



SAW Components

Data Sheet J 3353 K

Data Sheet

EPCOS



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J 3353 K

IF Filter for Quasi/Split Sound Applications

38,90 MHz

Data Sheet

Standard

- I
- D/K

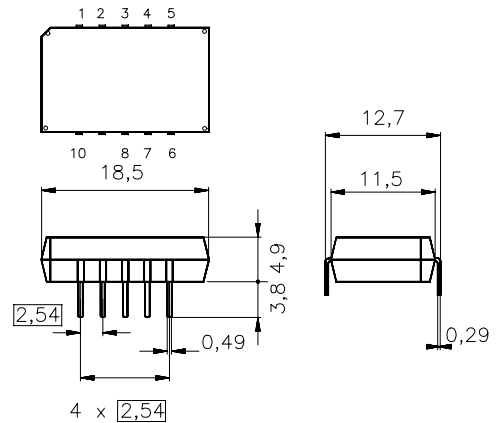
Features

- TV IF filter for quasi/split sound applications (separate picture and sound channel)
- Picture channel with Nyquist slope and sound suppression
- Customized group delay predistortion
- Sound channel with passband for sound carriers at 32,90 MHz and 32,35 MHz (NICAM)
- Suitable for CENELEC EN 55020

Terminals

- Tinned CuFe alloy

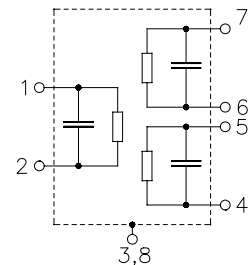
Plastic package DIP10K



Dimensions in mm, approx. weight 1,8 g

Pin configuration

- | | |
|------|-----------------------|
| 1 | Input |
| 2 | Input - ground |
| 3; 8 | Chip carrier - ground |
| 4; 5 | Output - sound |
| 6; 7 | Output - picture |
| 9 | Free |
| 10 | Not connected |



Type	Ordering code	Marking and package according to	Packing according to
J 3353 K	B39389-J3353-K100	C61157-A2-A3	F61074-V8068-Z000

Maximum ratings

Operable temperature range	T_A	-25/+65	°C	between any terminals between any terminals
Storage temperature range	T_{stg}	-25/+85	°C	
DC voltage	V_{DC}	5	V	
AC voltage	V_{pp}	10	V	



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Characteristics of picture channel

Reference temperature: $T_A = 25\text{ °C}$
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	37,40 MHz	12,9	14,4	15,9	dB
Relative attenuation α_{rel}					
Picture carrier	38,90 MHz	5,0	6,0	7,0	dB
Color carrier	34,47 MHz	-0,6	0,4	1,4	dB
Sound carrier	32,90 MHz	40,0	52,0	—	dB
	32,35 MHz	44,0	56,0	—	dB
Adjacent picture carrier	30,90 MHz	50,0	62,0	—	dB
	30,40 MHz	48,0	60,0	—	dB
	31,40 MHz	48,0	60,0	—	dB
Adjacent sound carrier	40,90 MHz	45,0	55,0	—	dB
	40,35 MHz	43,0	53,0	—	dB
Lower sidelobe	25,00 ... 30,90 MHz	46,0	54,0	—	dB
Upper sidelobe	40,90 ... 45,00 MHz	39,0	45,0	—	dB
Reflected wave signal suppression					
1,2 μ s ... 6,0 μ s after main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)		42,0	55,0	—	dB
Feedthrough signal suppression					
1,2 μ s ... 1,1 μ s before main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)		50,0	56,0	—	dB
Group delay predistortion $\Delta\tau$ (reference frequency 38,90 MHz)					
	38,90 MHz	—	0	—	ns
	34,47 MHz	—	-50	—	ns
Impedance at 37,40 MHz					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1,2 $\parallel$ 24,0	—	k Ω $\parallel$ pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	2,5 $\parallel$ 3,6	—	k Ω $\parallel$ pF
Temperature coefficient of frequency TC_f					
		—	-72	—	ppm/K



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Characteristics of sound channel

