



# SAW Components

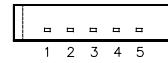
Data Sheet K 3565 M

Data Sheet



**SAW Components**
**K 3565 M**
**IF Filter for Quasi/Split Sound Applications**
**38,90 MHz**
**Data Sheet**
**Standard**

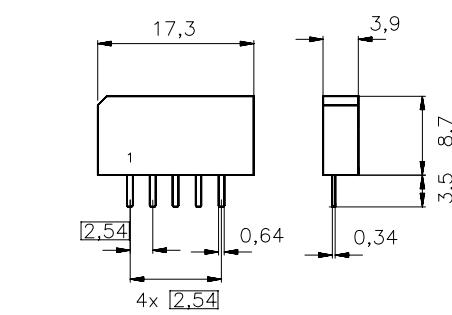
- B/G
- D/K

**Plastic package SIP5K**

**Features**

- TV IF filter for quasi/split sound applications (separate picture and sound channel)
- Picture channel with Nyquist slope and sound suppression, symmetrical output
- Customized group delay predistortion
- Sound channel with pass band for sound carriers between 32,4 MHz and 33,4 MHz

**Terminals**

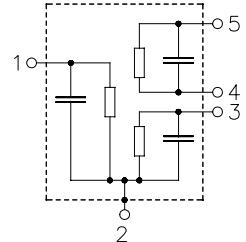
- Tinned CuFe alloy



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
K 3565 M	B39389-K3565-M201	C61157-A1-A15	F61064-V8067-Z000

**Maximum ratings**

Operating temperature range	$T_A$	-25/+65	$^{\circ}\text{C}$	
Storage temperature range	$T_{\text{stg}}$	-40/+85	$^{\circ}\text{C}$	
DC voltage	$V_{\text{DC}}$	5	V	between any terminals
AC voltage	$V_{\text{pp}}$	10	V	between any terminals



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### Characteristics of picture channel

Reference temperature:  $T_A = 25^\circ\text{C}$   
Terminating source impedance:  $Z_S = 50 \Omega$   
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	37,40 MHz	12,9	14,4	15,9	dB
<b>Relative attenuation</b>	$\alpha_{\text{rel}}$				
Picture carrier	38,90 MHz	4,8	5,8	6,8	dB
Color carrier	34,47 MHz	0,5	1,5	2,5	dB
Sound carrier	32,40 MHz	35,0	39,0	—	dB
	33,40 MHz	35,0	51,0	—	dB
Adjacent picture carrier	30,90 MHz	45,0	59,0	—	dB
	31,90 MHz	45,0	59,0	—	dB
Adjacent sound carrier	40,40 MHz	45,0	61,0	—	dB
	41,40 MHz	45,0	63,0	—	dB
Lower sidelobe	25,00 ... 30,90 MHz	39,0	46,0	—	dB
Upper sidelobe	41,40 ... 45,00 MHz	37,0	43,0	—	dB
<b>Reflected wave signal suppression</b>					
1,4 $\mu\text{s}$ ... 6,0 $\mu\text{s}$ after main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)		42,0	51,0	—	dB
<b>Feedthrough signal suppression</b>					
1,2 $\mu\text{s}$ ... 1,1 $\mu\text{s}$ before main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)		50,0	56,0	—	dB
<b>Group delay predistortion</b>	$\Delta\tau$				
(reference frequency 38,90 MHz)					
	35,90 MHz	—	-60	—	ns
	34,47 MHz	—	40	—	ns
<b>Impedance at 37,40 MHz</b>					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	1,2 $\parallel$ 24,2	—	$\text{k}\Omega \parallel \text{pF}$
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	2,0 $\parallel$ 4,0	—	$\text{k}\Omega \parallel \text{pF}$
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K



