



SAW Components

SAW bandpass filter

Bandpass filter for digital cable applications

Series/type:	X 6794 X
Ordering code:	B39440-X6794-X400
Date:	July 17, 2009
Version:	2.0

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SAW Components

X 6794 X

SAW bandpass filter

44.00 MHz

Data Sheet

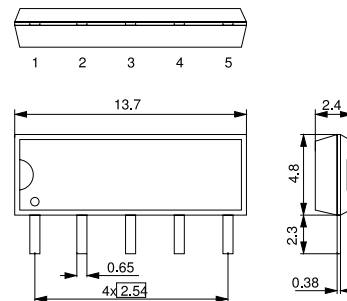
Application

- IF filter for ATSC
- Usable bandwidth 5.4 MHz
- Constant group delay
- Suitable for single use and cascade of two device
- Unbalanced input option



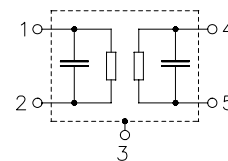
Features

- Duroplast 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



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



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Characteristics

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

	min.	typ. @ 25 °C	max.	
Insertion attenuation α				
Reference level for 44.06 (44.00) MHz the following data	16.7	18.2	19.7	dB
Amplitude ripple (p-p) $\Delta\alpha$				
41.66 ... 46.46 (41.60 ... 46.40) MHz	—	0.8	—	dB
Relative attenuation α_{rel}				
39.81 (39.75) MHz	30.0	44.0	—	dB
41.06 (41.00) MHz	—	7.3	—	dB
41.37 (41.31) MHz	—	2.0	—	dB
46.75 (46.69) MHz	—	2.9	—	dB
47.06 (47.00) MHz	—	9.3	—	dB
47.31 (47.25) MHz	16.0	21.0	—	dB
Lower sidelobe				
35.06 ... 38.80 (35.00 ... 38.74) MHz	36.0	42.0	—	dB
38.80 ... 39.81 (38.74 ... 39.75) MHz	29.0	35.0	—	dB
Upper sidelobe				
47.41... 50.11 (47.35 ... 50.05) MHz	22.0	28.0	—	dB
50.11 ... 55.06 (50.05 ... 55.00) MHz	36.0	41.0	—	dB
Reflected wave signal suppression				
1.2 μs ... 6.0 μs after main pulse (test pulse 250 ns, carrier frequency 44.06 MHz)	45.0	55.0	—	dB
Group delay ripple (p-p) $\Delta\tau$				
41.37 ... 46.75 (41.31 ... 46.69) MHz	—	50	—	ns
Impedance at 44.06 MHz				
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$	—	2.9 \parallel 7.6	—	k Ω \parallel pF
Input: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	—	2.9 \parallel 2.7	—	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	between any terminals
AC voltage	V _{pp}	10	V	between any terminals

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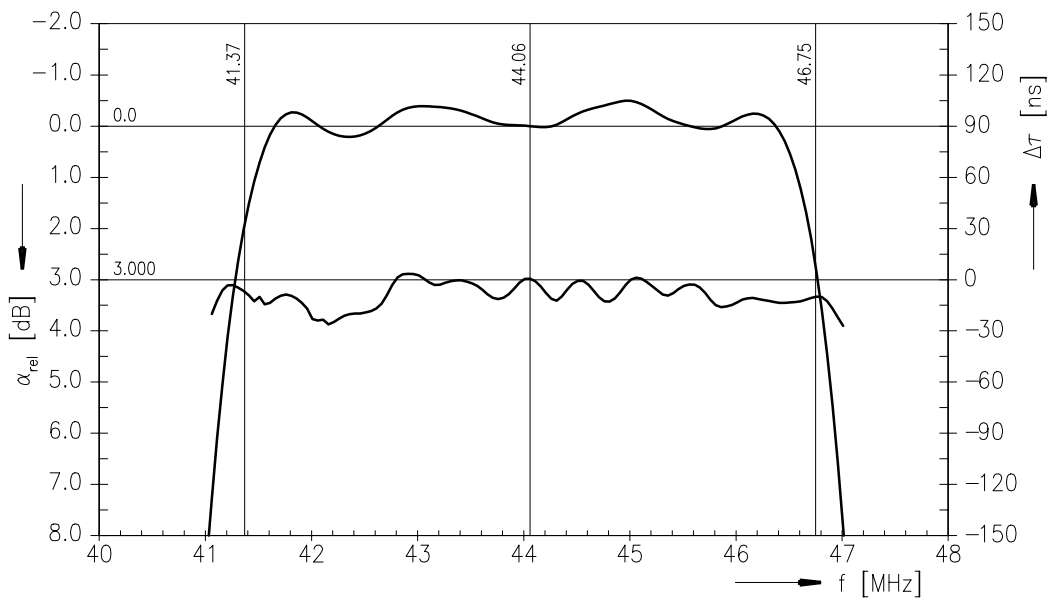
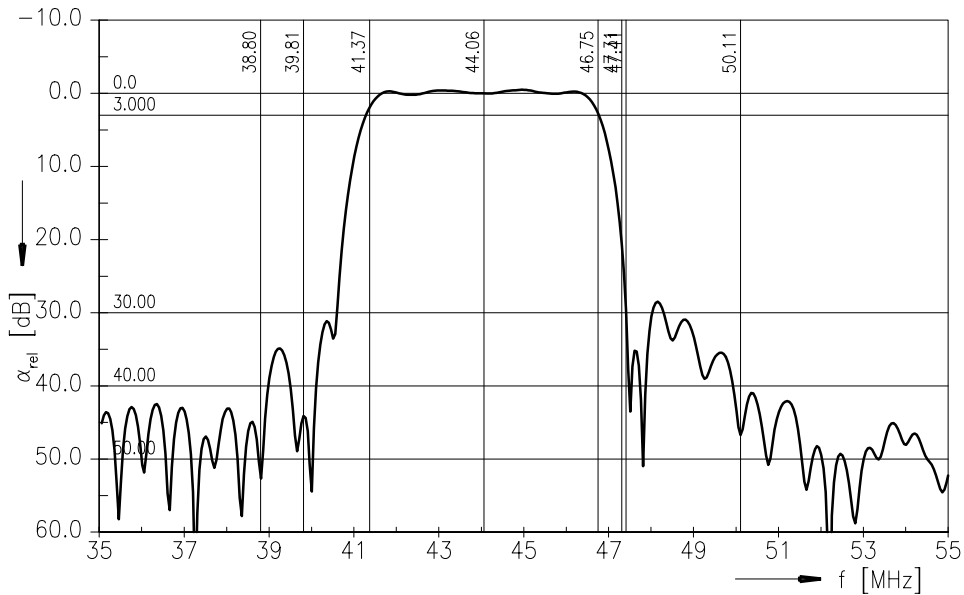
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Data Sheet

