



SAW Components

SAW bandpass Filter

Low loss bandpass filter for terrestrial TV applications

Series/type: X 7550 D

Ordering code:

Date: July 17, 2006

Version: 1.1



SAW Components

X 7550 D

SAW bandpass Filter

44.00 MHz

Data sheet

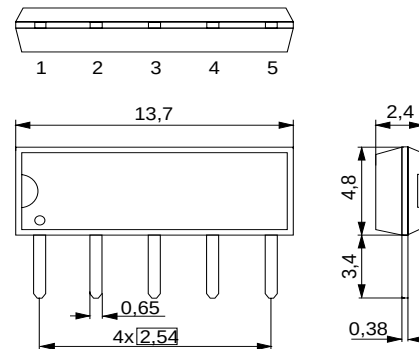
Application

- IF filter for digital terrestrial TV
- Usable bandwidth 5.7 MHz
- Low insertion attenuation



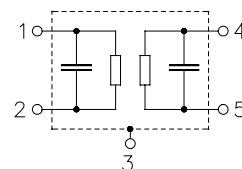
Features

- Duraplast package **SIP5D**
- Approximate weight 0.5 g
- Standard IC package
- RoHS compatible
- Tinned CuFe alloy terminals



Pin configuration

- 1 Input
- 2 Input
- 3 Chip carrier - ground
- 4 Output
- 5 Output





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Characteristics

Reference temperature: $T_A = 25 (45) ^\circ\text{C}$
Terminating source impedance: $Z_S = 50 \Omega$ and matching network
Terminating load impedance: $Z_L = 2 \text{ k}\Omega \parallel 3 \text{ pF}$ and matching network

	min.	typ. @ 25 °C	max.	
Insertion attenuation α				
Reference level for 44.06(44.00) MHz the following data	5.0	7.0	9.0	dB
Amplitude ripple (p-p) $\Delta\alpha$				
41.66 ... 46.46 (41.60 ... 46.40) MHz	—	1.5	—	dB
Pass bandwidth				
$\alpha_{\text{rel}} \leq 3 \text{ dB}$ $B_{3\text{dB}}$	—	5.7	—	MHz
Relative attenuation α_{rel}				
39.81 (39.75) MHz	32.0	41.0	—	dB
41.26 (41.20) MHz	—	2.1	—	dB
46.86 (46.80) MHz	—	0.4	—	dB
47.31 (47.25) MHz	20.0	27.0	—	dB
Lower sidelobe				
35.06 ... 40.41 (35.00 ... 40.35) MHz	32.0	38.0	—	dB
Upper sidelobe				
47.71 ... 55.06 (47.65 ... 55.00) MHz	27.0	33.0	—	dB
Reflected wave signal suppression				
1.3 μs ... 6.0 μs after main pulse (test pulse 250 ns, carrier frequency 44.06 MHz)	24.0	34.0	—	dB
Group delay ripple (p-p) Δt				
41.66 ... 46.46 (41.60 ... 46.40) MHz	—	190	—	ns
Impedance at 44.06 MHz				
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$	—	1.0 $\parallel$ 21.7	—	k Ω $\parallel$ pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$	—	8.0 $\parallel$ 3.6	—	k Ω $\parallel$ pF
Temperature coefficient of frequency TC_f	—	−72	—	ppm/K



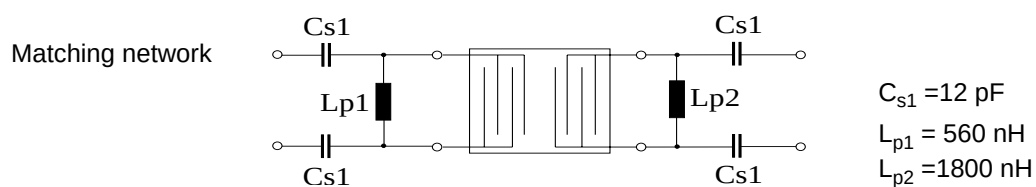
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Maximum ratings

Operable temperature range	T	-25 / +65	°C	
Storage temperature range	T _{stg}	-40 / +85	°C	
DC voltage	V _{DC}	5	V	
AC voltage	V _{pp}	10	V	between any terminals



