



## SAW multimedia filters

### Series/Type: M3565M

The following products presented in this data sheet are being withdrawn.

| Ordering Code   | Substitute Product | Date of Withdrawal | Deadline Last Orders | Last Shipments |
|-----------------|--------------------|--------------------|----------------------|----------------|
| B39458M3565M201 |                    | 2011-01-14         | 2011-09-30           | 2012-09-30     |

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**SAW Components**

**M 3565 M**

**IF Filter for Quasi/Split Sound Applications**

**45,75 MHz**

**Data Sheet**

**Standard**

- M/N

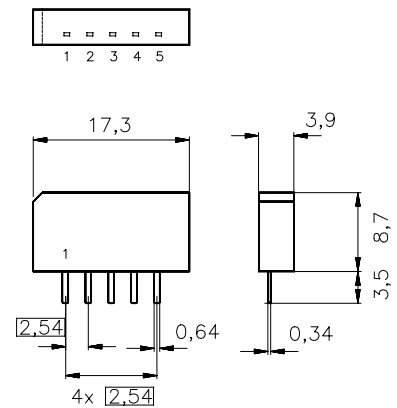
**Features**

- TV IF filter for quasi/split sound applications (separate picture and sound channel)
- Picture channel with Nyquist slope and sound suppression, symmetrical output
- High color carrier
- Constant group delay
- Sound channel with pass band for sound carrier only

**Terminals**

- Tinned CuFe alloy

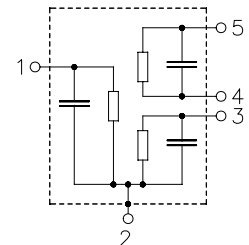
Plastic package **SIP5K**



Dimensions in mm, approx. weight 1,0 g

**Pin configuration**

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



| Type     | Ordering code     | Marking and package according to | Packing according to |
|----------|-------------------|----------------------------------|----------------------|
| M 3565 M | B39458-M3565-M201 | C61157-A1-A15                    | F61074-V8067-Z000    |

**Maximum ratings**

|                             |           |         |    |                       |
|-----------------------------|-----------|---------|----|-----------------------|
| Operating 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 of picture channel**

Reference temperature:  $T_A = 25 (45) \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 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   | 44,06 (44,00) MHz                     | 13,8 | 15,3                 | 16,8 | dB                        |
| <b>Relative attenuation</b>  | $\alpha_{rel}$                        |      |                      |      |                           |
| Picture carrier  | 45,81 (45,75) MHz                     | 5,1  | 6,1                  | 7,1  | dB                        |
| Color carrier  | 42,23 (42,17) MHz                     | -1,3 | -0,3                 | 0,7  | dB                        |
|  | 42,06 (42,00) MHz                     | —    | -0,2                 | —    | dB                        |
| Sound carrier  | 41,31 (41,25) MHz                     | 24,0 | 38,0                 | —    | dB                        |
| Adjacent picture carrier   | 39,81 (39,75) MHz                     | 45,0 | 58,0                 | —    | dB                        |
| Adjacent sound carrier   | 47,31 (47,25) MHz                     | 42,0 | 53,0                 | —    | dB                        |
| Lower sidelobe   | 35,06 ... 39,81 (35,00 ... 39,75) MHz | 40,0 | 45,0                 | —    | dB                        |
| Upper sidelobe   | 47,31 ... 55,06 (47,25 ... 55,00) MHz | 35,0 | 39,0                 | —    | dB                        |
| <b>Reflected wave signal suppression</b>   |                                       |      |                      |      |                           |
| 1,2 $\mu\text{s}$ ... 6,0 $\mu\text{s}$ after main pulse<br>(test pulse 250 ns,<br>carrier frequency 44,06 MHz)  |                                       | 42,0 | 52,0                 | —    | dB                        |
| <b>Feedthrough signal suppression</b>  |                                       |      |                      |      |                           |
| 1,3 $\mu\text{s}$ ... 1,2 $\mu\text{s}$ before main pulse<br>(test pulse 250 ns,<br>carrier frequency 44,06 MHz) |                                       | 50,0 | 56,0                 | —    | dB                        |
| <b>Group delay ripple (p-p)</b>  | $\Delta\tau$                          | —    | 50                   | —    | ns                        |
| <b>Impedance at 44,06 MHz</b>  |                                       |      |                      |      |                           |
| Input: $Z_{IN} = R_{IN} \parallel C_{IN}$  |                                       | —    | 1,1 $\parallel$ 18,7 | —    | k $\Omega$ $\parallel$ pF |
| Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$  |                                       | —    | 1,9 $\parallel$ 2,8  | —    | k $\Omega$ $\parallel$ pF |
| <b>Temperature coefficient of frequency</b>  | $TC_f$                                | —    | -72                  | —    | ppm/K                     |



