



# SAW Components

Data Sheet L 9653 M

Data Sheet

A large, stylized, 3D-rendered graphic of the word "EPCOS" in a light gray, sans-serif font. The letters are tilted and appear to be floating or emerging from a dark, textured background that resembles a globe or a complex circuit board. The overall effect is dynamic and modern.



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## IF Filter for Audio Applications

33,90 MHz and 38,90 MHz

### Data Sheet

#### Standard

Plastic package **SIP5K**

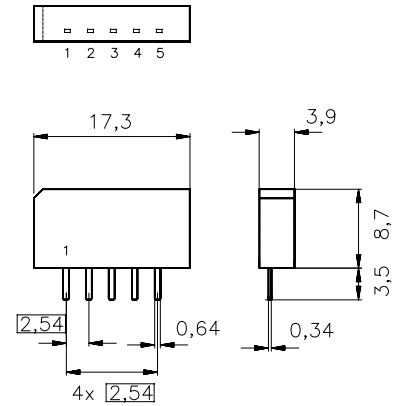
#### ■ L/L'

#### Features

- TV IF audio filter with two channels
- Channel 1 (L') with pass band for sound carrier at 40,40 MHz
- Channel 2 (L) with pass band for sound carrier at 32,40 MHz

#### Terminals

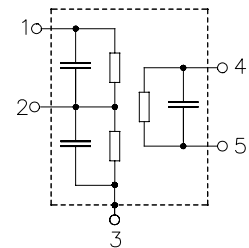
- Tinned CuFe alloy



Dimensions in mm, approx. weight 1,0 g

#### Pin configuration

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



Type	Ordering code	Marking and package according to	Packing according to
L 9653 M	B39389-L9653-M100	C61157-A1-A15	F61074-V8067-Z000

#### Maximum ratings

Operating temperature range	$T_A$	- 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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#### Characteristics of channel 1 (switching pin 2 connected to ground)

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

		min.	typ.	max.	
<b>Insertion attenuation</b> $\alpha$					
Reference level for the following data	40,40 MHz	12,5	14,0	15,5	dB
<b>Relative attenuation</b> $\alpha_{\text{rel}}$					
Picture carrier	33,90 MHz	42,0	52,0	—	dB
	38,40 MHz	40,0	45,0	—	dB
Adjacent picture carrier	41,90 MHz	34,0	38,0	—	dB
Adjacent sound carrier	32,40 MHz	39,0	55,0	—	dB
Lower sidelobe	25,00 ... 33,90 MHz	35,0	41,0	—	dB
Upper sidelobe	41,90 ... 45,00 MHz	32,0	37,0	—	dB
<b>Impedance</b> at 40,40 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	0,4 $\parallel$ 12,2	—	k $\Omega$ $\parallel$ pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	0,5 $\parallel$ 10,3	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K



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#### Characteristics of channel 2 (switching pin 2 connected to pin 1)

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

		min.	typ.	max.	
<b>Insertion attenuation</b> $\alpha$					
Reference level for the following data	32,40 MHz	12,2	13,7	15,2	dB
<b>Relative attenuation</b> $\alpha_{\text{rel}}$					
Picture carrier	38,90 MHz	45,0	61,0	—	dB
	34,40 MHz	33,0	37,0	—	dB
Adjacent picture carrier	30,90 MHz	46,0	58,0	—	dB
Adjacent sound carrier	40,40 MHz	37,0	47,0	—	dB
Lower sidelobe	25,00 ... 30,90 MHz	36,0	42,0	—	dB
Upper sidelobe	38,90 ... 45,00 MHz	35,0	41,0	—	dB
<b>Impedance</b> at 32,40 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	0,7 $\parallel$ 16,0	—	k $\Omega$ $\parallel$ pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	0,7 $\parallel$ 13,9	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b> $TC_f$		—	-72	—	ppm/K



