



SAW Components

Data Sheet M 3951 M





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M 3951 M

IF Filter for Video Applications

45,75 MHz

Data Sheet

Standard

Plastic package **SIP5K**

- M/N

Features

- TV IF filter with Nyquist slope and sound suppression
- Customized group delay predistortion
- Suitable for FCC EIA / IS-31

Terminals

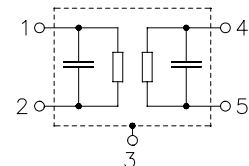
- Tinned CuFe alloy



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 |
|----------|-------------------|----------------------------------|----------------------|
| M 3951 M | B39458-M3951-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: $T_A = 25 (45) ^\circ \text{C}$
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 | 44,06 (44,00) MHz | 10,5 | 12,0 | 13,5 | dB |
| Relative attenuation α_{rel} | | | | | |
| Picture carrier | 45,81 (45,75) MHz | 4,9 | 5,9 | 6,9 | dB |
| Color carrier | 42,23 (42,17) MHz | 1,2 | 2,2 | 3,2 | dB |
| Sound carrier | 41,31 (41,25) MHz | 25,0 | 32,0 | — | dB |
| Adjacent picture carrier | 39,81 (39,75) MHz | 48,0 | 61,0 | — | dB |
| Adjacent sound carrier | 47,31 (47,25) MHz | 46,0 | 56,0 | — | dB |
| Lower sidelobe | 35,06 ... 39,81 (35,00 ... 39,75) MHz | 38,0 | 42,0 | — | dB |
| Upper sidelobe | 47,31 ... 55,06 (47,25 ... 55,00) MHz | 36,0 | 41,0 | — | dB |
| Reflected wave signal suppression | | | | | |
| 1,1 μs ... 6,0 μs after main pulse (test pulse 250 ns, carrier frequency 44,06 MHz) | | 42,0 | 52,0 | — | dB |
| Feedthrough signal suppression | | | | | |
| 1,2 μs ... 1,1 μs before main pulse (test pulse 250 ns, carrier frequency 44,06 MHz) | | 50,0 | 56,0 | — | dB |
| Group delay predistortion $\Delta\tau$ | | | | | |
| (reference frequency: 45,81 MHz) | | | | | |
| | 42,81 (42,75) MHz | — | −10 | — | ns |
| | 42,23 (42,17) MHz | — | −40 | — | ns |
| Group delay ripple (p-p) $\Delta\tau$ | | | | | |
| | | — | 40 | — | ns |
| Impedance at 44,06 MHz | | | | | |
| Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$ | | — | 1,4 \parallel 10,8 | — | k Ω \parallel pF |
| Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$ | | — | 0,9 \parallel 4,4 | — | k Ω \parallel pF |
| Temperature coefficient of frequency TC_f | | | | | |
| | | — | −72 | — | ppm/K |



