



SAW Components

Data Sheet K 3450 K

Data Sheet

EPCOS



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IF Filter for Video Applications

33,40 MHz and 38,90 MHz

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Standard

- B/G
- L/L'

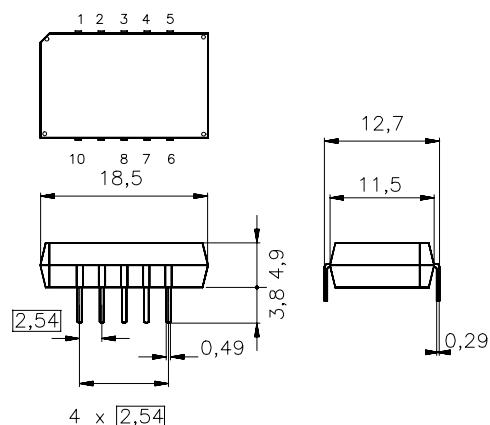
Features

- TV IF filter with two separate picture channels
- Channel 1 with Nyquist slopes at 33,40 MHz and 38,90 MHz (L/L' mode)
- Constant group delay
- Channel 2 with Nyquist slope at 38,90 MHz and sound suppression (B/G mode)
- Constant group delay
- Suitable for CENELEC EN 55020

Terminals

- Tinned CuFe alloy

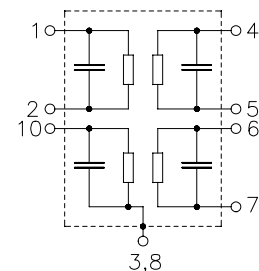
Plastic package DIP10K



Dimensions in mm, approx. weight 1,8 g

Pin configuration

- 1 Input - channel 1
- 2 Input - ground
- 3; 8 Chip carrier - ground
- 4; 5 Output - channel 1
- 6; 7 Output - channel 2
- 9 Free
- 10 Input - channel 2



| Type | Ordering code | Marking and package according to | Packing according to |
|----------|-------------------|----------------------------------|----------------------|
| K 3450 K | B39389-K3450-K100 | C61157-A2-A3 | F61074-V8068-Z000 |

Maximum ratings

| | | | | |
|----------------------------|-----------|---------|----|-----------------------|
| Operable temperature range | T_A | -25/+65 | °C | |
| Storage temperature range | T_{stg} | -40/+85 | °C | |
| DC voltage | V_{DC} | 12 | V | between any terminals |
| AC voltage | V_{pp} | 10 | V | between any terminals |



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Characteristics of channel 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 | 37,40 MHz | 14,3 | 15,8 | 17,3 | dB |
| Relative attenuation α_{rel} | | | | | |
| Picture carrier | 38,90 MHz | 5,0 | 6,0 | 7,0 | dB |
| Picture carrier | 33,40 MHz | 4,4 | 5,4 | 6,4 | dB |
| Adjacent picture carrier | 30,90 MHz | 48,0 | 62,0 | — | dB |
| | 31,90 MHz | 48,0 | 60,0 | — | dB |
| Adjacent sound carrier | 40,40 MHz | 46,0 | 55,0 | — | dB |
| | 41,40 MHz | 42,0 | 49,0 | — | dB |
| Lower sidelobe | 25,00 ... 31,90 MHz | 40,0 | 46,0 | — | dB |
| Upper sidelobe | 40,40 ... 45,00 MHz | 40,0 | 46,0 | — | dB |
| Reflected wave signal suppression | | | | | |
| 1,1 μs ... 6,0 μs after main pulse (test pulse 250 ns, carrier frequency 37,40 MHz) | | 42,0 | 58,0 | — | dB |
| Feedthrough signal suppression | | | | | |
| 1,1 μs ... 1,0 μs before main pulse (test pulse 250 ns, carrier frequency 37,40 MHz) | | — | 56,0 | — | dB |
| Group delay predistortion | $\Delta\tau$ | — | 40 | — | |
| Impedance at 37,40 MHz | | | | | |
| Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$ | | — | 1,8 \parallel 15,4 | — | k Ω \parallel pF |
| Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$ | | — | 1,6 \parallel 4,3 | — | k Ω \parallel pF |
| Temperature coefficient of frequency | TC_f | — | -72 | — | ppm/K |



