



SAW Components

Data Sheet M 3565 M

Data Sheet

EPCOS



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IF Filter for Quasi/Split Sound Applications

45,75 MHz

Data Sheet

Standard

Plastic package **SIP5K**

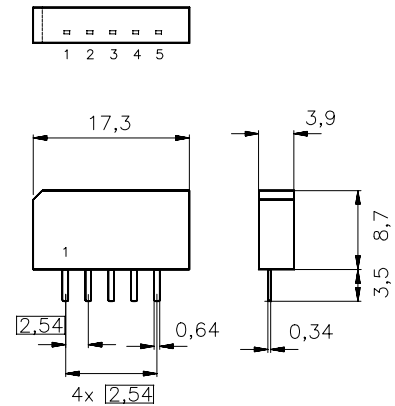
- M/N

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

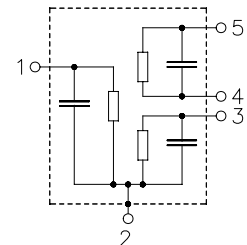
- Tinned CuFe alloy



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: $T_A = 25 (45) ^\circ \text{C}$
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	13,8	15,3	16,8	dB
Relative attenuation	α_{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
Reflected wave signal suppression					
1,2 μs ... 6,0 μs after main pulse (test pulse 250 ns, carrier frequency 44,06 MHz)		42,0	52,0	—	dB
Feedthrough signal suppression					
1,3 μs ... 1,2 μs before main pulse (test pulse 250 ns, carrier frequency 44,06 MHz)		50,0	56,0	—	dB
Group delay ripple (p-p)	$\Delta\tau$	—	50	—	ns
Impedance at 44,06 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	1,1 $\parallel$ 18,7	—	k Ω $\parallel$ pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1,9 $\parallel$ 2,8	—	k Ω $\parallel$ pF
Temperature coefficient of frequency	TC_f	—	-72	—	ppm/K



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Characteristics of sound channel

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	41,31 (41,25) MHz	9,1	10,6	12,1	dB
Relative attenuation	α_{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
Impedance at 41,31 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	0,7 $\parallel$ 19,5	—	k Ω $\parallel$ pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1,2 $\parallel$ 2,7	—	k Ω $\parallel$ pF
Temperature coefficient of frequency	TC_f	—	-72	—	ppm/K



