 30\text{dB}$ BW _{30dB}	MHz	-	7.6	-
Reflected Wave Signal Suppression 1.3 μs ...6.0 μs after main pulse (test pulse 250ns, Carrier frequency 43.81MHz)	dB	42	52	-
Feed through Signal Suppression 1.3 μs ...1.2 μs before main pulse (test pulse 250ns, Carrier frequency 43.81MHz)	dB	50	56	-
Group delay ripple (p-p) $\Delta\tau$ Aperture 50 kHz 40.81 ... 46.81 (40.75 ... 46.75) MHz	ns	-	40	-
Temperature coefficient of frequency TC _f	ppm/K	-	-72	-
Impedance at 43.81MHz				
Input	k Ω / pF	-	1.1 / 16.4	-
Output	k Ω / pF	-	1.1 / 5.0	-
Package type	SIP5G			

Maximum Ratings

Rating		Unit	Value
Operable Temperature Range	T _A	-25 to +65	°C
Storage Temperature Range	T _{stg}	-40 to +85	°C
DC Voltage (between any terminals)	V _{DC}	12	V
AC Voltage (between any terminals)	V _{PP}	10	V

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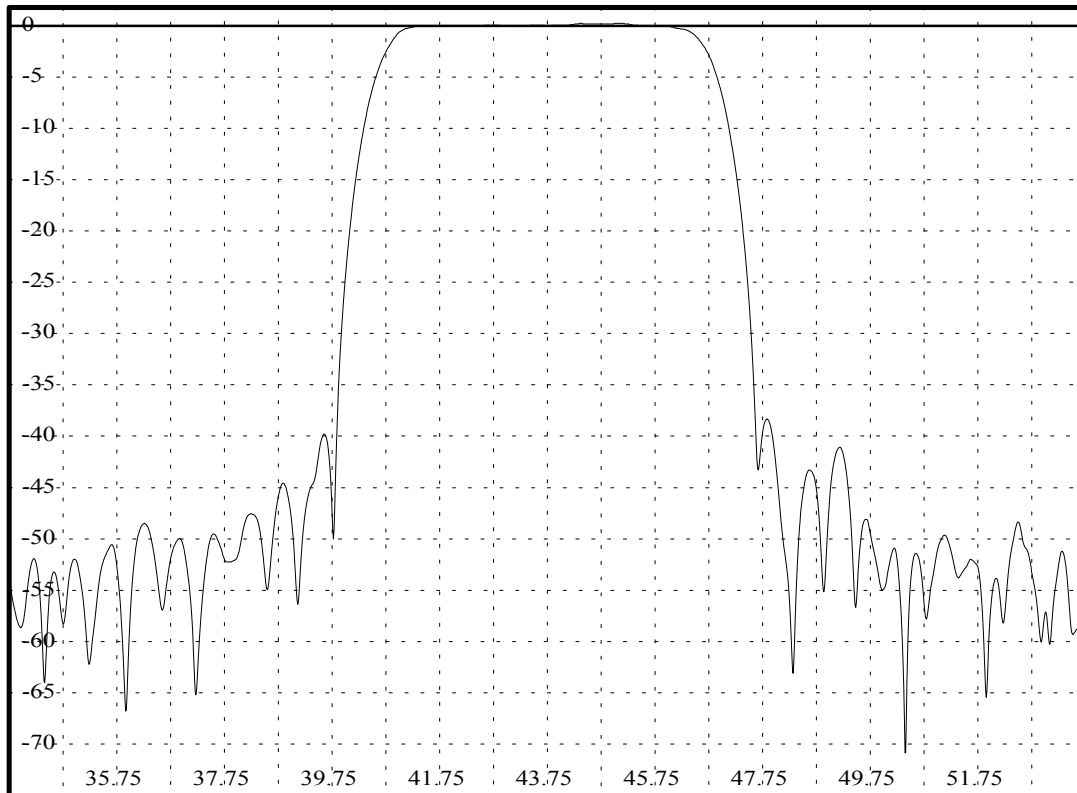
TYPICAL S21 RESPONSE

References

CENTER FREQUENCY = 43.75 MHz
LOSS REFERENCE = -6.77 dB
DELAY REFERENCE = 1.23 μ s
PHASE REFERENCE = -96.26 deg

Scales

SCALE_FREQUENCY = 1 MHz/div
SCALE_AMPLITUDE = 5 dB/div

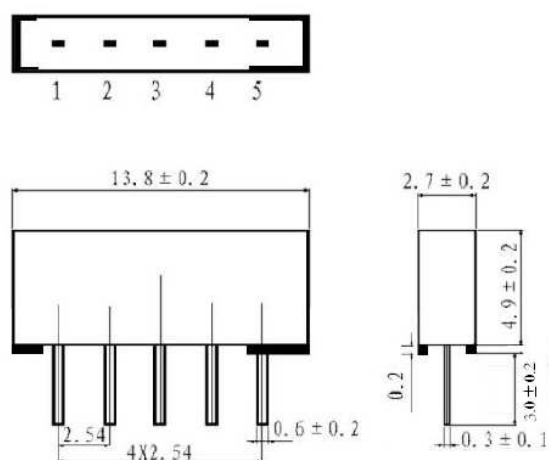


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PACKAGE DRAWING



Pin No.	Functions
1.	Input
2.	Input-Ground
3.	Chip carrier-Ground
4.	Output
5.	Output