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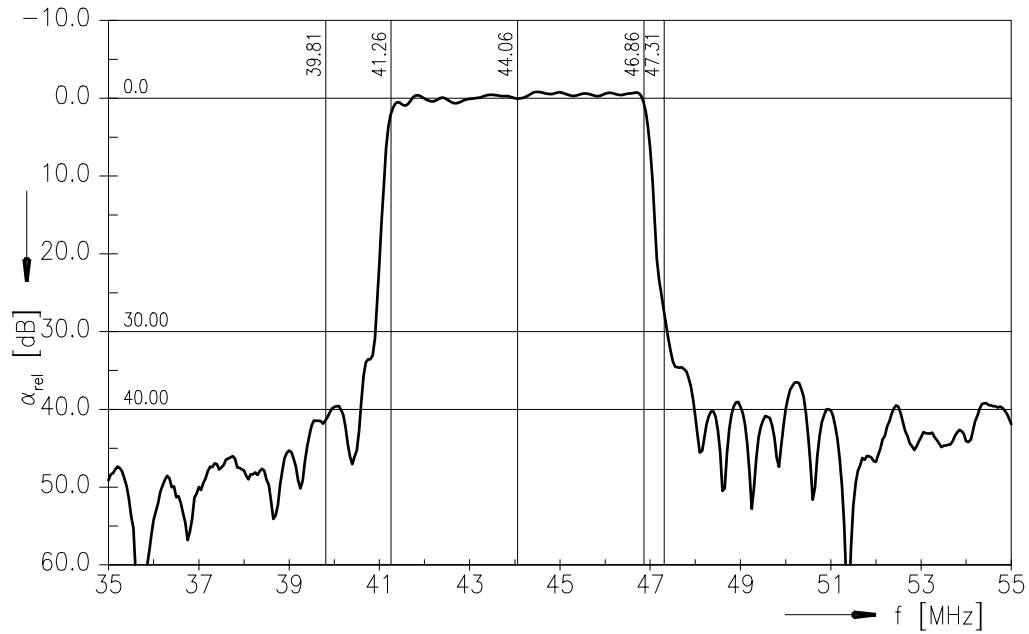
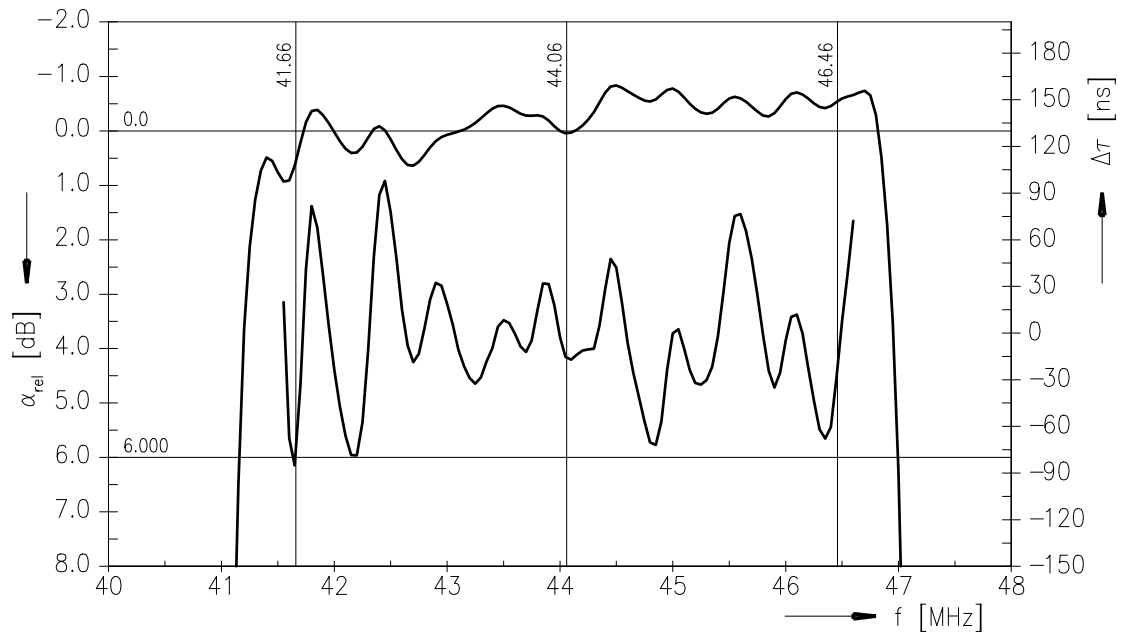
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Frequency response



Please read *cautions and warnings* and *important notes* at the end of this document.