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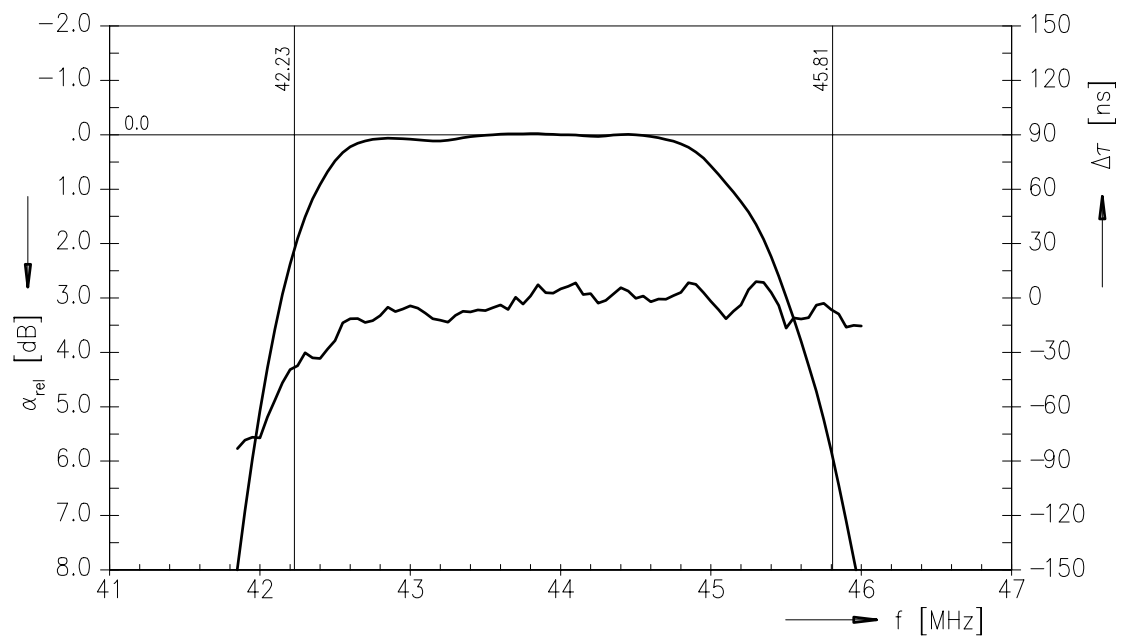
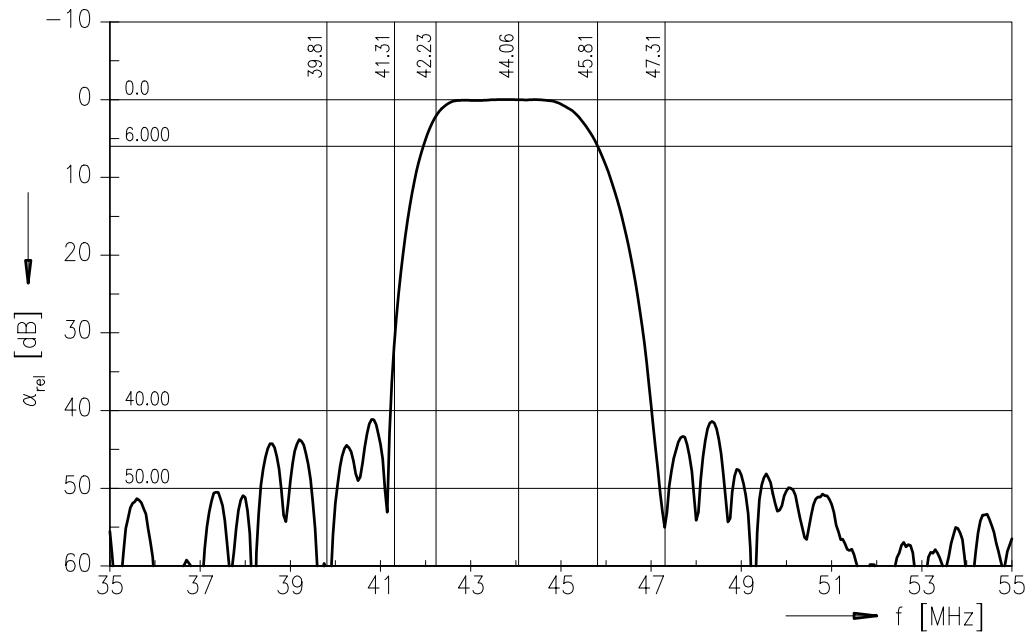
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Frequency response





