EPCOS

# *SAW Components*

*Data Sheet X 6966 M*

Data Sheet

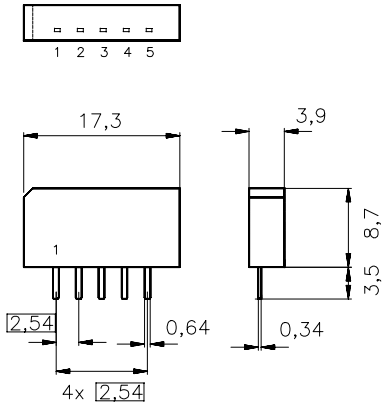
Plastic package **SIP5K**

### Features

- IF filter for digital cable TV

### Terminals

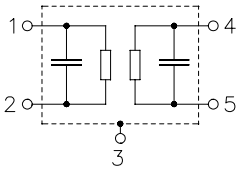
- Tinned CuFe alloy




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 |
|---|---|---|---|
| X 6966 M | B39361-X6966-M100 | C61157-A1-A15 | F61074-V8067-Z000 |

### Maximum ratings

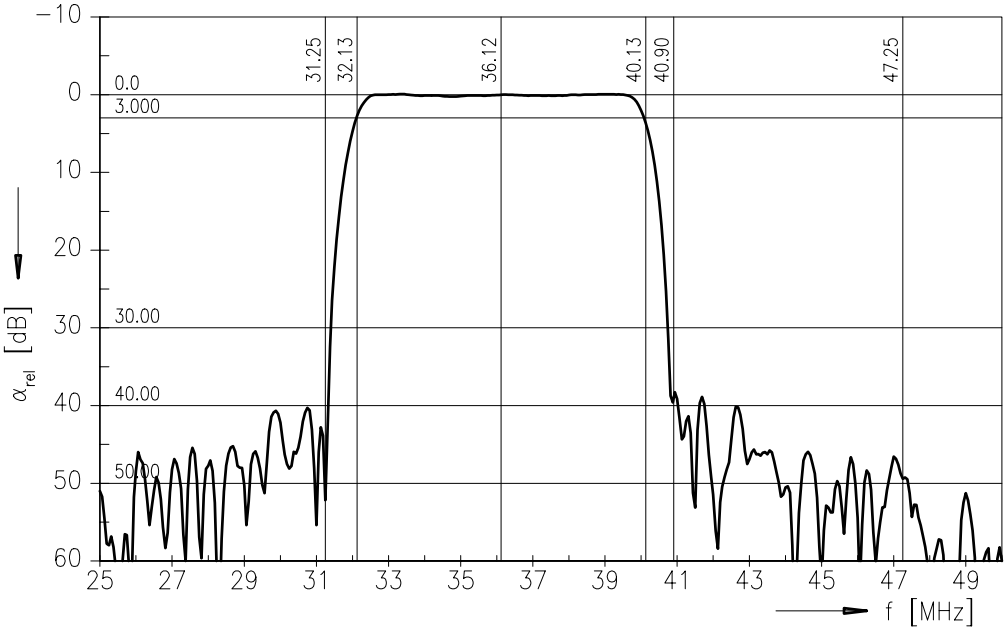
| | | | | |
|---|---|---|---|---|
| Operable temperature range | $T_A$ | –25/+65 | ˚C | |
| Storage temperature range | $T_{stg}$ | –40/+85 | ˚C | |
| DC voltage | $V_{DC}$ | 12 | V | between any terminals |
| AC voltage | $V_{pp}$ | 10 | V | between any terminals |

