

Data Sheet K 3958 M





## SAW Components K 3958 M

## **IF Filter for Video Applications**

33,90 MHz and 38,90 MHz

#### **Data Sheet**

#### Standard

- B/G
- D/K
- L/L'

#### **Features**

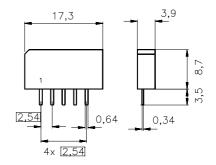
- TV IF filter with Nyquist slopes at 33.90 MHz and 38.90 MHz
- Constant group delay

#### **Terminals**

■ Tinned CuFe alloy

#### Plastic package SIP5K

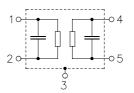




Dimensions in mm, approx. weight 1,0 g

## Pin configuration

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



| Туре     | Ordering code     | Marking and package according to | Packing according to |  |  |
|----------|-------------------|----------------------------------|----------------------|--|--|
| K 3958 M | B38389-K3958-M100 | C61157-A1-A15                    | F61064-V8067-Z000    |  |  |

#### **Maximum ratings**

| Operable temperature range | $T_{A}$       | -25/+65 | °C |                       |
|----------------------------|---------------|---------|----|-----------------------|
| Storage temperature range  | $T_{\rm stg}$ | -40/+85 | °C |                       |
| DC voltage                 | $V_{DC}$      | 5       | V  | between any terminals |
| AC voltage                 | $V_{\sf pp}$  | 10      | V  | between any terminals |



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## Characteristics

Reference temperature:  $T_{\rm A}=25~(45)~^{\circ}{\rm C}$ Terminating source impedance:  $Z_{\rm S}=50~\Omega$ Terminating load impedance:  $Z_{\rm L}=2~{\rm k}\Omega~||~3~{\rm pF}$ 

|  |   |                | min. | typ.        | max. |                        |
|--|---|----------------|------|-------------|------|------------------------|
| Insertion attenuation                            |   | α              |      |             |      |                        |
| Reference level for the following data           | 37,45 (37,40) MHz                                   |                | 13,5 | 15,0        | 16,5 | dB                     |
| Relative attenuation                             |   | $\alpha_{rel}$ |      |             |      |                        |
| Picture carrier                                  | 38,95 (38,90) MHz                                   |                | 5,0  | 6,0         | 7,0  | dB                     |
|  | 33,95 (33,90) MHz                                   |                | 4,8  | 5,8         | 6,8  | dB                     |
| Color carrier                                    | 34,52 (34,47) MHz                                   |                | -0,4 | 0,6         | 1,6  | dB                     |
| Sound carrier                                    | 32,45 (32,40) MHz                                   |                | _    | 57,0        | _    | dB                     |
|  | 32,95 (32,90) MHz                                   |                | _    | 58,0        | _    | dB                     |
|  | 33,45 (33,40) MHz                                   |                | 16,0 | 18,2        | _    | dB                     |
| Adjacent picture carrier                         | 30,95 (30,90) MHz                                   |                | 47,0 | 60,0        | _    | dB                     |
|  | 31,95 (31,90) MHz                                   |                | 47,0 | 55,0        | _    | dB                     |
| Adjacent sound carrier                           | 40,45 (40,40) MHz                                   |                | 46,0 | 60,0        | _    | dB                     |
|  | 40,20 (40,15) MHz                                   |                | 42,0 | 52,0        | _    | dB                     |
|  | 40,95 (40,90) MHz                                   |                | 43,0 | 51,0        | _    | dB                     |
|  | 41,45 (41,40) MHz                                   |                | 45,0 | 60,0        | _    | dB                     |
| Lower sidelobe                                   |   |                |      |             |      |                        |
| 25,05 31,95                                      | (25,00 31,90) MHz                                   |                | 42,0 | 48,0        |      | dB                     |
| Upper sidelobe                                   |   |                |      |             |      |                        |
| 40,45 45,05 (40,40 45,00) MHz                    |   |                | 38,0 | 45,0        | _    | dB                     |
| Reflected wave signal su                         | ppression   |                |      |             |      |                        |
| 1,2 μs 6,0 μs after main                         | pulse   |                | 42,0 | 52,0        | _    | dB                     |
| (test pulse 250 ns, carrier frequency 37,45 MHz) |   |                |      |             |      |                        |
| Feedthrough signal supp                          | ression   |                |      |             |      |                        |
| 1,0 μs 0,9 μs before main pulse                  |   |                | 50,0 | 56,0        | _    | dB                     |
| (test pulse 250 ns, carrier frequency 37,45 MHz) |   |                |      |             |      |                        |
| Group delay ripple (p-p, aperture 50 kHz)        |   |                |      | 40          |      |                        |
| 33,95 38,95 (33,90 38,90) MHz                    |   |                |      | 40          |      | ns                     |
| Impedance at 37,45 MHz                           |   |                |      |             |      |                        |
| Input: $Z_{IN} = R_{IN} \parallel C_{IN}$        |   |                | _    | 2,2    10,8 | _    | $k\Omega \parallel pF$ |
| Output: Z  | $C_{\text{OUT}} = R_{\text{OUT}}    C_{\text{OUT}}$ |                | _    | 1,9    3,9  | _    | k $\Omega$    pF       |
| Temperature coefficient of frequency             |   |                | _    | -72         | _    | ppm/K                  |



