



# *SAW Components*

*Data Sheet J 1956 M*

Data Sheet

EPCOS



## SAW Components

J 1956 M

## IF Filter for Intercarrier Applications

38,90 MHz

### Data Sheet

#### Standard

Plastic package **SIP5K**

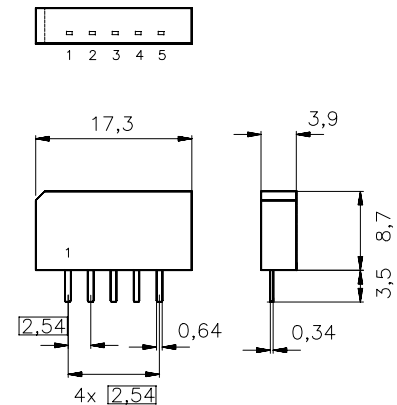
- I

#### Features

- TV IF filter with Nyquist slope and sound shelf
- Constant group delay
- Suitable for CENELEC EN 55020

#### Terminals

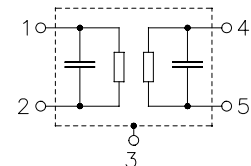
- Tinned CuFe alloy



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 |
|----------|-------------------|----------------------------------|----------------------|
| J 1956 M | B39389-J1956-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 |



## SAW Components

J 1956 M

## IF Filter for Intercarrier Applications

38,90 MHz

### Data Sheet

#### 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                                                               | 37,40 MHz             | 13,3 | 14,8                 | 16,3 | dB                        |
| <b>Relative attenuation</b>                                                                          | $\alpha_{\text{rel}}$ |      |                      |      |                           |
| Picture carrier                                                                                      | 38,90 MHz             | 5,3  | 6,3                  | 7,3  | dB                        |
| Color carrier                                                                                        | 34,47 MHz             | 1,5  | 2,5                  | 3,5  | dB                        |
| Sound carrier                                                                                        | 32,90 MHz             | 19,3 | 20,3                 | 21,3 | dB                        |
| Adjacent picture carrier                                                                             | 30,90 MHz             | 48,0 | 61,0                 | —    | dB                        |
|                                                                                                      | 30,40 MHz             | 48,0 | 62,0                 | —    | dB                        |
|                                                                                                      | 31,40 MHz             | 44,0 | 65,0                 | —    | dB                        |
| Adjacent sound carrier                                                                               | 40,90 MHz             | 46,0 | 56,0                 | —    | dB                        |
|                                                                                                      | 40,35 MHz             | 42,0 | 49,0                 | —    | dB                        |
| Lower sidelobe                                                                                       | 25,00 ... 30,90 MHz   | 46,0 | 52,0                 | —    | dB                        |
| Upper sidelobe                                                                                       | 40,90 ... 45,00 MHz   | 42,0 | 49,0                 | —    | dB                        |
| <b>Reflected wave signal suppression</b>                                                             |                       |      |                      |      |                           |
| 1,2 $\mu$ s ... 6,0 $\mu$ s after main pulse<br>(test pulse 250 ns,<br>carrier frequency 37,40 MHz)  |                       | 42,0 | 52,0                 | —    | dB                        |
| <b>Feedthrough signal suppression</b>                                                                |                       |      |                      |      |                           |
| 1,1 $\mu$ s ... 1,0 $\mu$ s before main pulse<br>(test pulse 250 ns,<br>carrier frequency 37,40 MHz) |                       | 50,0 | 56,0                 | —    | dB                        |
| <b>Group delay ripple (p-p)</b>                                                                      | $\Delta\tau$          |      | 40                   |      | ns                        |
| <b>Impedance at 37,40 MHz</b>                                                                        |                       |      |                      |      |                           |
| Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$                                       |                       | —    | 1,4 $\parallel$ 14,6 | —    | k $\Omega$ $\parallel$ pF |
| Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$                                   |                       | —    | 2,4 $\parallel$ 3,6  | —    | k $\Omega$ $\parallel$ pF |
| <b>Temperature coefficient of frequency</b>                                                          | $TC_f$                | —    | -72                  | —    | ppm/K                     |