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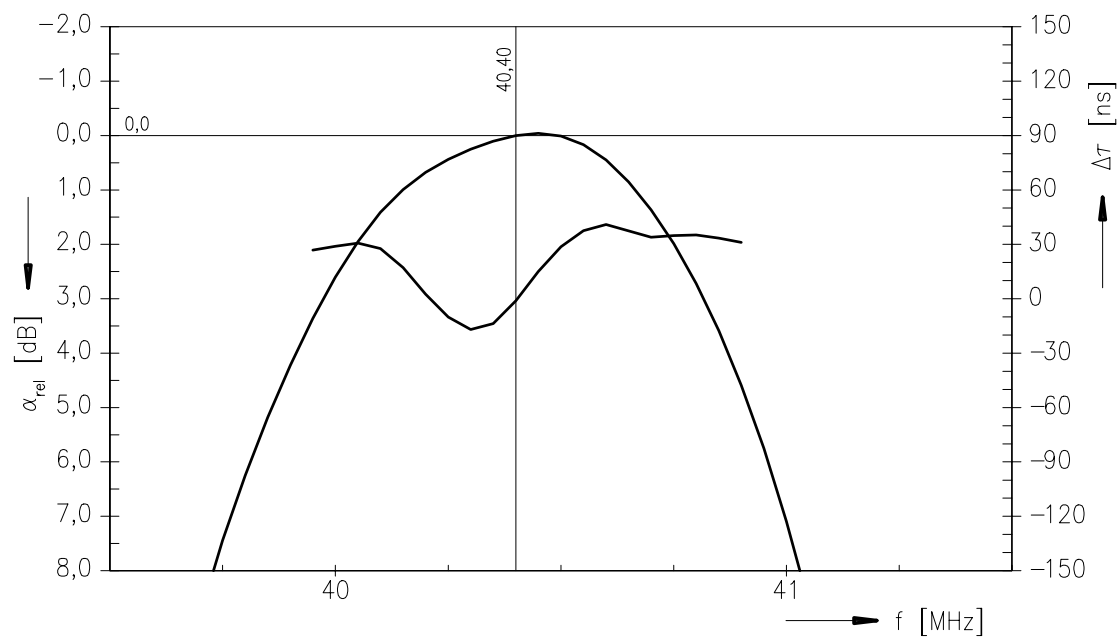
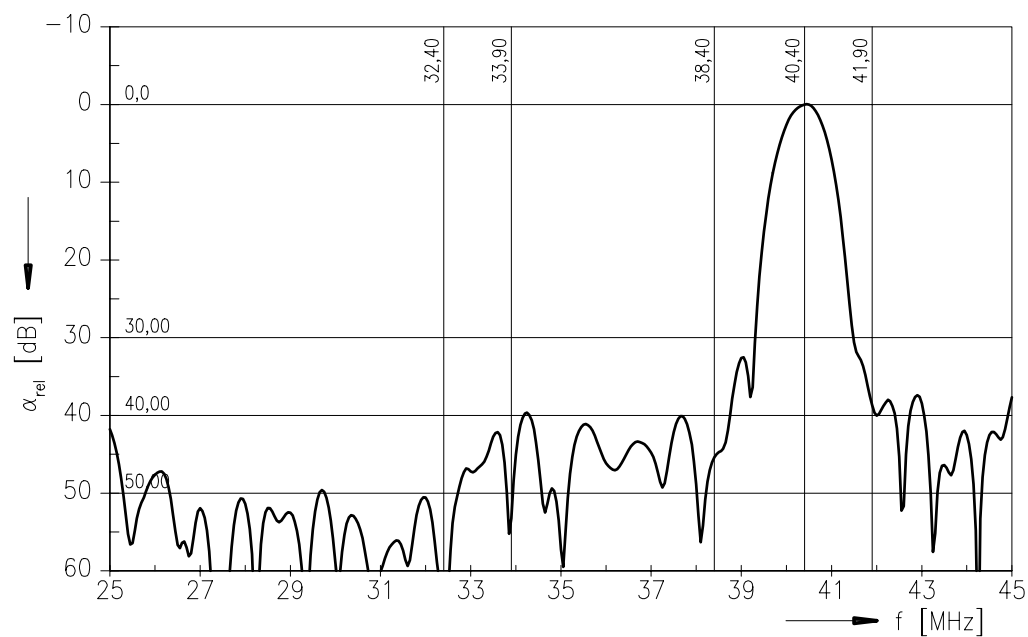
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Frequency response of channel 1