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**Data Sheet**

**Characteristics of sound channel**

Reference temperature:  $T_A = 25 (45) \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 Terminating load impedance:  $Z_L = 2 \text{ k}\Omega \parallel 3 \text{ pF}$

|   |                                       | <b>min.</b> | <b>typ.</b>          | <b>max.</b> |                           |
|---|---------------------------------------|-------------|----------------------|-------------|---------------------------|
| <b>Insertion attenuation</b>                  | $\alpha$                              |             |                      |             |                           |
| Reference level for the following data        | 41,31 (41,25) MHz                     | 9,1         | 10,6                 | 12,1        | dB                        |
| <b>Relative attenuation</b>                   | $\alpha_{rel}$                        |             |                      |             |                           |
| Picture carrier                               | 45,81 (45,75) MHz                     | 38,0        | 44,0                 | —           | dB                        |
| Color carrier                                 | 42,23 (42,17) MHz                     | 25,0        | 35,0                 | —           | dB                        |
| Adjacent picture carrier                      | 39,81 (39,75) MHz                     | 38,0        | 44,0                 | —           | dB                        |
| Adjacent sound carrier                        | 47,31 (47,25) MHz                     | 42,0        | 50,0                 | —           | dB                        |
| Lower sidelobe                                | 35,06 ... 39,81 (35,00 ... 39,75) MHz | 37,0        | 42,0                 | —           | dB                        |
| Upper sidelobe                                | 47,31 ... 55,06 (47,25 ... 55,00) MHz | 37,0        | 43,0                 | —           | dB                        |
| <b>Impedance at 41,31 MHz</b>                 |                                       |             |                      |             |                           |
| Input: $Z_{IN} = R_{IN} \parallel C_{IN}$     |                                       | —           | 0,7 $\parallel$ 19,5 | —           | k $\Omega$ $\parallel$ pF |
| Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$ |                                       | —           | 1,2 $\parallel$ 2,7  | —           | k $\Omega$ $\parallel$ pF |
| <b>Temperature coefficient of frequency</b>   | $TC_f$                                | —           | -72                  | —           | ppm/K                     |



SAW Components

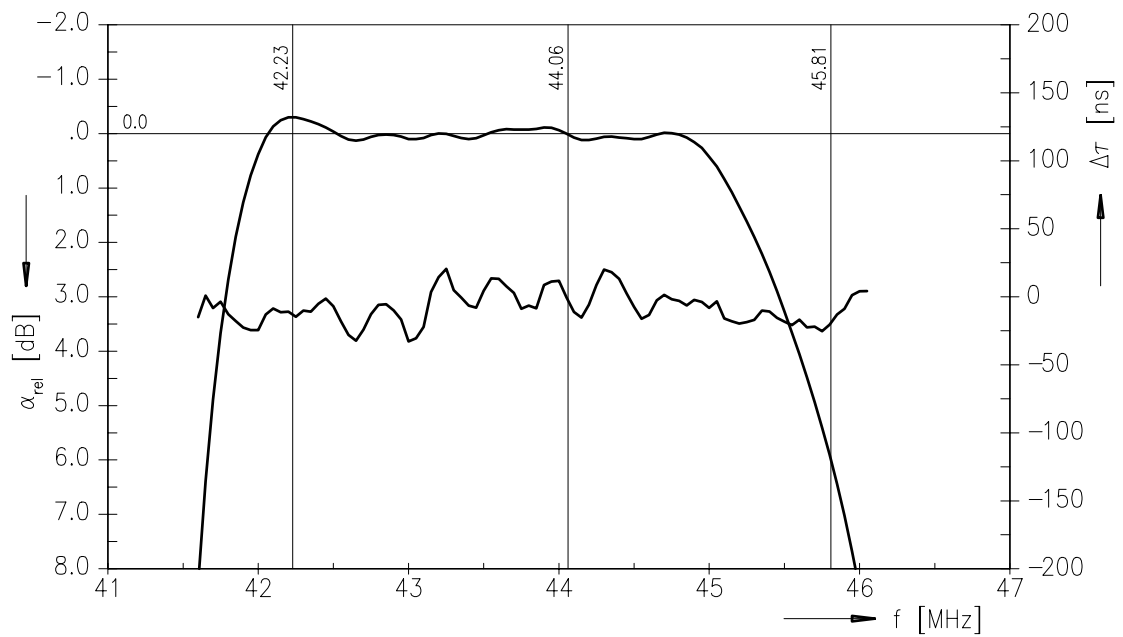
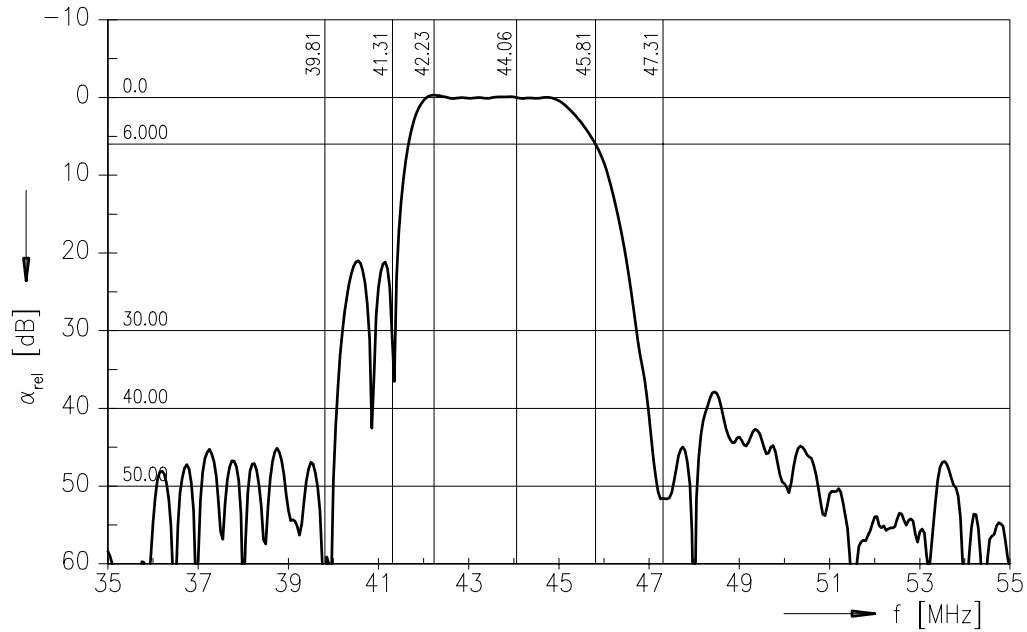
M 3565 M