SAW Components

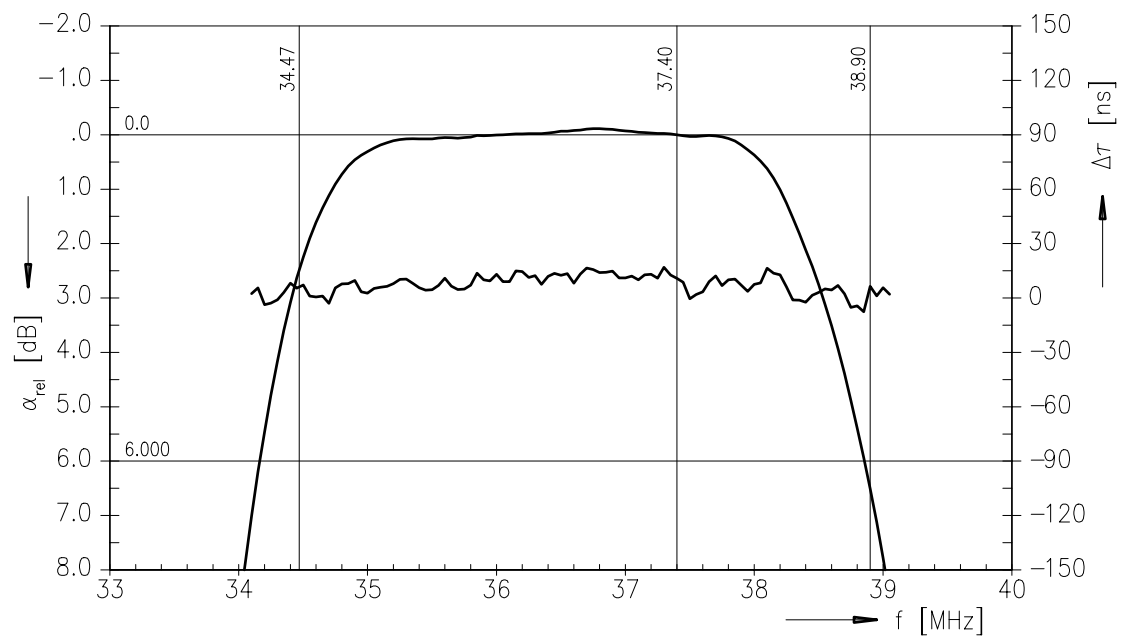
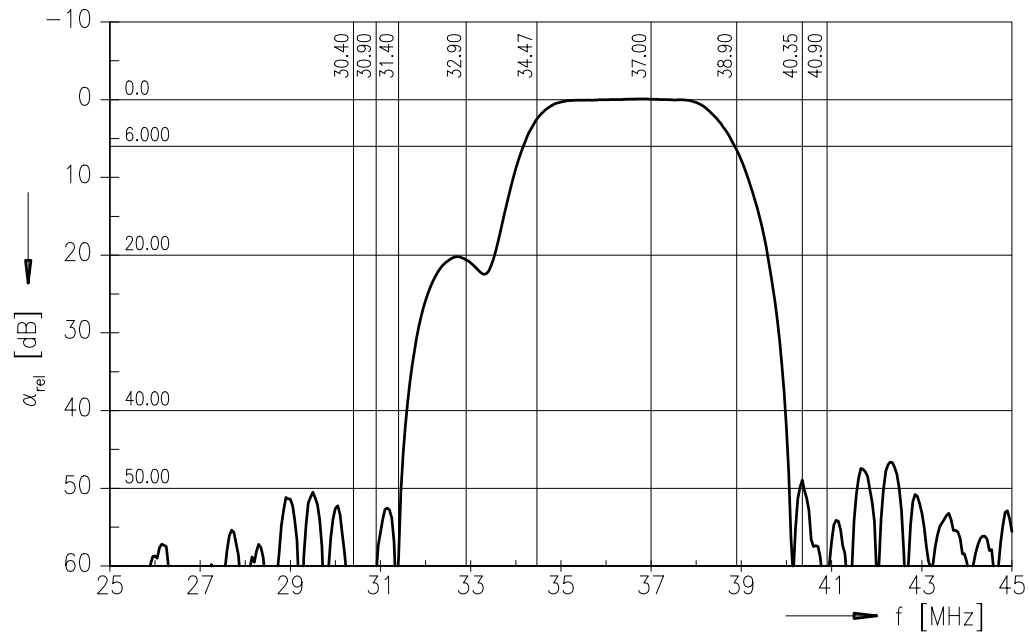
J 1956 M