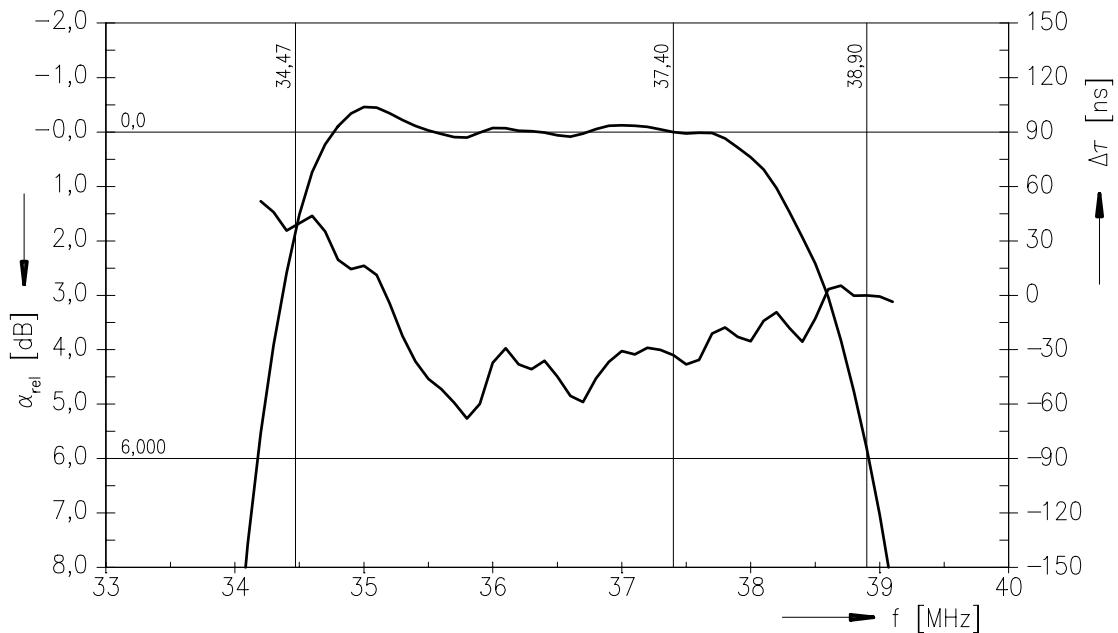
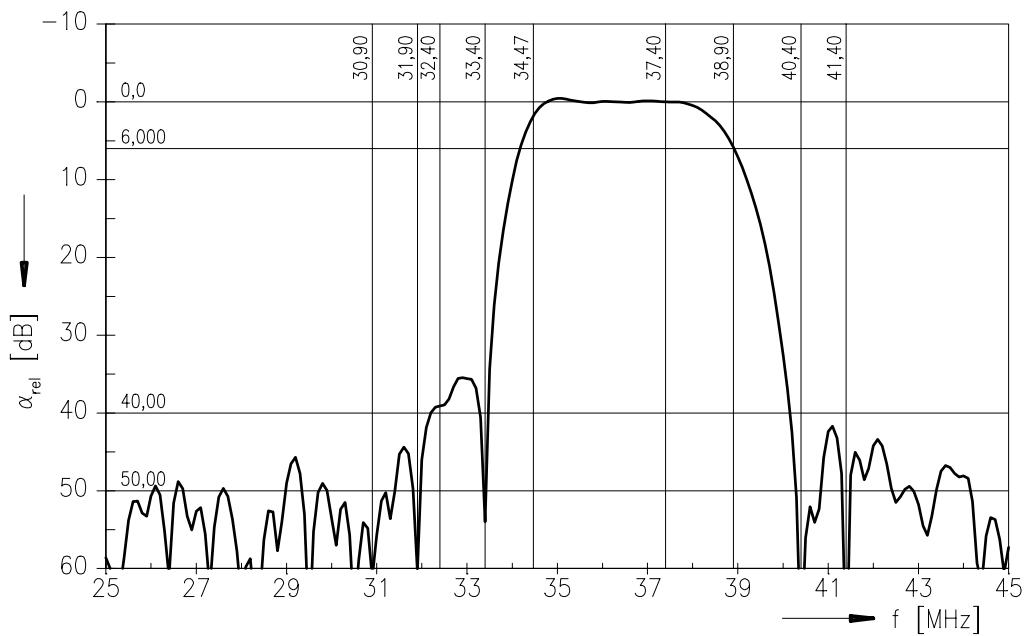
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## Data Sheet