IF Filter for Quasi/Split Sound Applications

45,75 MHz

Data Sheet

Frequency response of picture channel





SAW Components

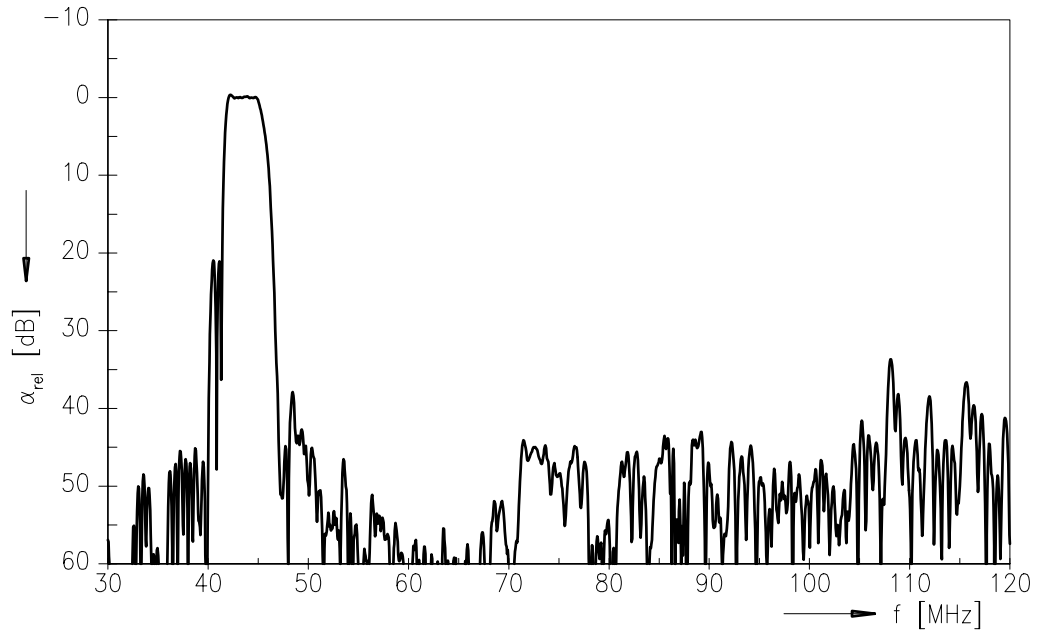
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IF Filter for Quasi/Split Sound Applications

