



SAW Components

Data Sheet L 9653 M

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a bright, circular highlight in the center of each, giving them a three-dimensional appearance. They are set against a dark, textured background that includes a faint, glowing globe and circuitry patterns, suggesting a high-tech or electronic theme.



SAW Components

L 9653 M

IF Filter for Audio Applications

33,90 MHz and 38,90 MHz

Data Sheet

Standard

Plastic package **SIP5K**

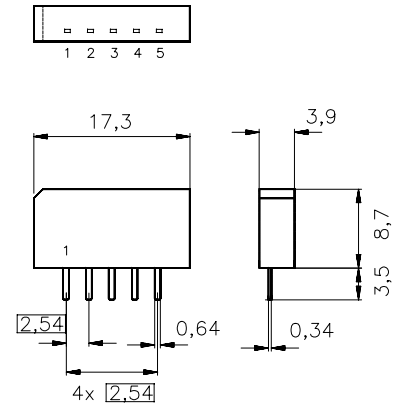
■ L/L'

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

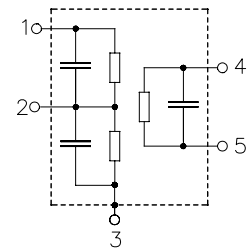
- Tinned CuFe alloy



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	between any terminals
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	12	V	
AC voltage	V_{pp}	10	V	



SAW Components

L 9653 M

IF Filter for Audio Applications

33,90 MHz and 38,90 MHz

Data Sheet

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

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.	
Insertion attenuation α					
Reference level for the following data	40,40 MHz	12,5	14,0	15,5	dB
Relative attenuation α_{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
Impedance at 40,40 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	0,4 \parallel 12,2	—	k Ω \parallel pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	0,5 \parallel 10,3	—	k Ω \parallel pF
Temperature coefficient of frequency TC_f		—	-72	—	ppm/K



SAW Components

L 9653 M

IF Filter for Audio Applications

33,90 MHz and 38,90 MHz

Data Sheet

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

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.	
Insertion attenuation α					
Reference level for the following data	32,40 MHz	12,2	13,7	15,2	dB
Relative attenuation α_{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
Impedance at 32,40 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	0,7 \parallel 16,0	—	k Ω \parallel pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	0,7 \parallel 13,9	—	k Ω \parallel pF
Temperature coefficient of frequency TC_f		—	-72	—	ppm/K