Frequency response



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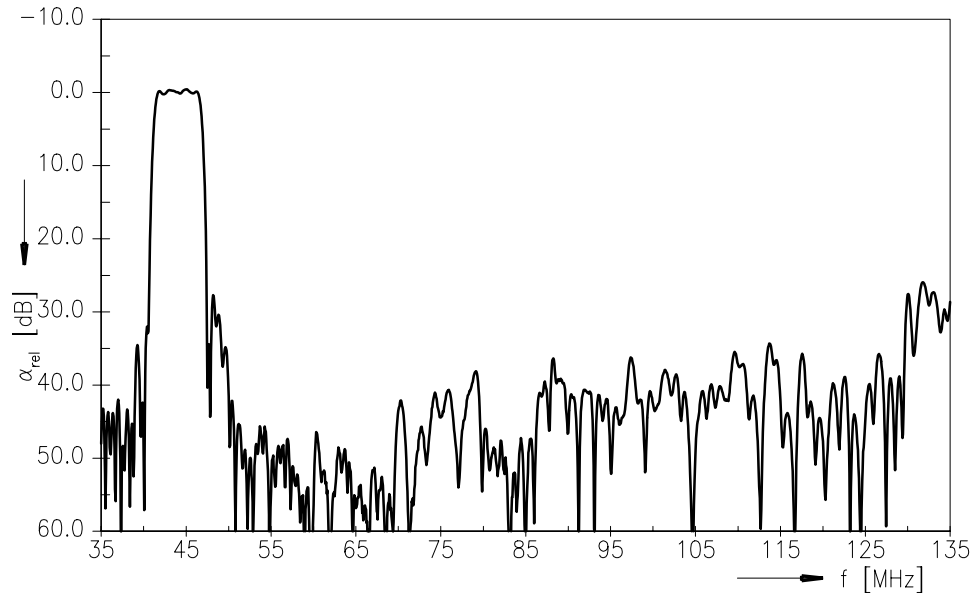
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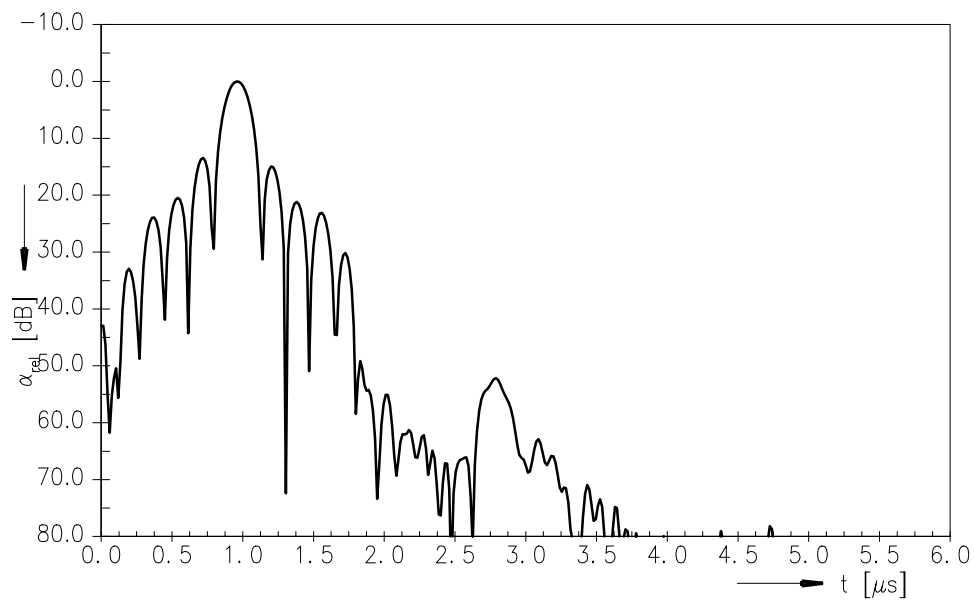
44.00 MHz

Data Sheet

Frequency response



Time domain response



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References

Type	X 6794 X
Ordering code	B39440-X6794-X400
Marking and package	C61157-A1-A22
Packaging	F61074-V8049-Z000
Date codes	L_1126
S-parameters	X6794X_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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