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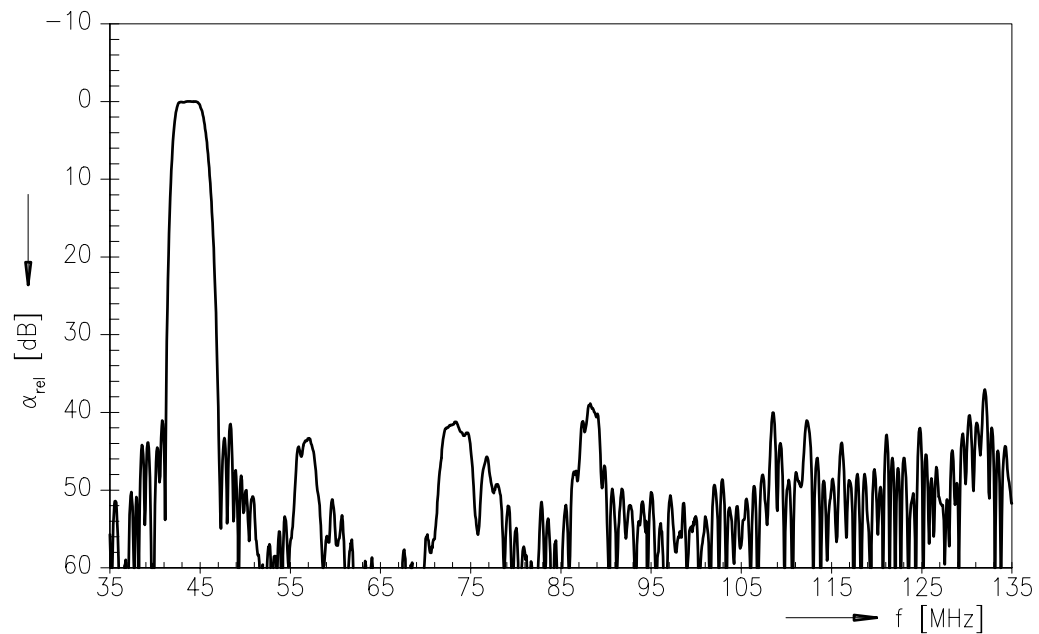
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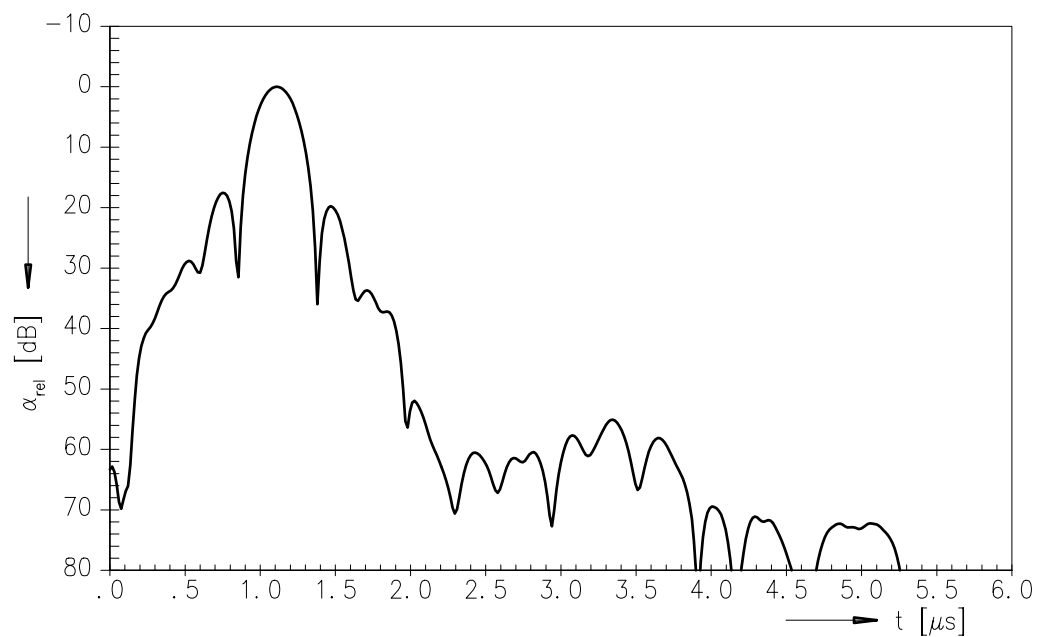
45,75 MHz

Data Sheet

Frequency response



Time domain response





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