SAW Components

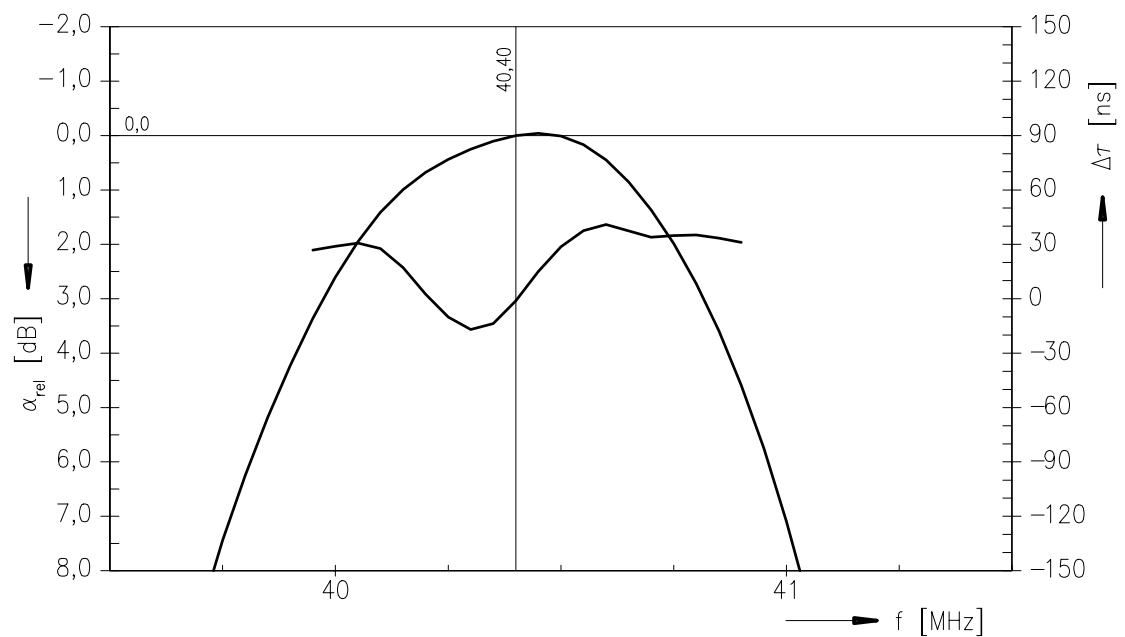
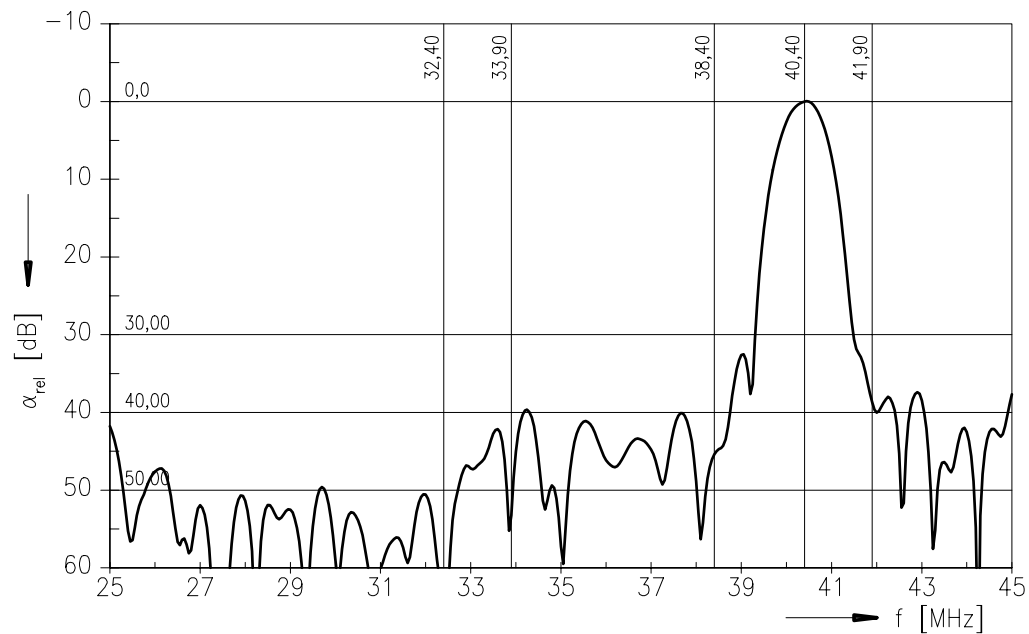
L 9653 M

