



## **SAW Components**

### **SAW bandpass filter**

Bandpass filters for terrestrial TV applications

<b>Series/type:</b>	<b>X 6753 M</b>
<b>Ordering code:</b>	<b>B39358-X6753-M100</b>
<b>Date:</b>	<b>February 17, 2006</b>
<b>Version:</b>	<b>2.0</b>



SAW Components

X 6753 M

SAW bandpass filter

35.825 MHz

Data sheet

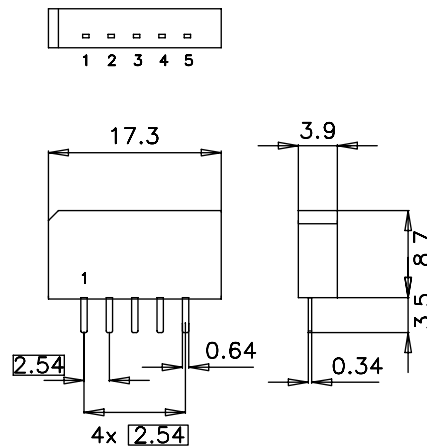
### Application

- Bandpass filters for terrestrial TV applications
- Usable bandwidth 7.5 MHz



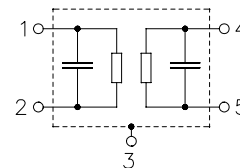
### Features

- Plastic package SIP5K
- Approximate weight 1.0 g
- RoHS compatible
- Tinned CuFe alloy terminals



### Pin configuration

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





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**Characteristics**

Reference temperature:

