



## SAW Components

### SAW bandpass filter

Bandpass filter for digital cable applications

<b>Series/type:</b>	<b>X 6793 D</b>
<b>Ordering code:</b>	<b>B39440-X6793-N201</b>
Date:	September 04, 2009
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SAW Components

X 6793 D

SAW bandpass filter

44.00 MHz

### Data Sheet

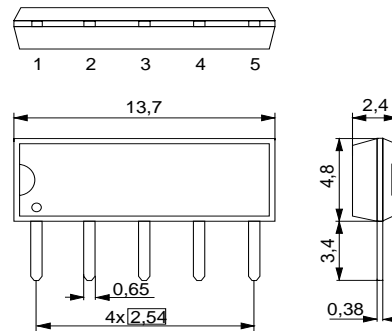
#### Application

- Standard: ATSC
- Usable bandwidth 5.6 MHz
- Constant group delay
- Suitable for single use and cascade of two device
- Balanced input option



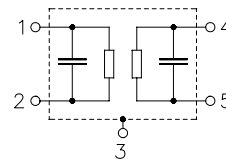
#### Features

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



#### Pin configuration

- 1 Input
- 2 Input - ground
- 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:  $Z_L = 2 \text{ k}\Omega \parallel 3 \text{ pF}$

	<b>min.</b>	<b>typ. @ 25 °C</b>	<b>max.</b>	
<b>Insertion attenuation</b> $\alpha$				
Reference level for 44.06 (44.00) MHz the following data	17.3	18.8	20.3	dB
<b>Amplitude ripple (p-p)</b> $\Delta\alpha$				
41.81 ... 46.06 (41.75 ... 46.00) MHz	—	1.5	—	dB
<b>Relative attenuation</b> $\alpha_{rel}$				
39.81 (39.75) MHz	28.0	35.0	—	dB
41.06 (41.00) MHz	1.6	3.1	4.6	dB
46.75 (46.69) MHz	0.9	2.4	3.9	dB
47.06 (47.00) MHz	7.0	9.0	—	dB
47.31 (47.25) MHz	17.0	23.0	—	dB
<b>Lower sidelobe</b>				
35.06 ... 37.06 (35.00 ... 37.00) MHz	34.0	38.0	—	dB
37.06 ... 39.41 (37.00 ... 39.35) MHz	29.0	34.0	—	dB
<b>Upper sidelobe</b>				
47.71 ... 50.76 (47.65 ... 50.70) MHz	20.0	27.0	—	dB
50.76 ... 55.06 (50.00 ... 55.00) MHz	30.0	36.0	—	dB
<b>Reflected wave signal suppression</b>				
1.2 $\mu\text{s}$ ... 6.0 $\mu\text{s}$ after main pulse (test pulse 250 ns, carrier frequency 44.06 MHz)	42.0	54.0	—	dB
<b>Group delay ripple (p-p)</b> $\Delta\tau$				
41.37 ... 46.75 (41.31 ... 46.69) MHz	—	50	—	ns
<b>Impedance at 44.06 MHz</b>				
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$	—	2.1 $\parallel$ 8.9	—	$\text{k}\Omega \parallel \text{pF}$
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	—	7.0 $\parallel$ 2.0	—	$\text{k}\Omega \parallel \text{pF}$
<b>Temperature coefficient of frequency</b> $TC_f$	—	-72	—	ppm/K