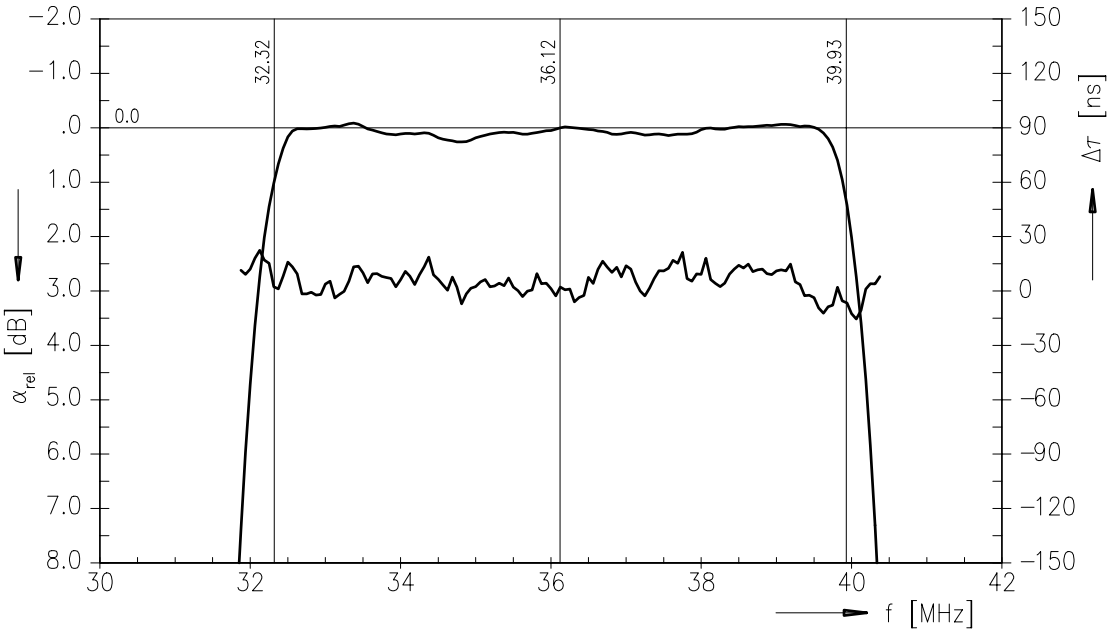
## Characteristics

Reference temperature: $T_A$ = 25 °C
Terminating source impedance: $Z_S$ = 50 Ω
Terminating load impedance: $Z_L$ = 2 kΩ || 3 pF

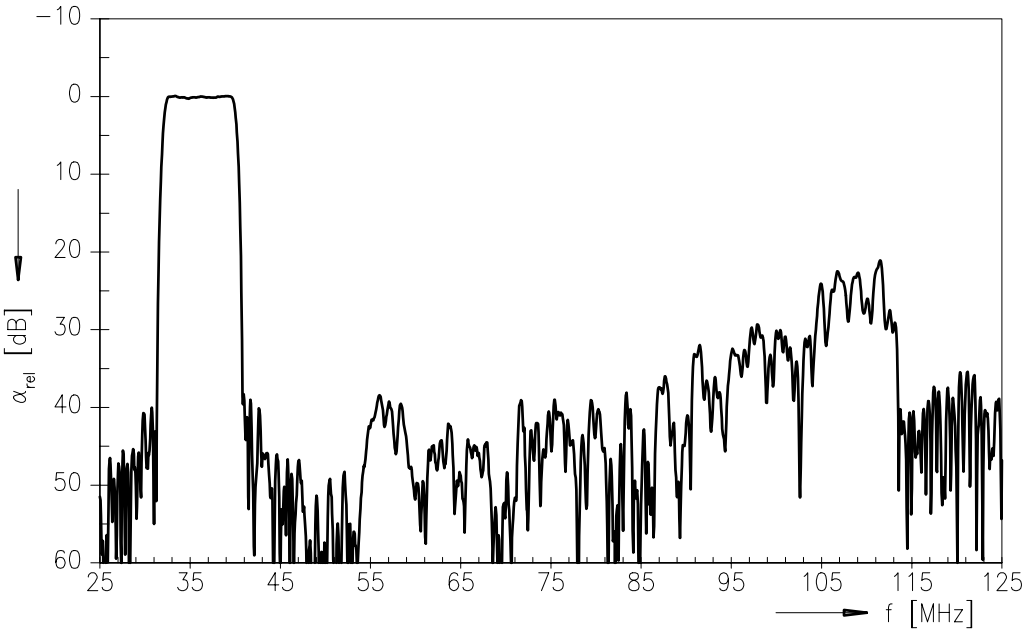
| | | | | | min. | typ. | max. | |
|---|---|---|---|---|---|---|---|---|
| **Insertion attenuation** | | | | $\alpha$ | | | | |
| Reference level for the following data | | 36,125 | MHz | | 18,8 | 20,3 | 21,8 | dB |
| **Amplitude ripple** | | | | $\Delta\alpha$ | | | | |
| | 32,65 ... | 39,60 | MHz | | 0,0 | 0,5 | 1,0 | dB |
| **Pass bandwith** | | | | | | | | |
| $\alpha_{rel}$ ≤1 dB | | | | $B_{1dB}$ | — | 7,5 | — | MHz |
| $\alpha_{rel}$ ≤3 dB | | | | $B_{3dB}$ | — | 8,0 | — | MHz |
| $\alpha_{rel}$ ≤30 dB | | | | $B_{30dB}$ | — | 9,4 | — | MHz |
| **Relative attenuation** | | | | $\alpha_{rel}$ | | | | |
| | | 32,32 | MHz | | –0,1 | 0,9 | 1,9 | dB |
| | | 39,93 | MHz | | 0,4 | 1,4 | 2,4 | dB |
| | | 32,13 | MHz | | 1,5 | 2,7 | 3,9 | dB |
| | | 40,13 | MHz | | 2,3 | 3,5 | 4,7 | dB |
| | | 31,25 | MHz | | 37,0 | 51,0 | — | dB |
| | | 47,25 | MHz | | 45,0 | 60,0 | — | dB |
| Lower sidelobe | 25,00 ... | 31,25 | MHz | | 35,0 | 41,0 | — | dB |
| Upper sidelobe | 40,90 ... | 50,00 | MHz | | 32,0 | 39,0 | — | dB |
| **Reflected wave signal suppression** 1,0 µs ... 6,0 µs after main pulse (test pulse 250 ns, carrier frequency 36,125 MHz) | | | | | 42,0 | 52,0 | — | dB |
| **Feedthrough signal suppression** 1,2 µs ... 1,1 µs before main pulse (test pulse 250 ns, carrier frequency 36,125 MHz) | | | | | 50,0 | 56,0 | — | dB |
| **Group delay ripple** (p-p) | | | | $\Delta\tau$ | | | | |
| Aperture 62,5 kHz | 32,32 ... | 39,93 | MHz | | — | 40 | — | ns |
| **Impedance** at 36,125 MHz | | | | | | | | |
| Input: $Z_{IN} = R_{IN} \parallel C_{IN}$ | | | | | — | 2,3 ‖ 14,7 | — | kΩ \|\| pF |
| Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$ | | | | | — | 2,4 ‖ 3,9 | — | kΩ \|\| pF |
| **Temperature coefficient of frequency** | | | | $TC_f$ | — | –72 | — | ppm/K |