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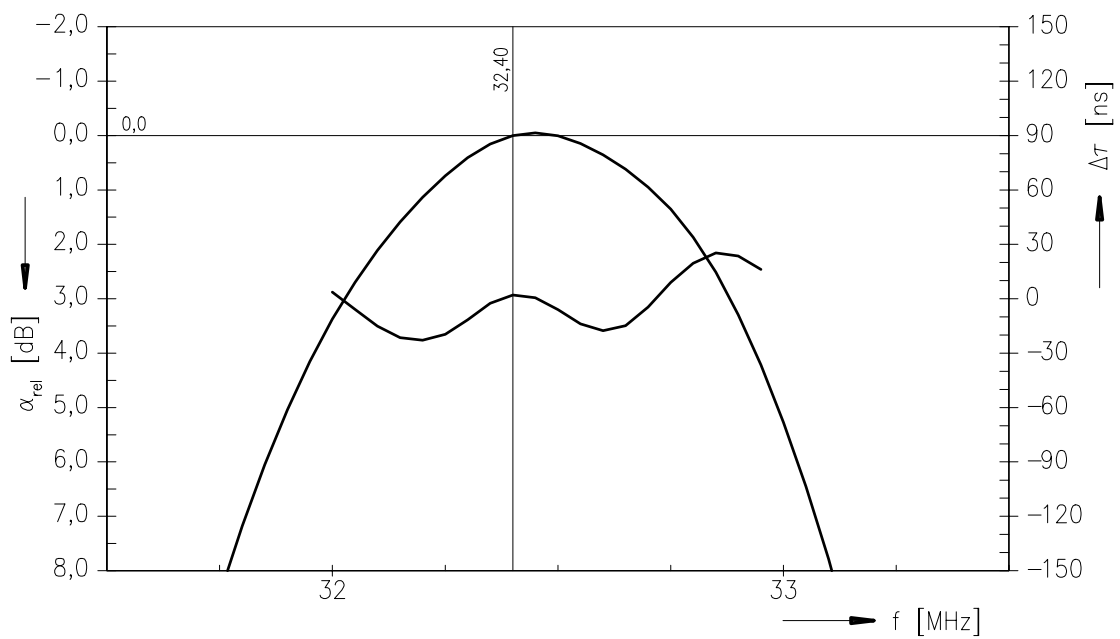
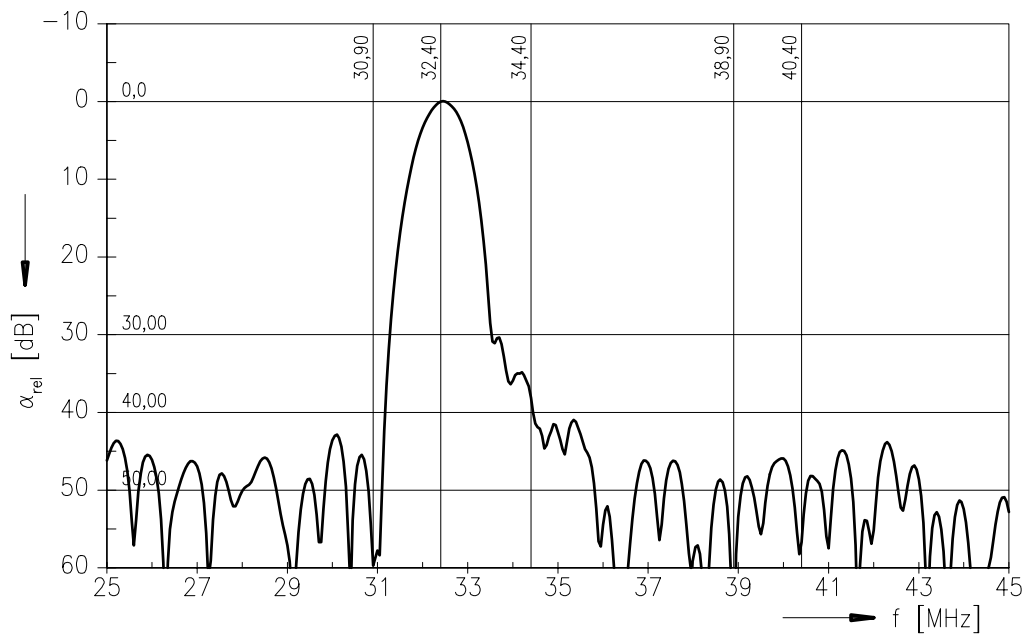
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Frequency response of channel 2





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