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Characteristics of channel 2

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 | 37,40 MHz | 13,4 | 14,9 | 16,4 | dB |
| Relative attenuation | α_{rel} | | | | |
| Picture carrier | 38,90 MHz | 5,3 | 6,3 | 7,3 | dB |
| Color carrier | 34,47 MHz | -0,2 | 0,8 | 1,8 | dB |
| Sound carrier | 33,40 MHz | 30,0 | 48,0 | — | dB |
| Adjacent picture carrier | 30,90 MHz | 45,0 | 52,0 | — | dB |
| | 31,90 MHz | 47,0 | 57,0 | — | dB |
| | 32,40 MHz | 46,0 | 55,0 | — | dB |
| Adjacent sound carrier | 40,40 MHz | 45,0 | 56,0 | — | dB |
| | 40,15 MHz | 40,0 | 48,0 | — | dB |
| | 41,40 MHz | 42,0 | 49,0 | — | dB |
| Lower sidelobe | 25,00 ... 31,90 MHz | 41,0 | 47,0 | — | dB |
| Upper sidelobe | 40,40 ... 45,00 MHz | 37,0 | 43,0 | — | dB |
| Reflected wave signal suppression | | | | | |
| 1,1 μs ... 6,0 μs after main pulse (test pulse 250 ns, carrier frequency 37,40 MHz) | | 42,0 | 56,0 | — | dB |
| Feedthrough signal suppression | | | | | |
| 1,1 μs ... 1,0 μs after main pulse (test pulse 250 ns, carrier frequency 37,40 MHz) | | — | 56,0 | — | dB |
| Group delay ripple (p-p) | $\Delta\tau$ | — | 40 | — | |
| Impedance at 37,40 MHz | | | | | |
| Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$ | | — | 1,9 \parallel 13,3 | — | k Ω \parallel pF |
| Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$ | | — | 2,0 \parallel 3,2 | — | k Ω \parallel pF |
| Temperature coefficient of frequency | TC_f | — | -72 | — | ppm/K |