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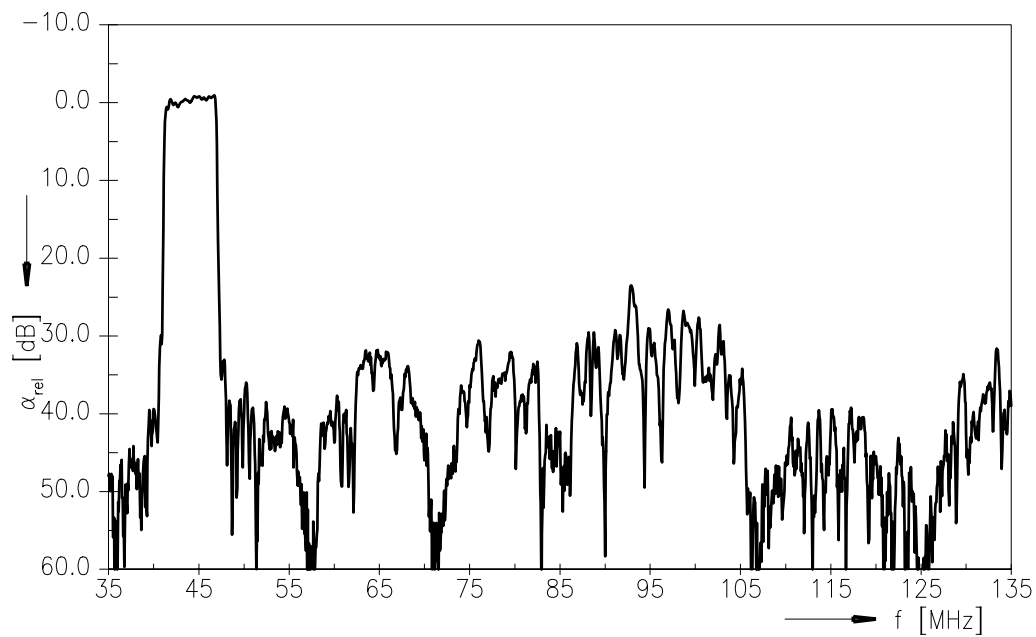
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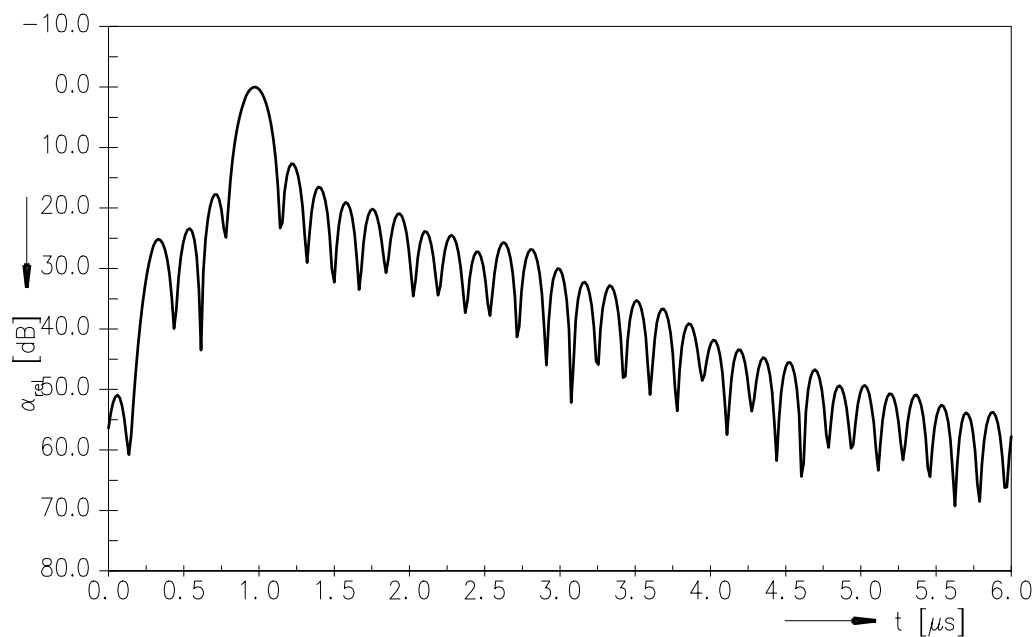
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Frequency response



Time domain response



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References

Type	X 7550 D
Ordering code	
Marking and package	C61157-A1-A21
Packaging	F61074-V8049-Z000
Date codes	L_1126
S-parameters	X7550D_NB.s4p
Soldering profile	S_6001
RoHS compatible	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com.

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Please read *cautions and warnings and important notes* at the end of this document.



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