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Maximum ratings

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

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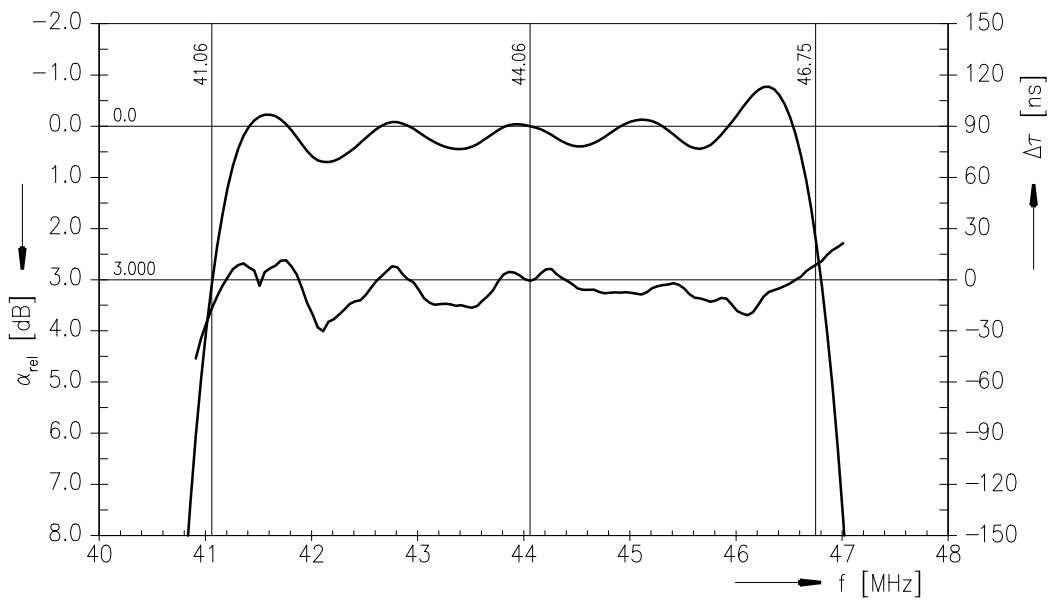
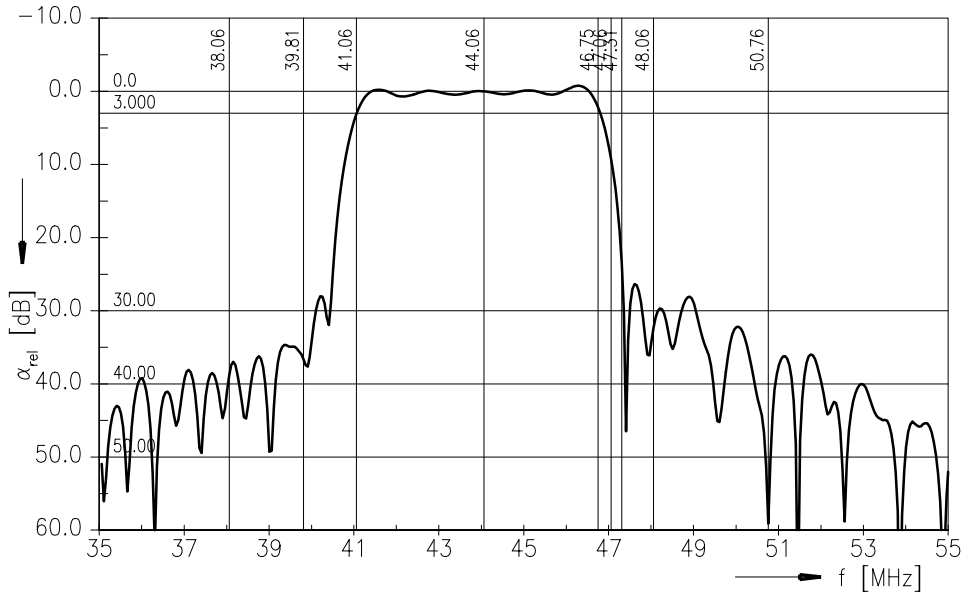
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44.00 MHz