IF Filter for Audio Applications

33,90 MHz and 38,90 MHz

Data Sheet

Frequency response of channel 1





SAW Components

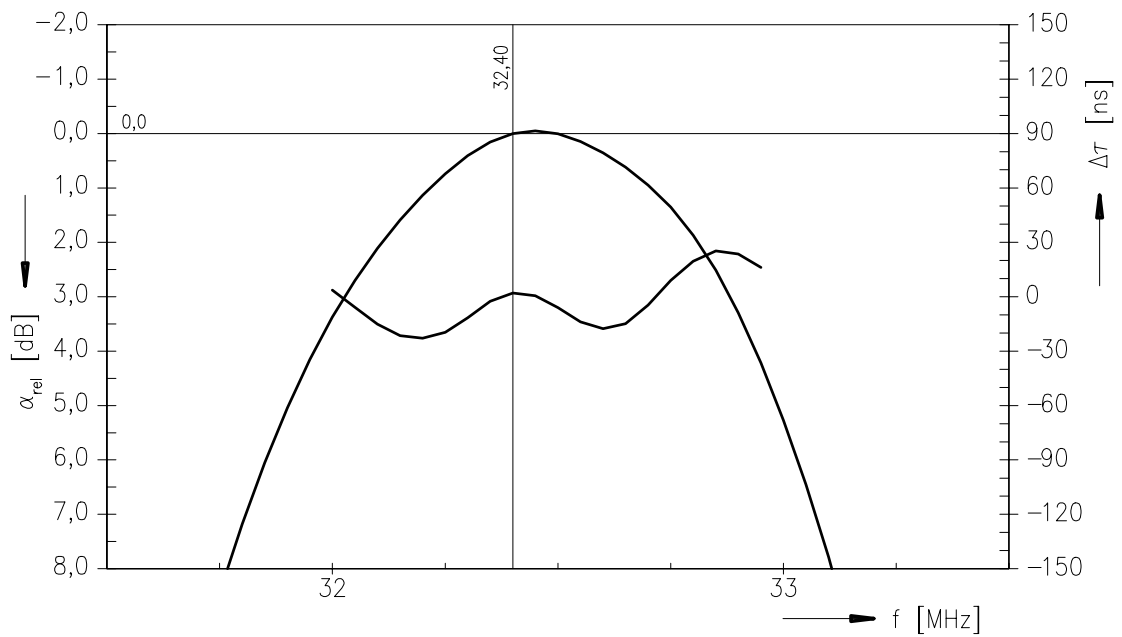
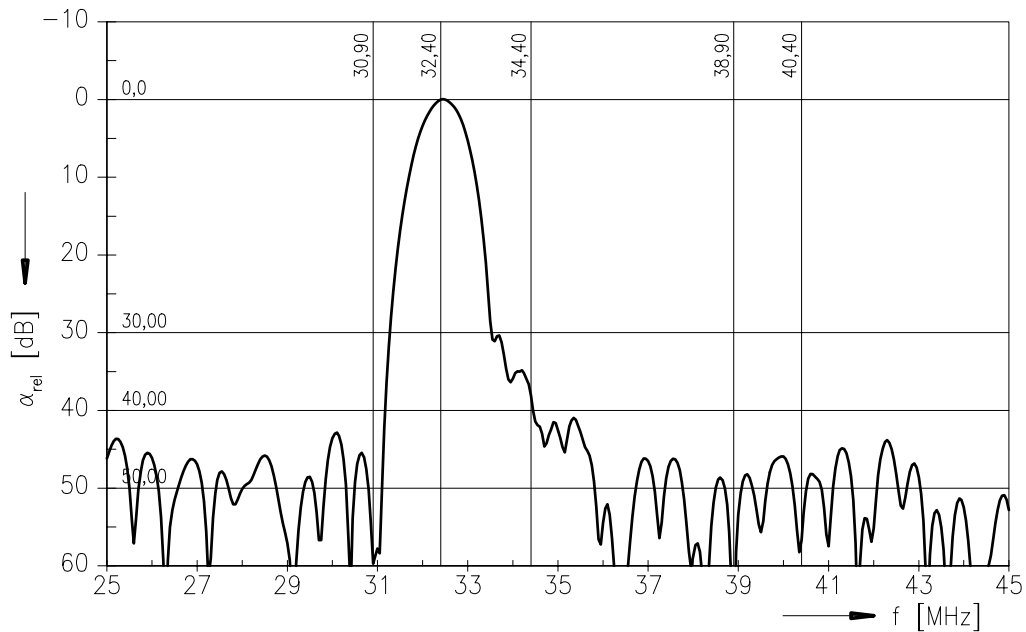
L 9653 M

IF Filter for Audio Applications

33,90 MHz and 38,90 MHz

Data Sheet

Frequency response of channel 2





SAW Components	L 9653 M
IF Filter for Audio Applications	33,90 MHz and 38,90 MHz

Data Sheet

Published by EPCOS AG
Surface Acoustic Wave Components Division, OFW E UE
P.O. Box 80 17 09, D-81617 München

© EPCOS AG 1999. All Rights Reserved.

As far as patents or other rights of third parties are concerned, liability is only assumed for components per se, not for applications, processes and circuits implemented within components or assemblies.

The information describes the type of component and shall not be considered as assured characteristics.

Terms of delivery and rights to change design reserved.

For questions on technology, prices and delivery please contact the sales offices of EPCOS AG or the international representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our sales offices.