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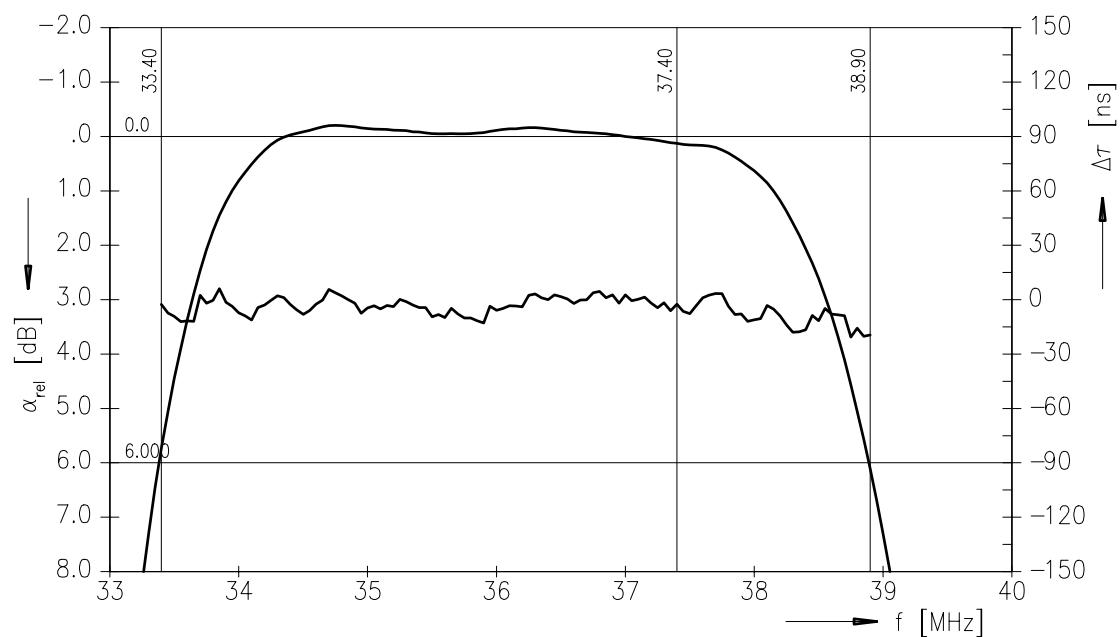
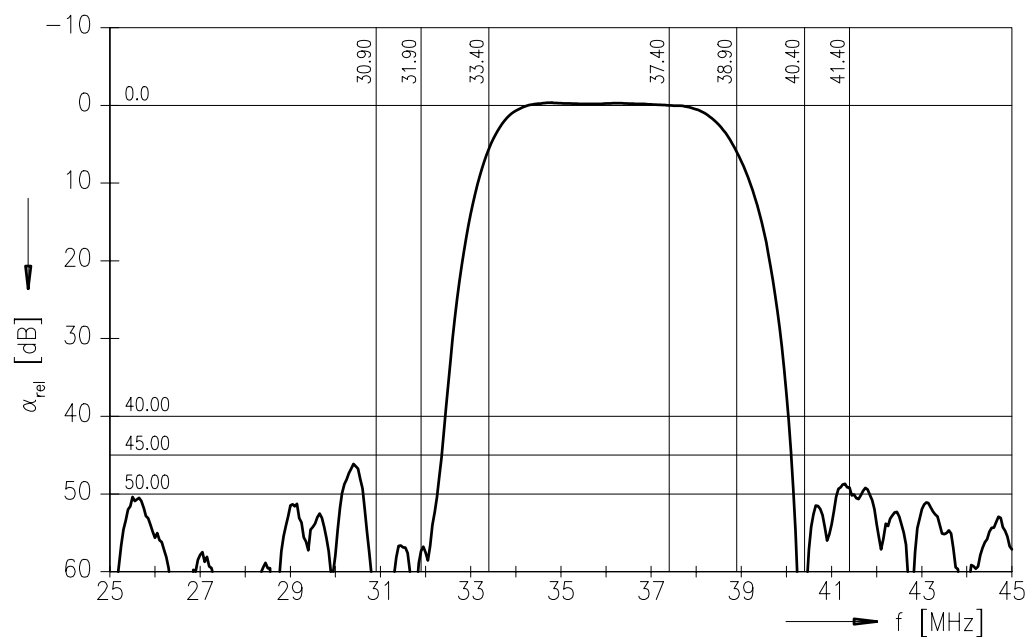
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Frequency response of channel 1