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

		min.	typ.	max.	
Insertion attenuation α					
Reference level for the following data	32,35 MHz	10,4	11,9	13,4	dB
Relative attenuation α_{rel}					
Sound carrier	32,90 MHz	-0,5	0,5	1,5	dB
	31,95 MHz	—	2,5	—	dB
Picture carrier	38,90 MHz	46,0	58,0	—	dB
Color carrier	34,47 MHz	33,0	47,0	—	dB
Adjacent picture carrier	30,90 MHz	40,0	51,0	—	dB
Adjacent sound carrier	40,90 MHz	48,0	59,0	—	dB
	40,35 MHz	46,0	55,0	—	dB
Lower sidelobe	25,00 ... 30,90 MHz	39,0	45,0	—	dB
Upper sidelobe	38,90 ... 45,00 MHz	44,0	50,0	—	dB
Impedance at 32,35 MHz					
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	2,5 $\parallel$ 3,6	—	k Ω $\parallel$ pF
Temperature coefficient of frequency TC_f					
		—	-72	—	ppm/K



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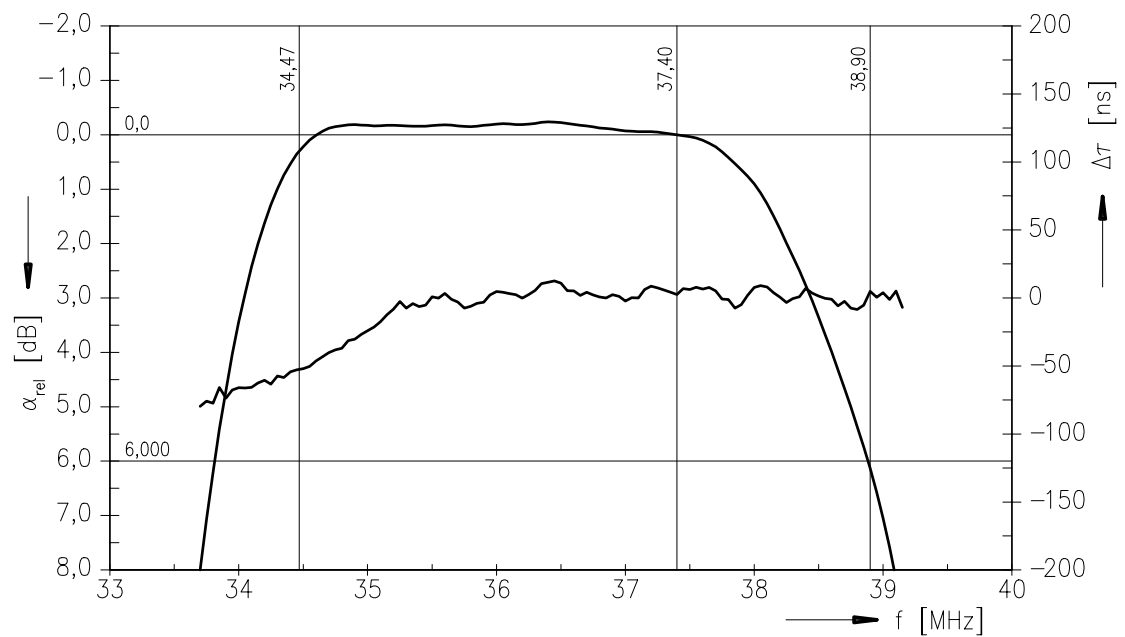
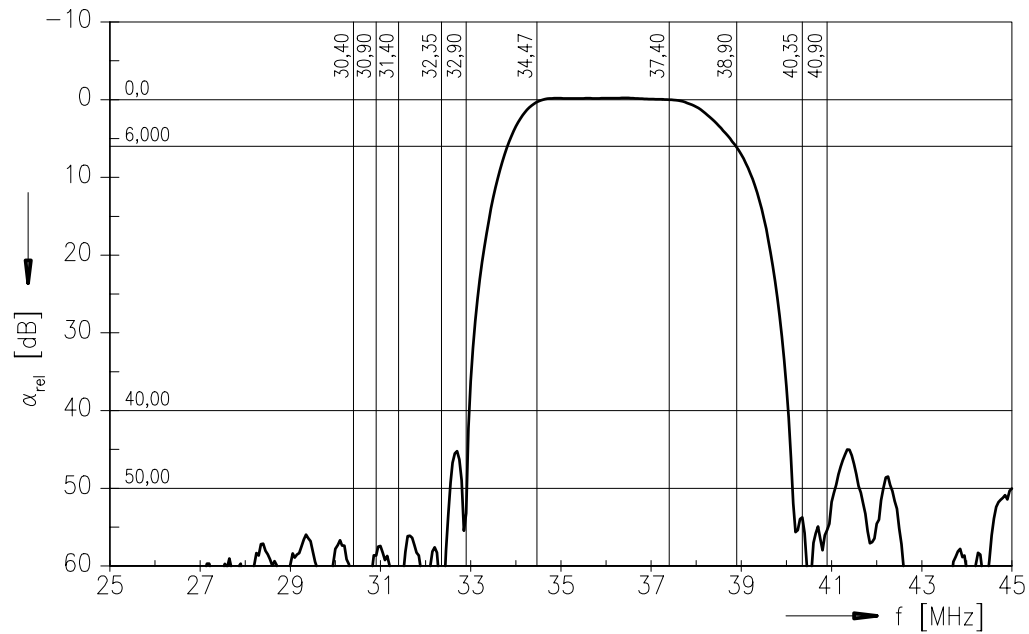
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Frequency response of picture channel