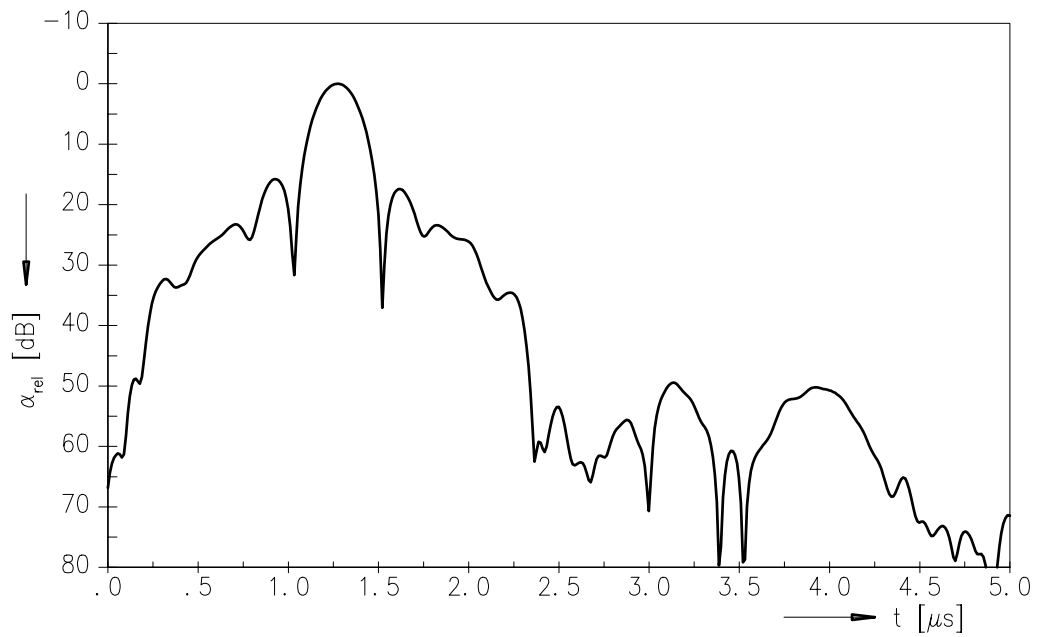
45,75 MHz

Data Sheet

Frequency response of picture channel



Time domain response of picture channel





SAW Components

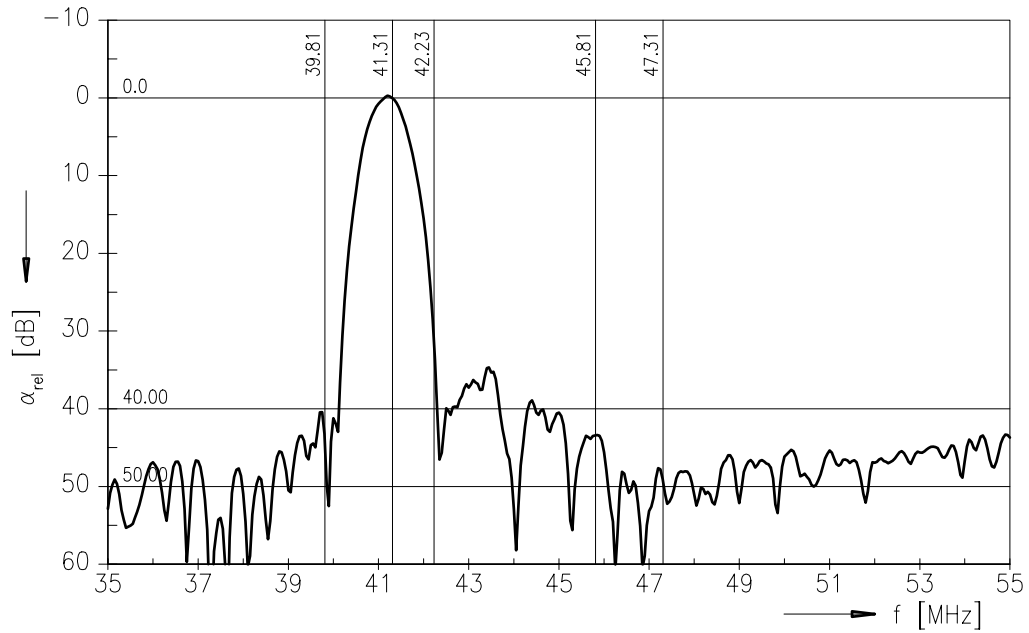
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45,75 MHz

Data Sheet

Frequency response of sound channel





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