



# *SAW Components*

*Data Sheet K 9356 M*

Data Sheet

EPCOS



## SAW Components

K 9356 M

## IF Filter for Audio Applications

38,90 MHz

### Data Sheet

#### Standard

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

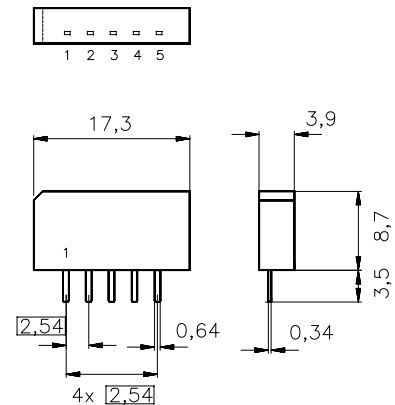
Plastic package **SIP5K**

#### Features

- TV IF audio filter with passband for sound carriers at 32,40 MHz (D/K, L), 32,90 MHz (I) and 33,40 MHz (B/G)

#### Terminals

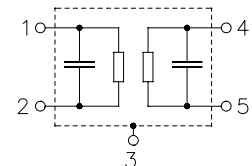
- Tinned CuFe alloy



Dimensions in mm, approx. weight 1,0 g

#### Pin configuration

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



| Type     | Ordering code     | Marking and package according to | Packing according to |
|----------|-------------------|----------------------------------|----------------------|
| K 9356 M | B39389-K9356-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

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      | 33,40 MHz                                                  | 9,1  | 10,6                 | 12,1 | dB                        |
| <b>Relative attenuation</b>                 |                                                            |      |                      |      |                           |
|                                             | $\alpha_{\text{rel}}$                                      |      |                      |      |                           |
| Sound carrier                               | 32,40 MHz                                                  | -1,4 | -0,4                 | 0,6  | dB                        |
|                                             | 32,90 MHz                                                  | -0,9 | 0,1                  | 1,1  | dB                        |
|                                             | 33,05 MHz                                                  | -0,5 | 0,5                  | 1,5  | dB                        |
| Picture carrier                             | 38,90 MHz                                                  | 40,0 | 47,0                 | —    | dB                        |
| Color carrier                               | 34,47 MHz                                                  | 33,0 | 40,0                 | —    | dB                        |
| Adjacent picture carrier                    | 30,90 MHz                                                  | 40,0 | 55,0                 | —    | dB                        |
|                                             | 31,90 MHz                                                  | 9,5  | 12,0                 | —    | dB                        |
| Adjacent sound carrier                      | 40,40 MHz                                                  | 46,0 | 54,0                 | —    | dB                        |
|                                             | 40,90 MHz                                                  | 46,0 | 61,0                 | —    | dB                        |
|                                             | 41,40 MHz                                                  | 46,0 | 60,0                 | —    | dB                        |
| Lower sidelobe                              | 25,00 ... 30,90 MHz                                        | 34,0 | 38,0                 | —    | dB                        |
| Upper sidelobe                              | 38,90 ... 75,00 MHz                                        | 35,0 | 41,0                 | —    | dB                        |
| <b>Impedance at 33,40 MHz</b>               |                                                            |      |                      |      |                           |
| Input:                                      | $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$    | —    | 0,7 $\parallel$ 11,6 | —    | k $\Omega$ $\parallel$ pF |
| Output:                                     | $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$ | —    | 2,3 $\parallel$ 2,6  | —    | k $\Omega$ $\parallel$ pF |
| <b>Temperature coefficient of frequency</b> |                                                            |      |                      |      |                           |
|                                             | $TC_f$                                                     | —    | -72                  | —    | ppm/K                     |