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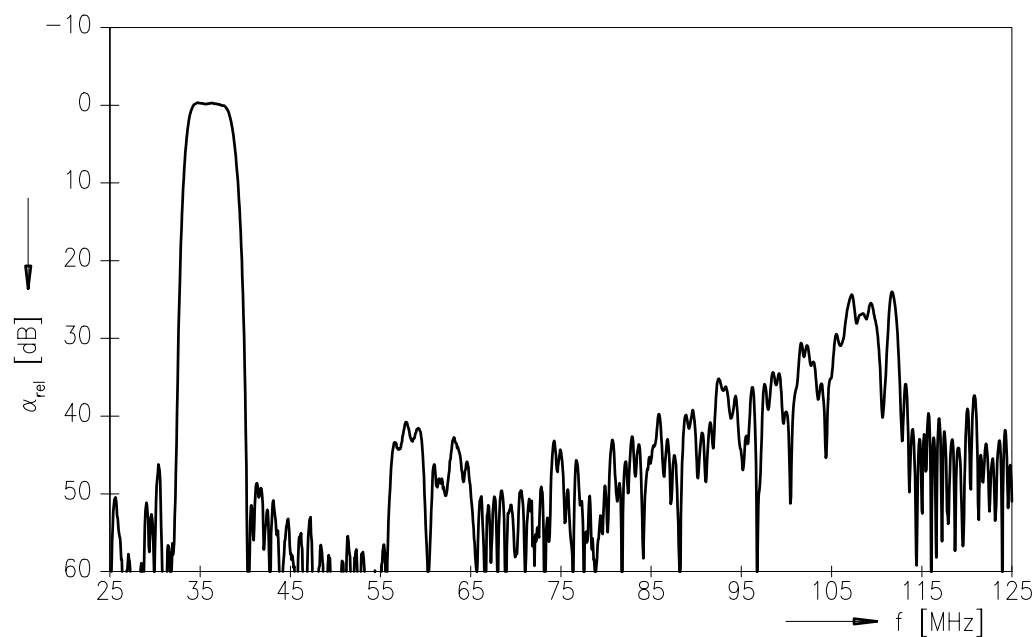
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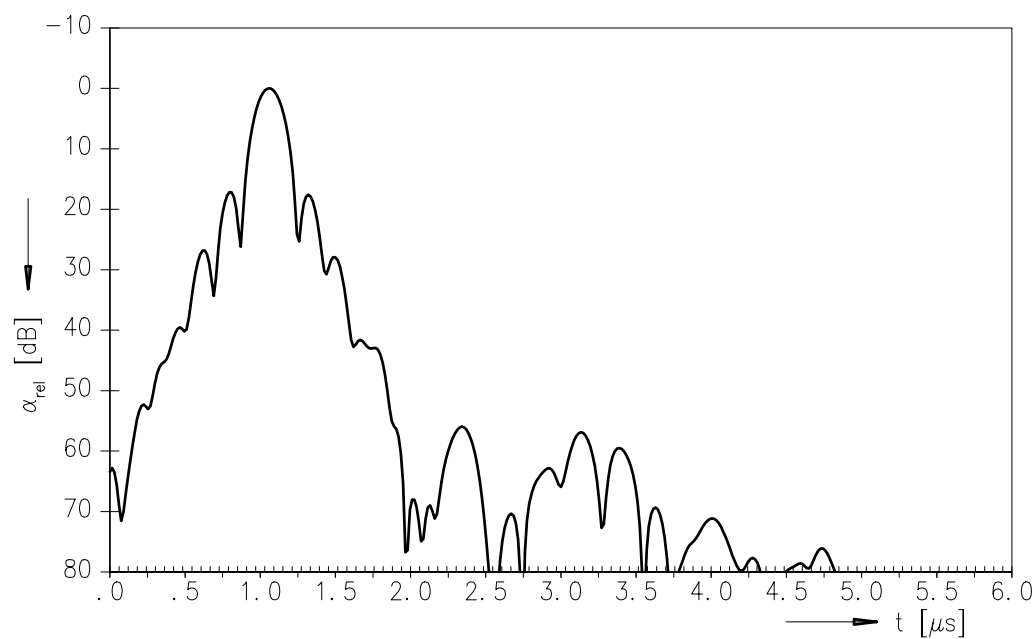
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Frequency response of channel 1



