



SAW Components

Data Sheet K 9650 M

Data Sheet

An abstract graphic with the word "EPCOS" in large, glowing, 3D letters. The letters are white with a blue glow. In the background, there is a faint world map and a stylized globe with curved lines.



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K 9650 M

IF Filter for Audio Applications

33,90 MHz and 38,90 MHz

Data Sheet

Standard

- B/G
- D/K
- I
- L/L'

Plastic package **SIP5K**

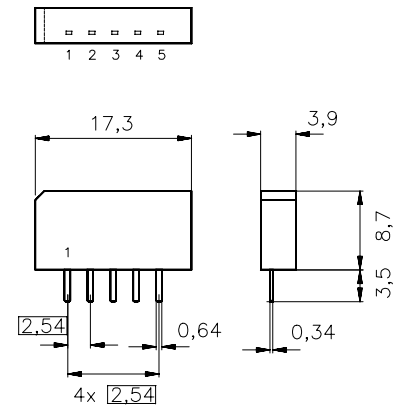
Features

- TV IF audio filter with two channels
- Channel 1 (L') with one pass band for sound carrier at 40,40 MHz
- Channel 2 (L, D/K, I, B/G) with one pass band for sound carriers between 32,40 MHz and 33,40 MHz

Terminals

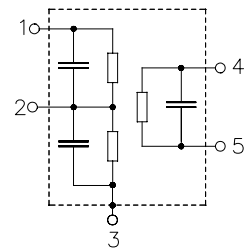
- Tinned CuFe alloy

Dimensions in mm, approx. weight 1,0 g



Pin configuration

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



Type	Ordering code	Marking and package according to	Packing according to
K 9650 M	B39389-K9650-M100	C61157-A1-A15	F61074-V8067-Z000

Maximum ratings

Operable 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: $T_A = 25\text{ }^{\circ}\text{C}$
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	12,4	13,9	15,4	dB
Relative attenuation	α_{rel}				
Picture carrier	33,90 MHz	40,0	49,0	—	dB
	38,40 MHz	40,0	50,0	—	dB
Adjacent picture carrier	41,90 MHz	36,0	46,0	—	dB
Adjacent sound carrier	32,40 MHz	38,0	45,0	—	dB
Lower sidelobe	25,00 ... 38,40 MHz	37,0	44,0	—	dB
Upper sidelobe	41,90 ... 45,00 MHz	34,0	40,0	—	dB
Impedance at 40,40 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	0,8 $\parallel$ 9,1	—	k Ω $\parallel$ pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	2,2 $\parallel$ 5,4	—	k Ω $\parallel$ pF
Temperature coefficient of frequency	TC_f	—	-72	—	ppm/K



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

Reference temperature: $T_A = 25\text{ °C}$
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	33,40 MHz	13,8	15,3	16,8	dB
Relative attenuation α_{rel}					
Sound carrier	33,05 MHz	-1,4	-0,4	0,6	dB
	32,90 MHz	-1,1	-0,1	0,9	dB
	32,40 MHz	-1,1	-0,1	0,9	dB
Picture carrier	38,90 MHz	38,0	49,0	—	dB
Color carrier	34,47 MHz	30,0	40,0	—	dB
Adjacent picture carrier	30,90 MHz	32,0	41,0	—	dB
Adjacent sound carrier	40,40 MHz	35,0	41,0	—	dB
	40,90 MHz	36,0	45,0	—	dB
	41,40 MHz	35,0	41,0	—	dB
Lower sidelobe	25,00 ... 30,50 MHz	38,0	46,0	—	dB
Upper sidelobe	38,90 ... 45,00 MHz	32,0	38,0	—	dB
Impedance at 33,40 MHz					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1,0 $\parallel$ 13,5	—	k Ω $\parallel$ pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	2,7 $\parallel$ 5,8	—	k Ω $\parallel$ pF
Temperature coefficient of frequency TC_f		—	-72	—	ppm/K



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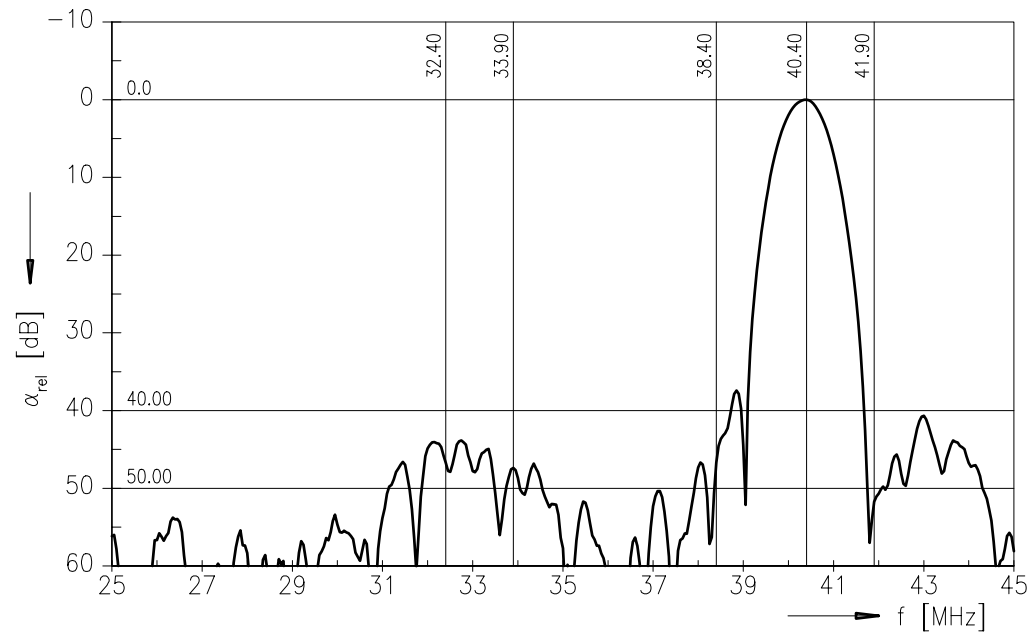
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Frequency response of channel 1