IF Filter for Intercarrier Applications

38,90 MHz

Data Sheet

Frequency response





SAW Components

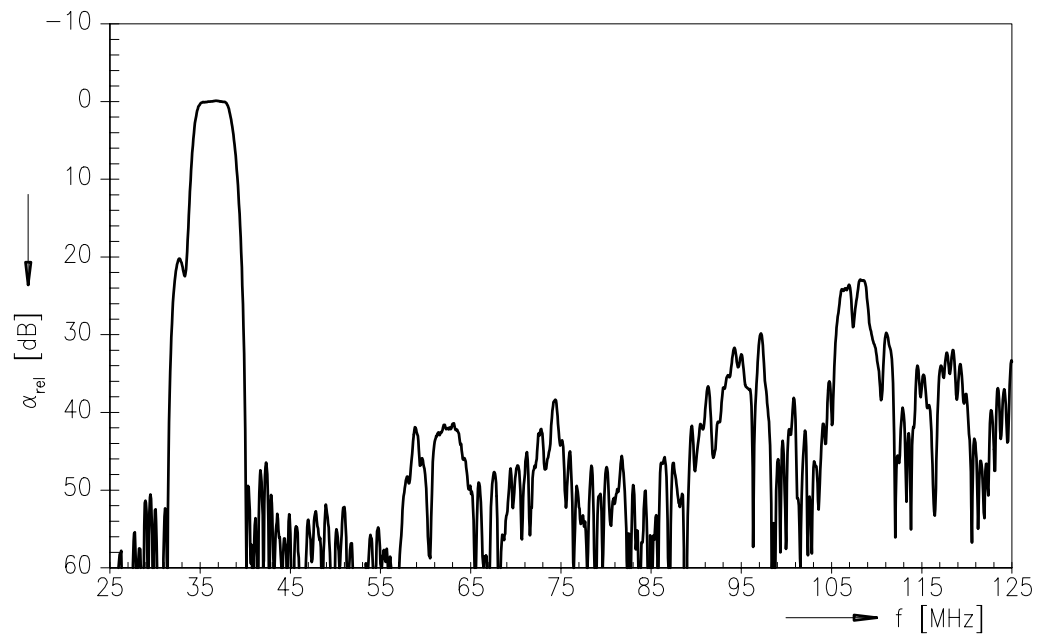
J 1956 M

IF Filter for Intercarrier Applications

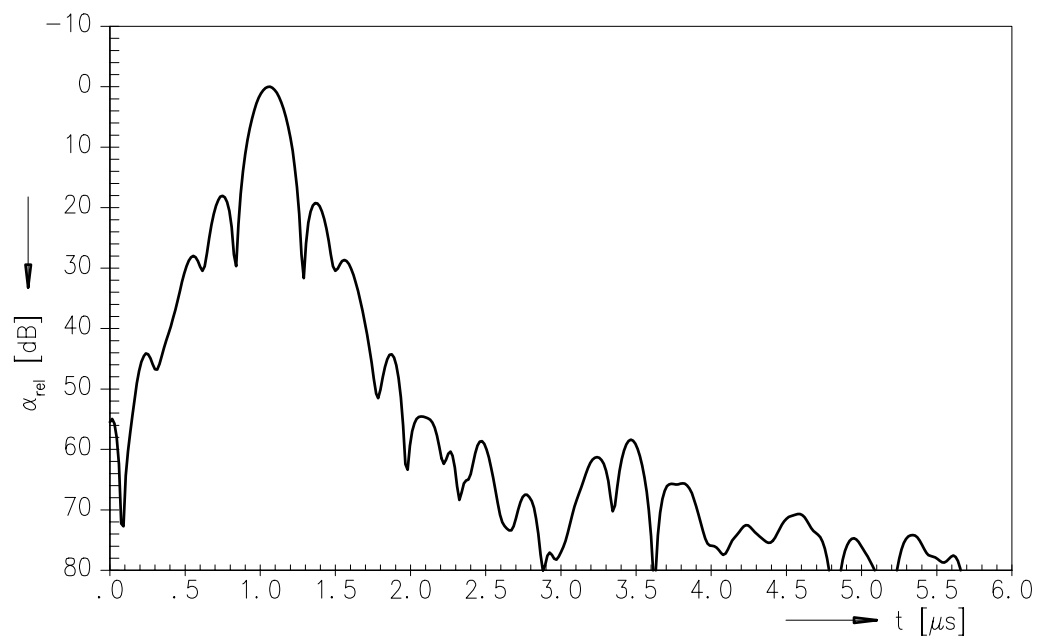
38,90 MHz

Data Sheet

Frequency response



Time domain response





|                                                |                  |
|------------------------------------------------|------------------|
| <b>SAW Components</b>                          | <b>J 1956 M</b>  |
| <b>IF Filter for Intercarrier Applications</b> | <b>38,90 MHz</b> |

Data Sheet

**Published by EPCOS AG**  
**Surface Acoustic Wave Components Division, SAW CE MM PD**  
**P.O. Box 80 17 09, D-81617 München**

© EPCOS AG 2001. 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.