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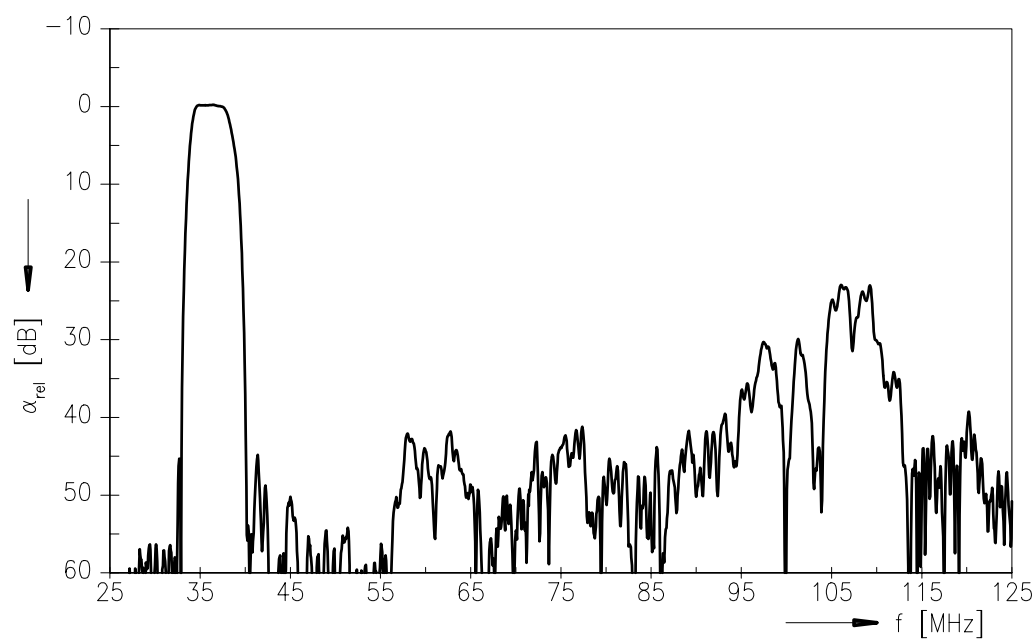
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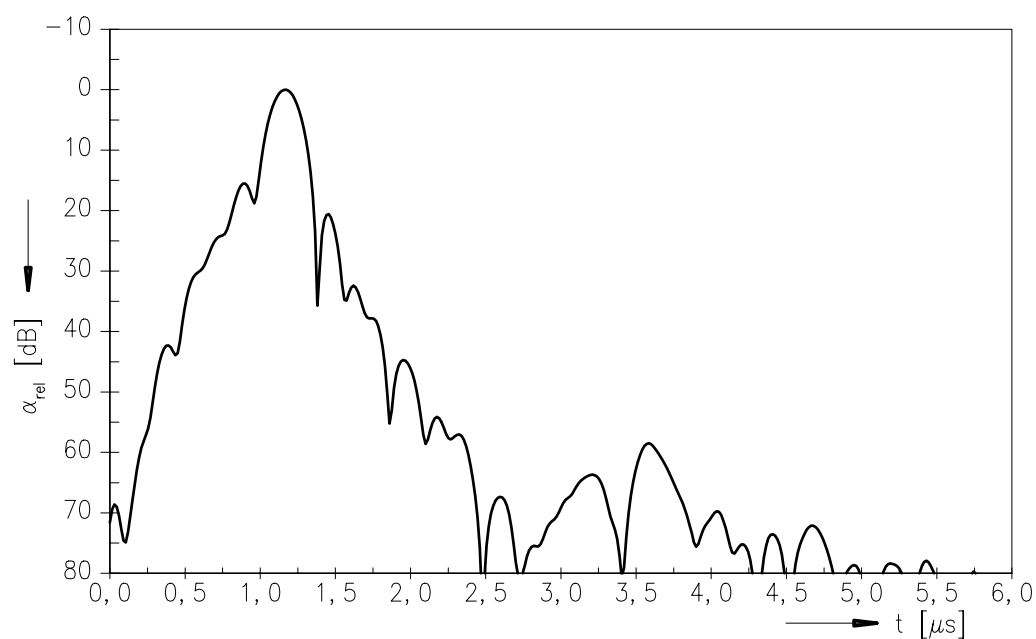
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Frequency response of picture channel