### Characteristics of sound channel

Reference temperature:  $T_A = 25^\circ\text{C}$   
Terminating source impedance:  $Z_S = 50 \Omega$   
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	33,40 MHz	15,4	16,9	18,4	dB
<b>Relative attenuation</b>	$\alpha_{\text{rel}}$				
Sound carrier	32,40 MHz	-1,5	-0,5	0,5	dB
Picture carrier	38,90 MHz	30,0	34,0	—	dB
Color carrier	34,47 MHz	22,0	27,0	—	dB
Adjacent picture carrier	30,90 MHz	27,0	32,0	—	dB
	31,90 MHz	—	8,0	—	dB
Adjacent sound carrier	40,40 MHz	35,0	41,0	—	dB
	41,40 MHz	38,0	46,0	—	dB
Lower sidelobe	25,00 ... 30,90 MHz	25,0	31,0	—	dB
Upper sidelobe	38,90 ... 45,00 MHz	25,0	30,0	—	dB
<b>Impedance at 33,40 MHz</b>					
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	5,1 $\parallel$ 2,2	—	$\text{k}\Omega \parallel \text{pF}$
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K

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**Frequency response of picture channel**


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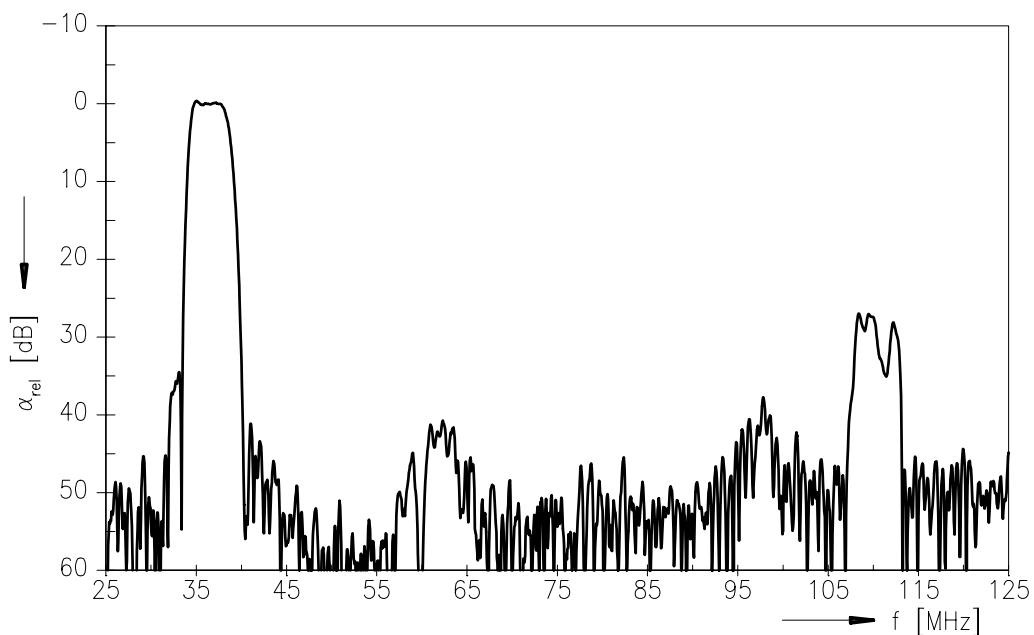
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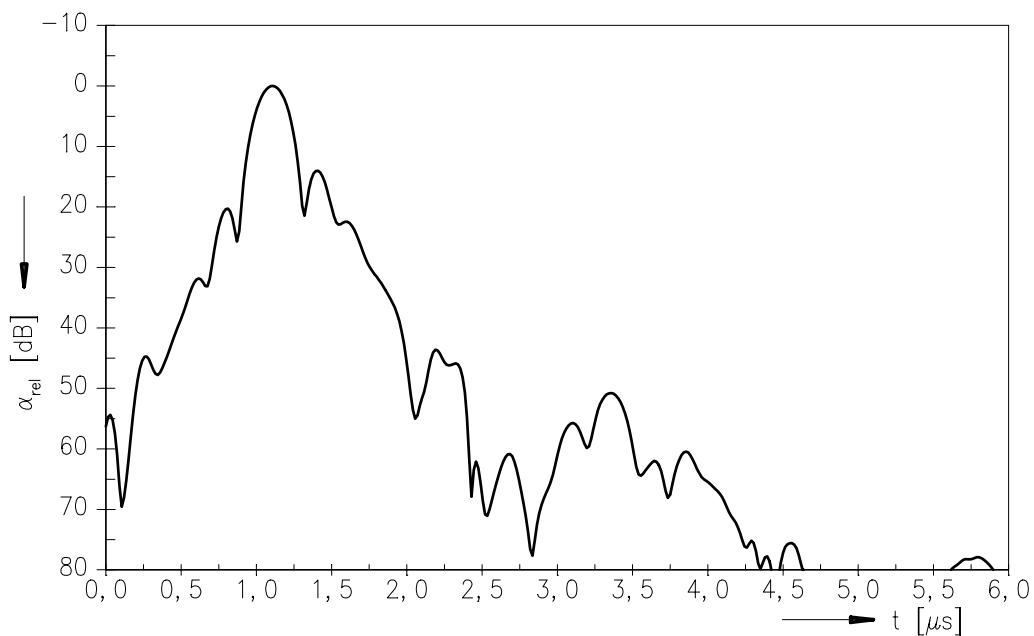
**38,90 MHz**