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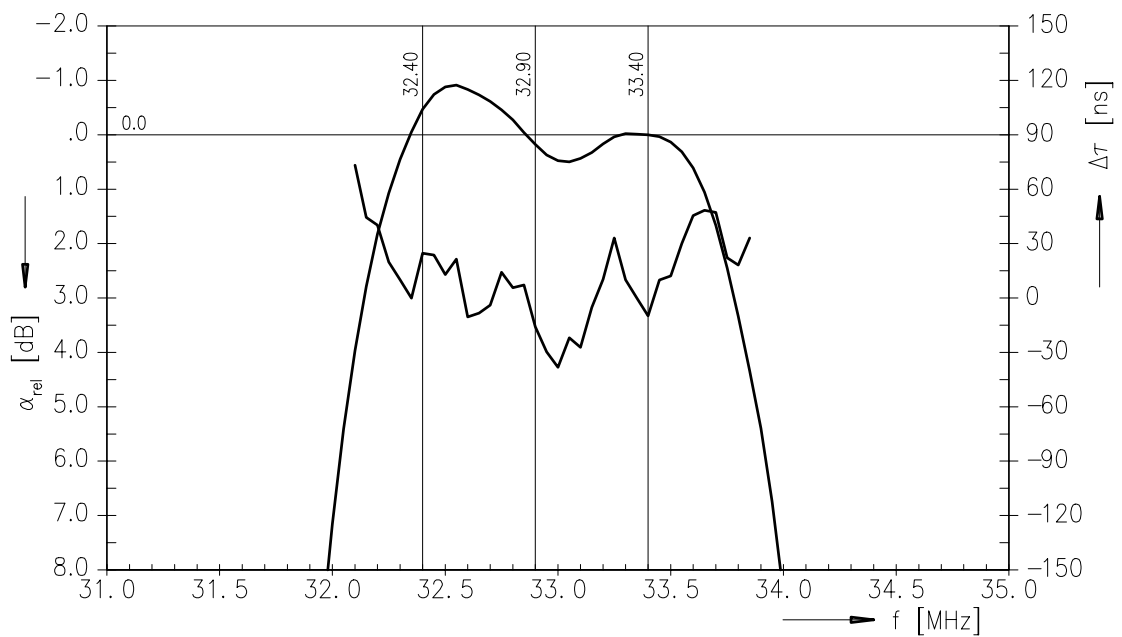
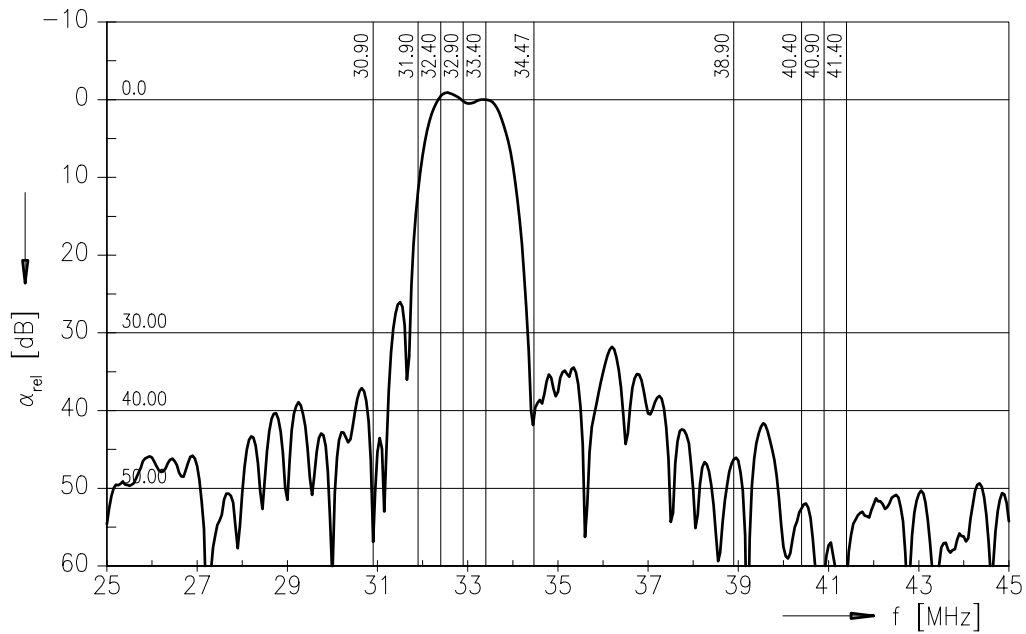
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Frequency response





|                                         |                  |
|-----------------------------------------|------------------|
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