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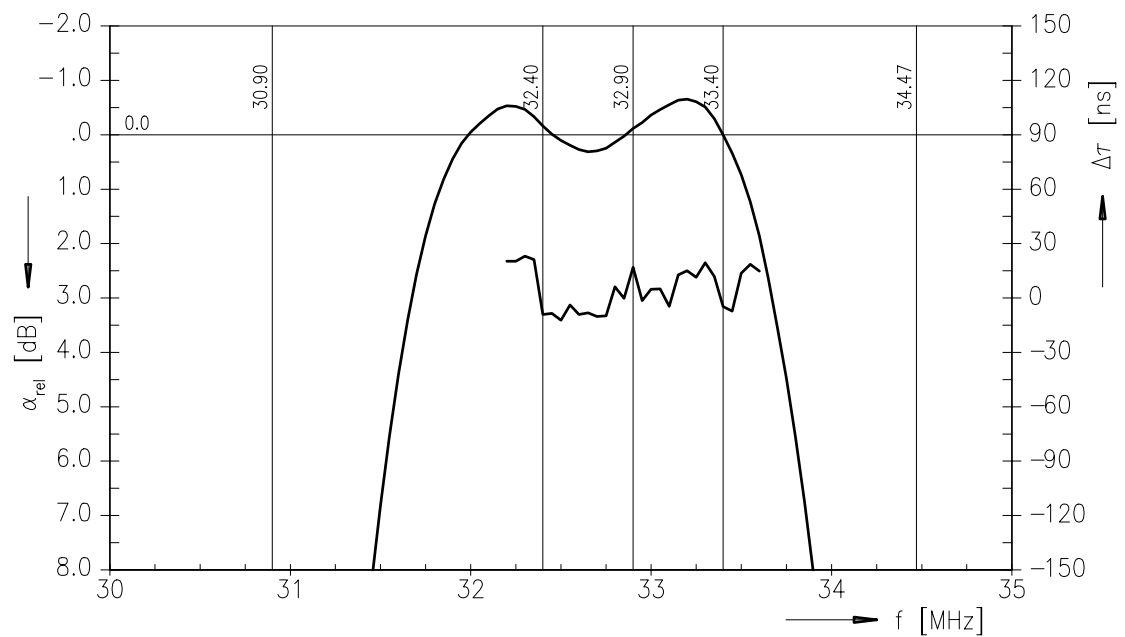
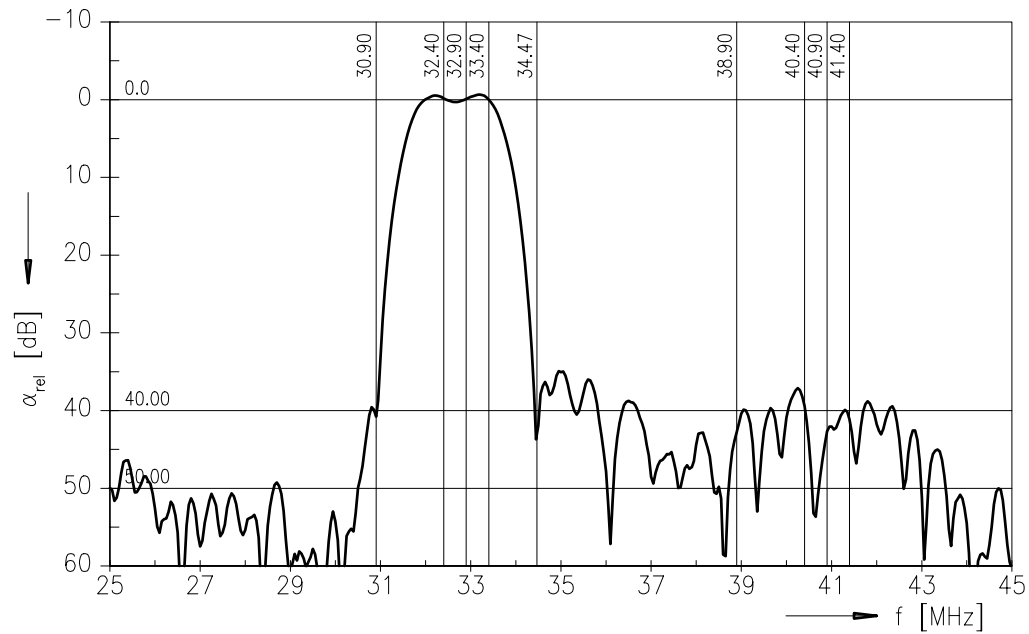
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Data Sheet

Frequency response of channel 2





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