Time domain response of picture channel





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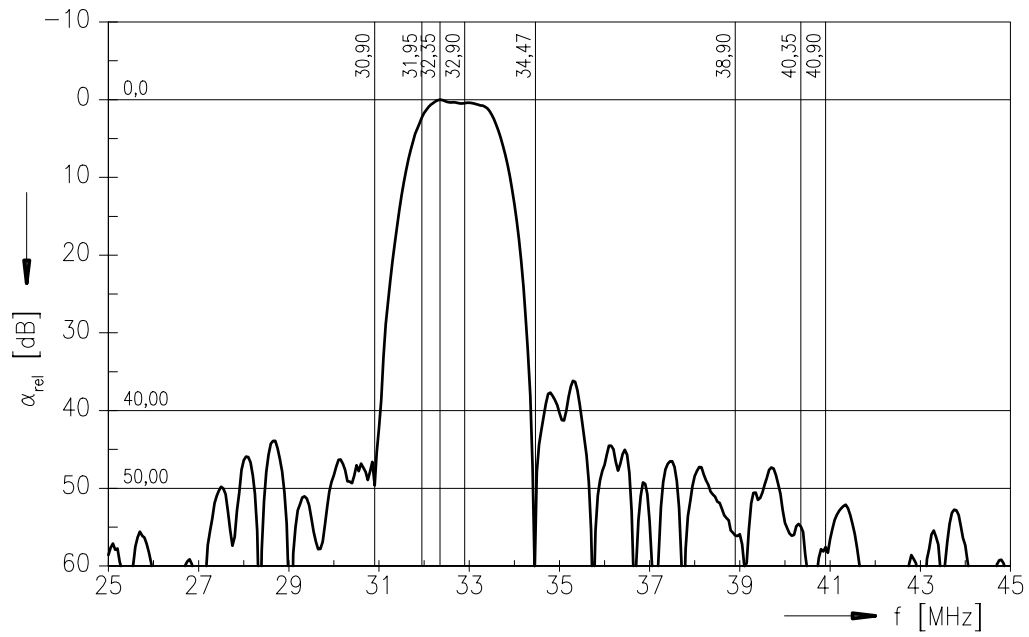
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Frequency response of sound channel





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