Time domain response of channel 1





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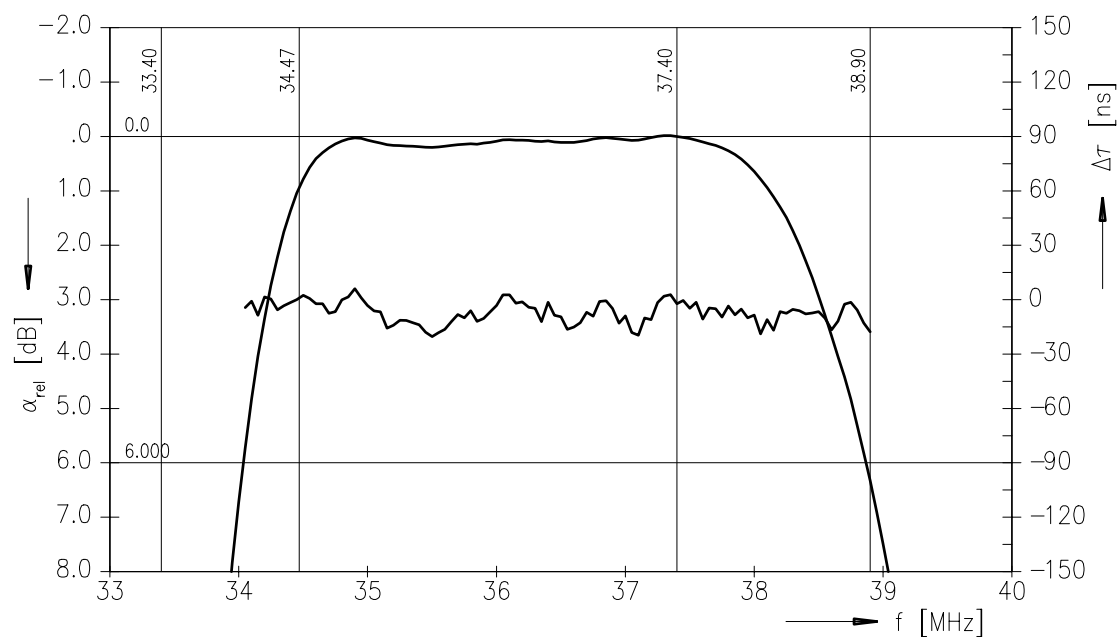
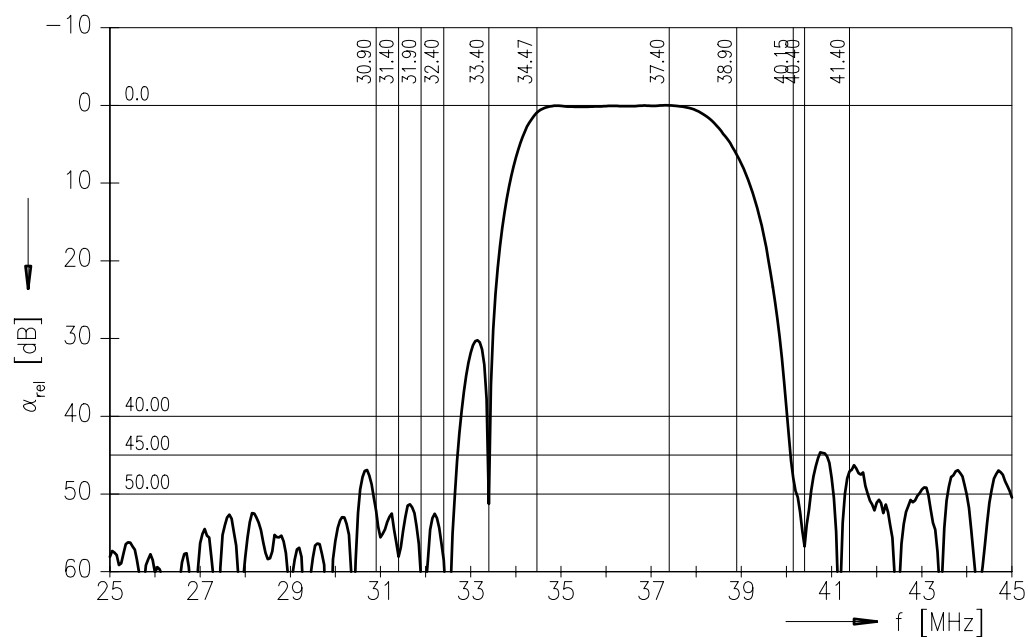
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Frequency response of channel 2





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