$$T_A = 25 \text{ }^\circ\text{C}$$

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 the 35.825 MHz following data		18.3	19.8	21.3	dB
<b>Pass bandwidth</b>					
$\alpha_{\text{rel}} \leq 1 \text{ dB}$	$B_{1\text{dB}}$	—	7.2	—	MHz
$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	—	7.5	—	MHz
$\alpha_{\text{rel}} \leq 30 \text{ dB}$	$B_{30\text{dB}}$	—	8.6	—	MHz
<b>Relative attenuation</b>	$\alpha_{\text{rel}}$				
32.40 MHz		0.0	1.0	2.0	dB
39.63 MHz		0.4	1.4	2.4	dB
39.83 MHz		2.7	3.9	5.1	dB
31.90 MHz		—	16.7	—	dB
30.90 MHz		38.0	47.0	—	dB
40.40 MHz		27.0	32.0	—	dB
40.90 MHz		34.0	43.0	—	dB
41.40 MHz		36.0	44.0	—	dB
Lower sidelobe					
25.00 ... 30.90 MHz		34.0	39.0	—	dB
Upper sidelobe					
40.90 ... 50.00 MHz		31.0	38.0	—	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 35.825 MHz)		40.0	49.0	—	dB
<b>Feedthrough signal suppression</b>					
1.4 $\mu\text{s}$ ... 1.3 $\mu\text{s}$ before main pulse (test pulse 250 ns, carrier frequency 35.825 MHz)		—	50.0	—	dB
<b>Group delay ripple (p-p)</b>	$\Delta t$				
32.40 ... 39.63 MHz		—	50	—	ns
<b>Impedance at 35.825 MHz</b>					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	2.4  16.9	—	k $\Omega$    pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1.9   4.8	—	k $\Omega$    pF
<b>Temperature coefficient of frequency</b>	$\text{TC}_f$	—	-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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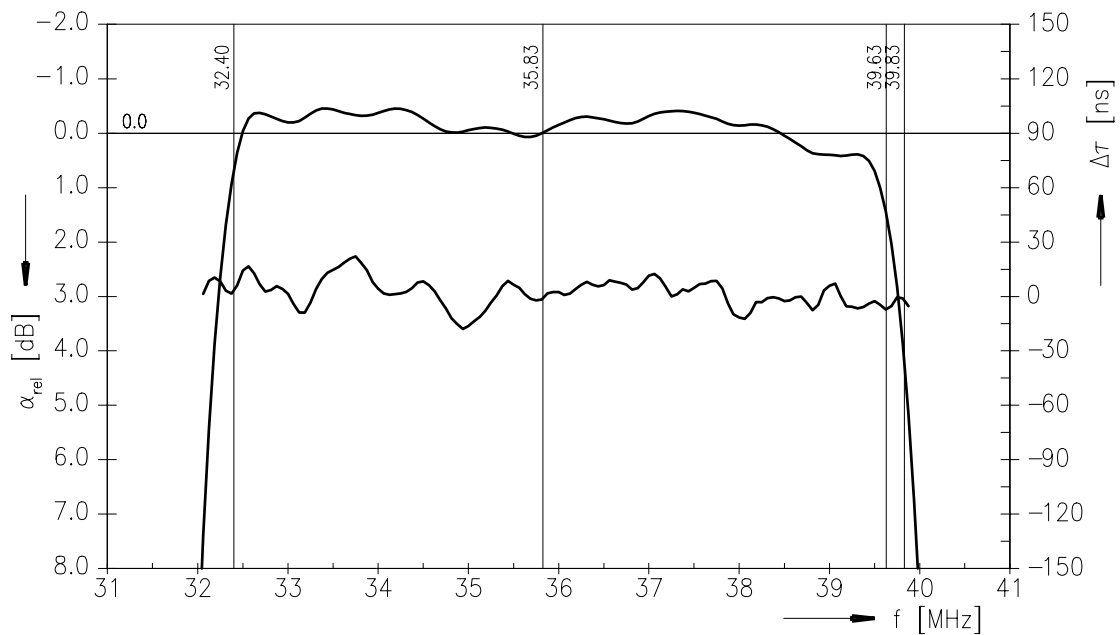
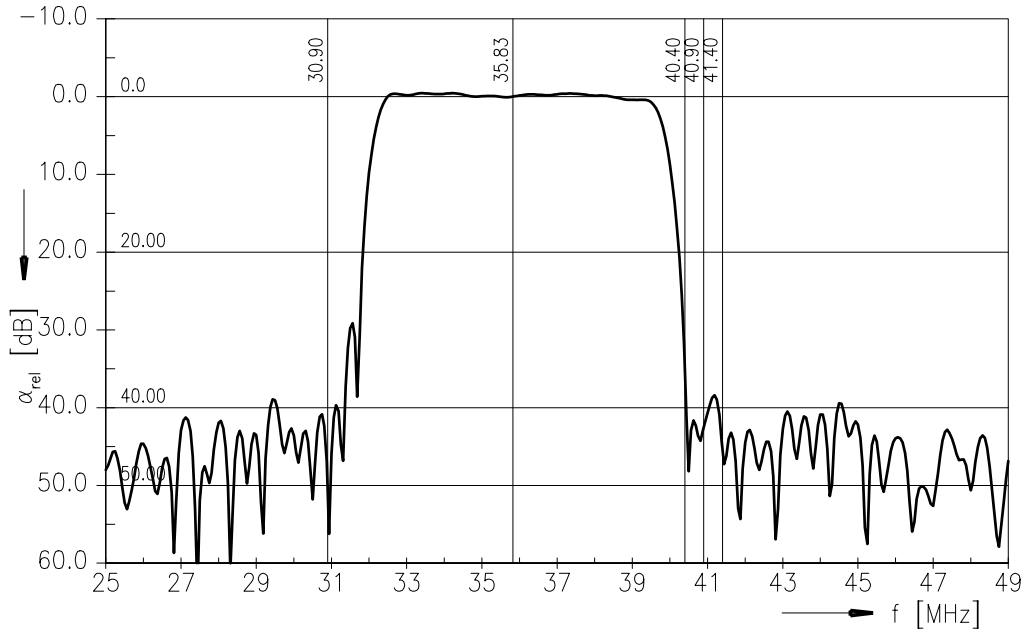
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Data sheet