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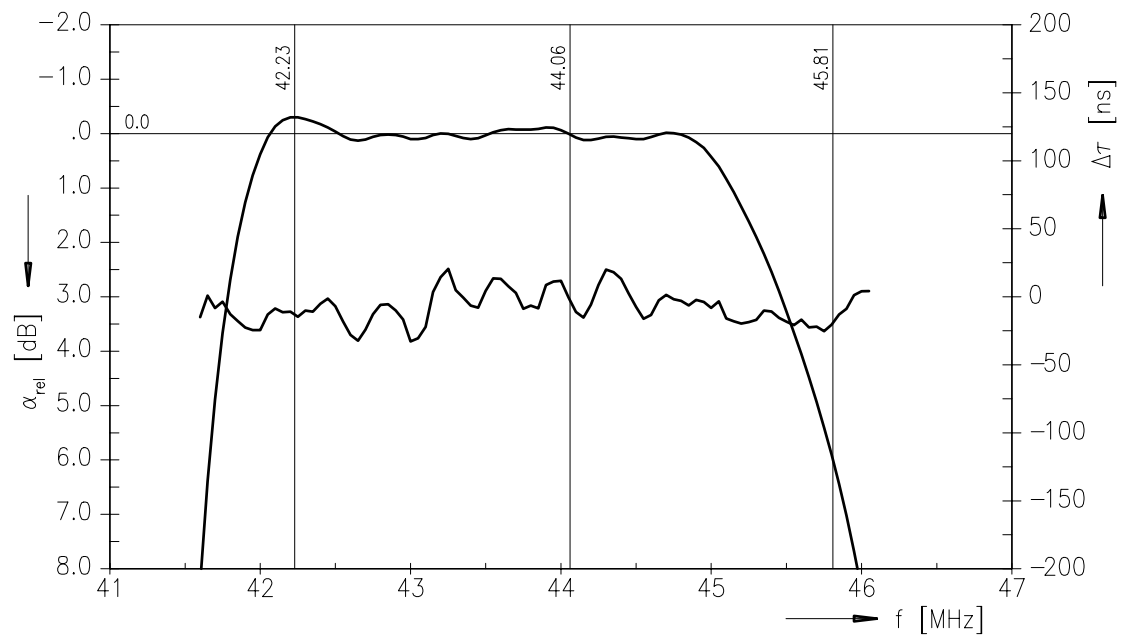
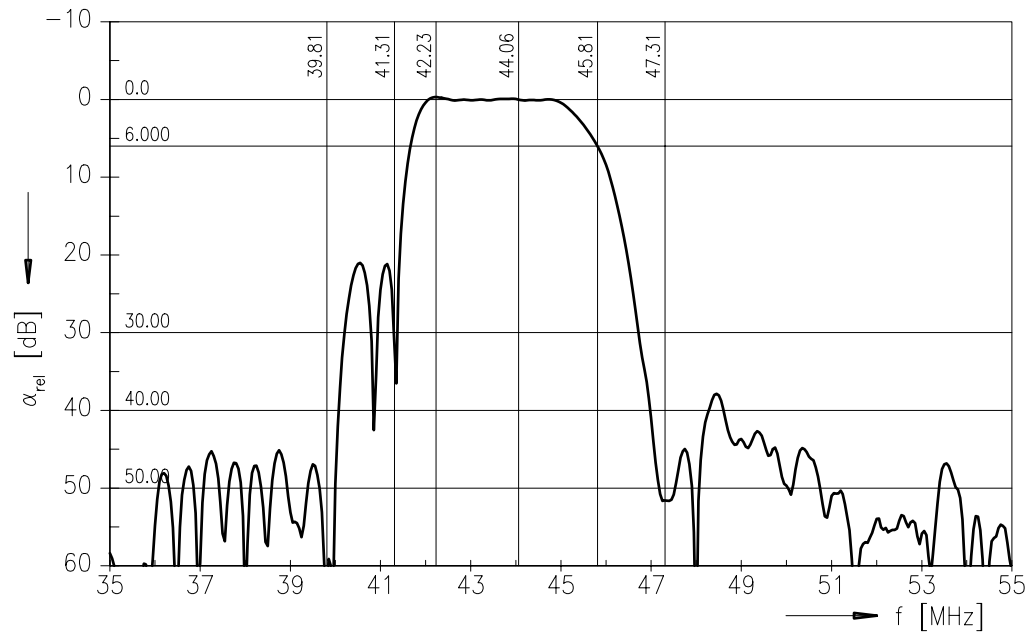
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Frequency response of picture channel