**Data Sheet**

**Frequency response of picture channel**



**Time domain response of picture channel**



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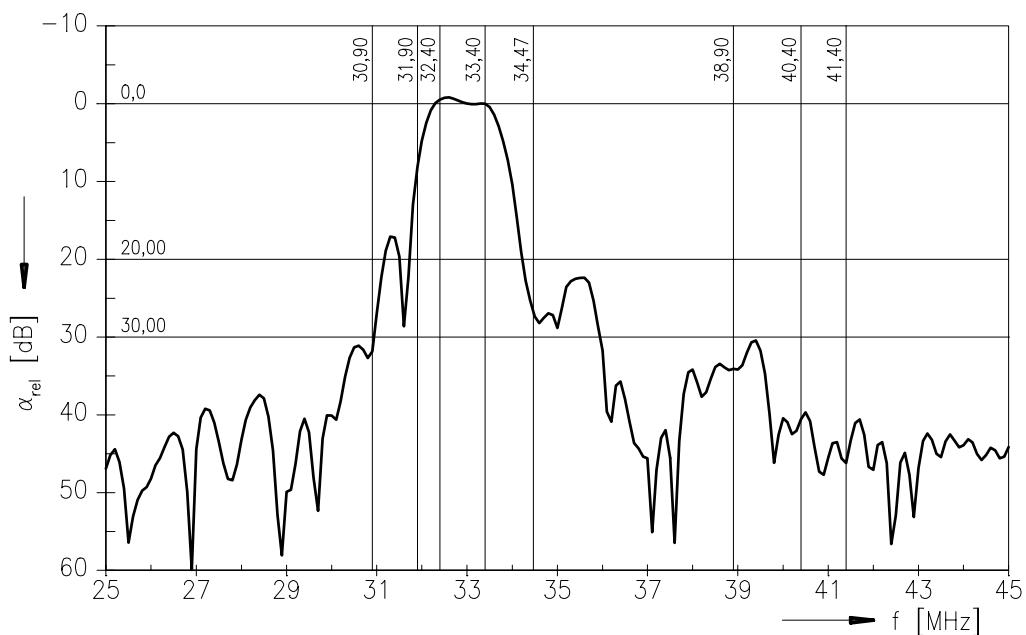
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IF Filter for Quasi/Split Sound Applications

38,90 MHz

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**Frequency response of sound channel**





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