**Frequency response**

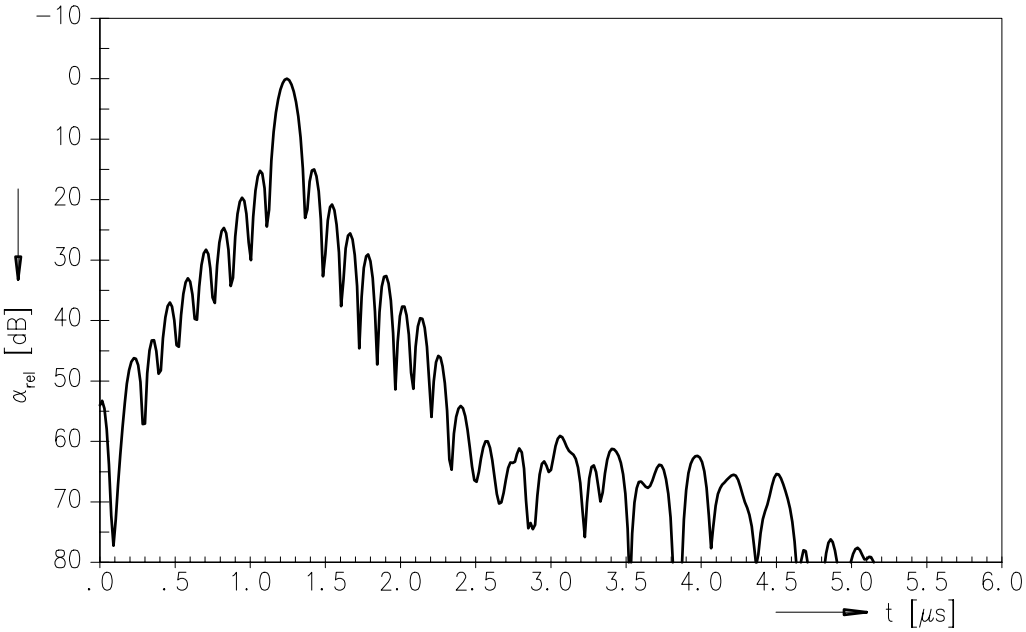


**Frequency response**




**Time domain response**



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