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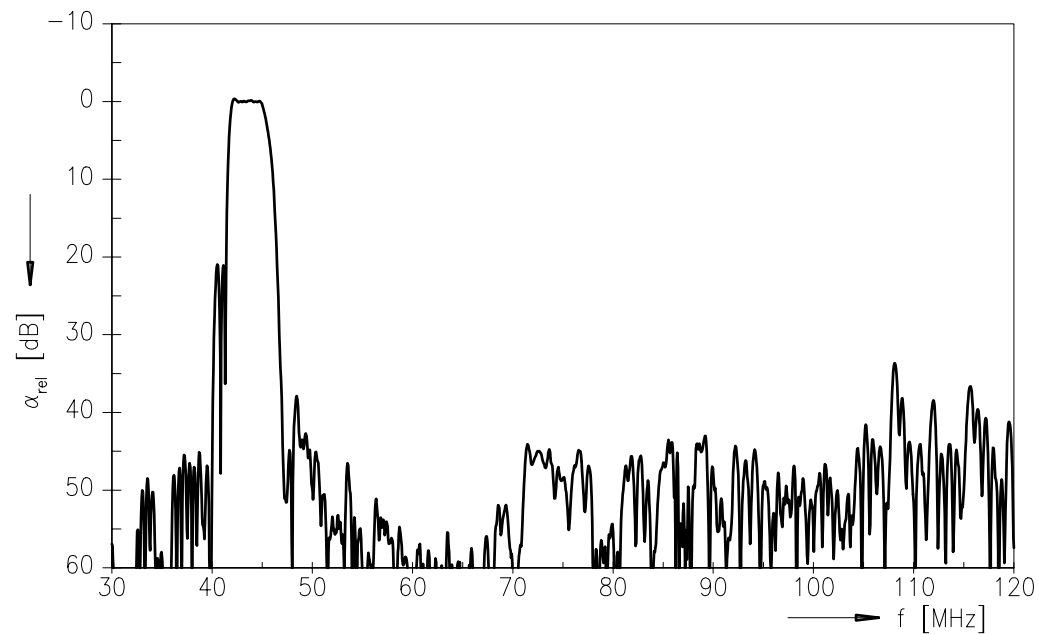
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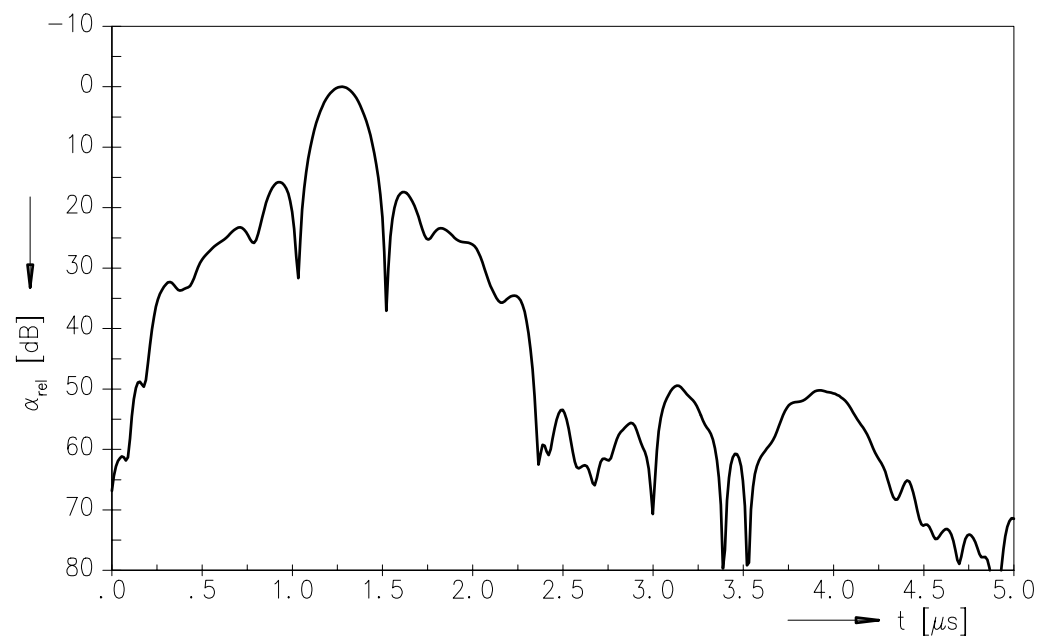
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Frequency response of picture channel



Time domain response of picture channel





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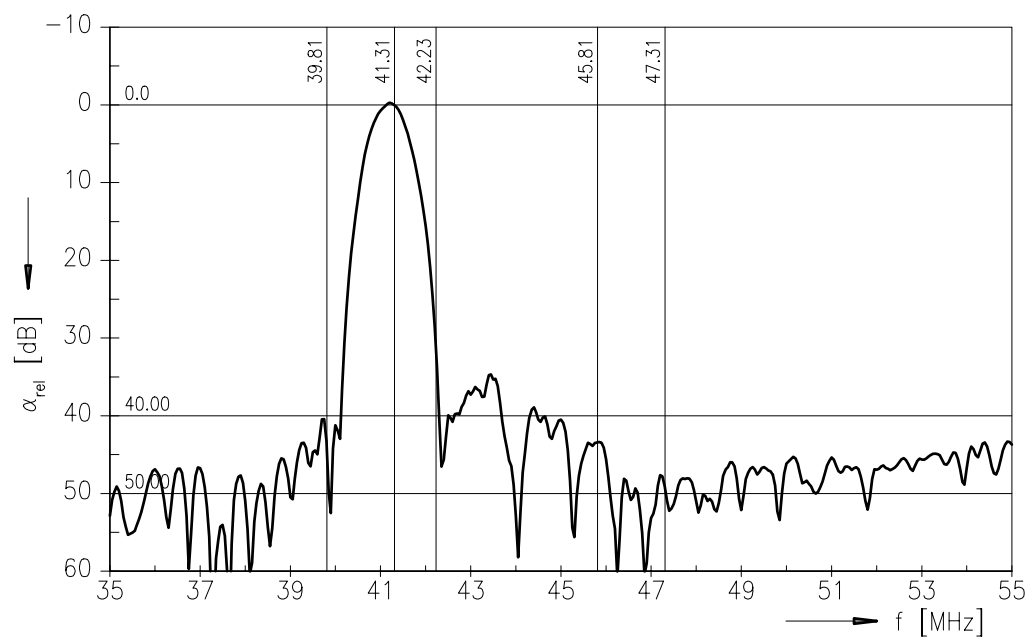
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Frequency response of sound channel





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