Frequency response

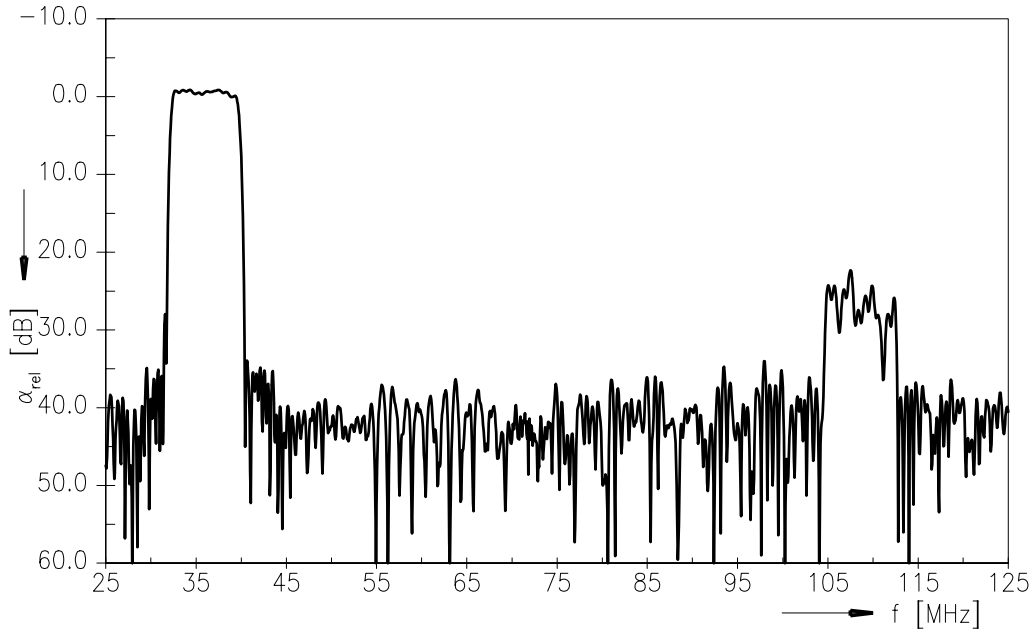


Please read *cautions and warnings* and *important notes* at the end of this document.

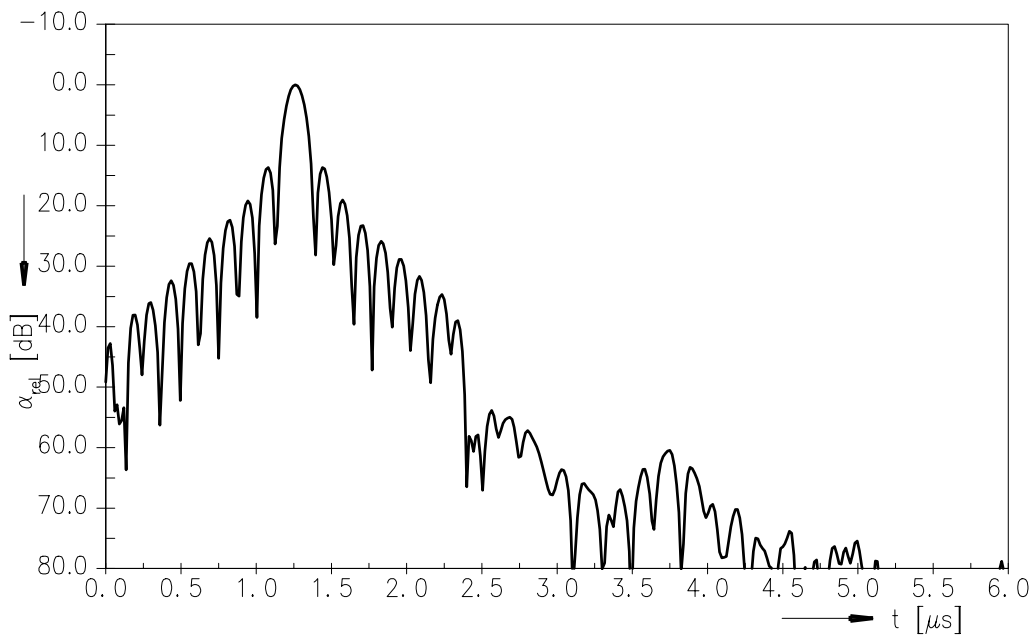


Data sheet

Frequency response



Time domain response





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<b>SAW bandpass filter</b>	<b>35.825 MHz</b>

Data sheet

## References

<b>Type</b>	X 6753 M
<b>Ordering code</b>	B39358-X6753-M100
<b>Marking and package</b>	C61157-A1-A15
<b>Packaging</b>	F61074-V8067-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	X6753M_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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Published by EPCOS AG  
Surface Acoustic Wave Components Division  
P.O. Box 80 17 09, 81617 Munich, GERMANY

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