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Frequency response



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SAW Components

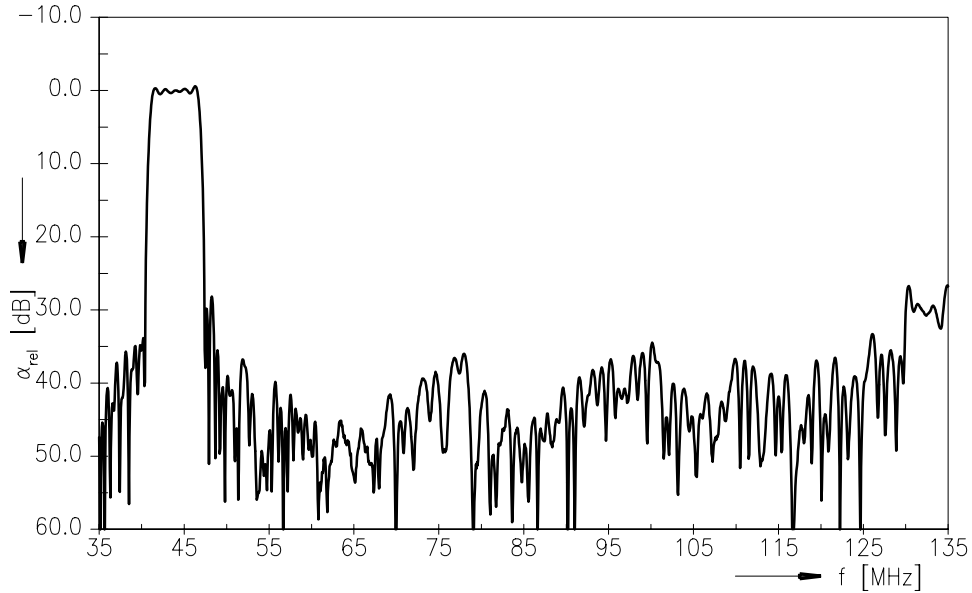
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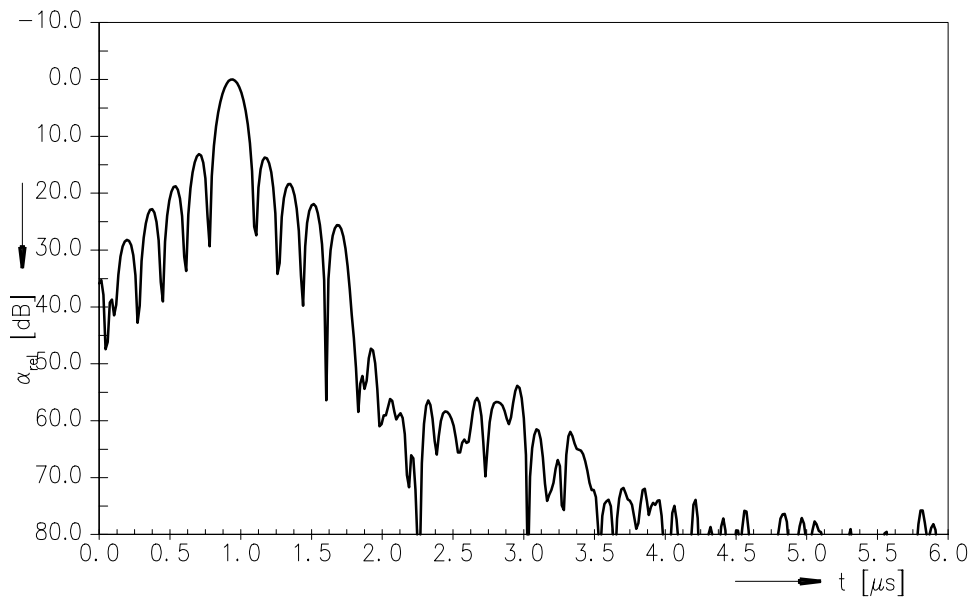
44.00 MHz

Data Sheet

Frequency response



Time domain response



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**SAW Components** X 6793 D

**SAW bandpass filter** 44.00 MHz

Data Sheet

References

<b>Type</b>	X 6793 D
<b>Ordering code</b>	B39440-X6793-N201
<b>Marking and package</b>	C61157-A1-A21
<b>Packaging</b>	F61074-V8049-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	X6793N_NB.s4p
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	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."

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