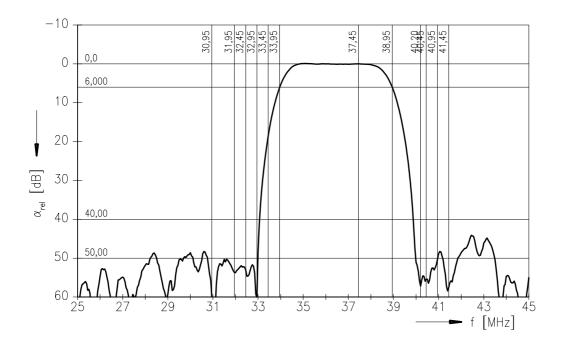
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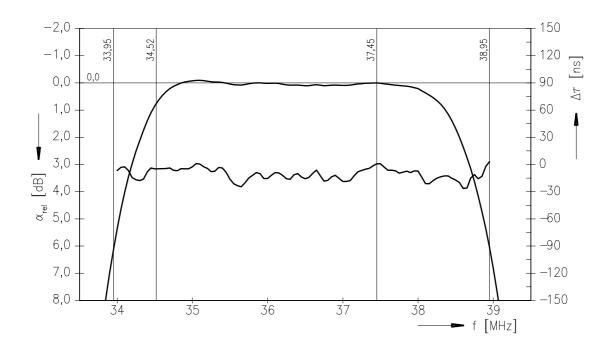
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## Frequency response







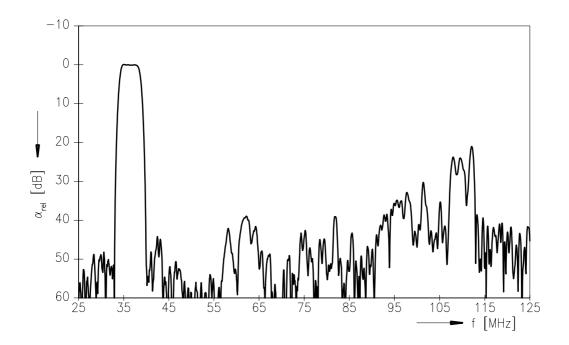
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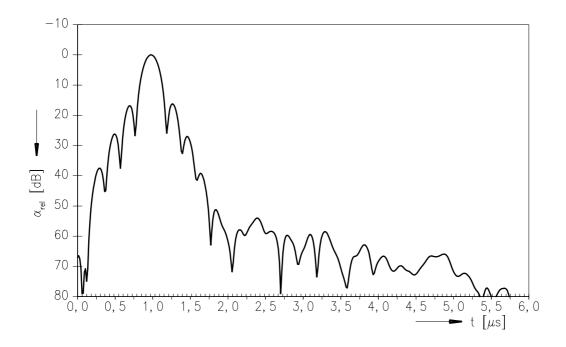
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## Frequency response



## Time domain response





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