



SAW Components

Data Sheet X 6864 D

Data Sheet

EPCOS



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X 6864 D

Bandpass Filter

43,75 MHz

Data Sheet

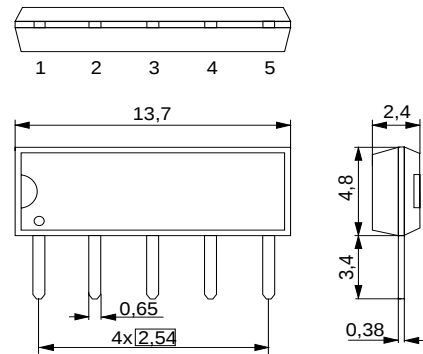
Duroplast package **SIP5D**

Features

- IF filter for digital cable TV
- Standard IC package

Terminals

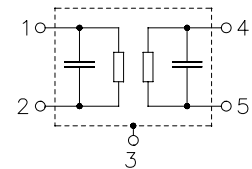
- Tinned CuFe alloy



Dimensions in mm, approx. weight 0,5 g

Pin configuration

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



Type	Ordering code	Marking and package according to	Packing according to
X 6864 D	B39438-X6864-N201	C61157-A1-A21	F61074-V8049-Z000

Maximum ratings

Operable 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

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.	
Center frequency	f_C	—	(43,75)	—	MHz
(center between 10 dB points)					
Insertion attenuation	α				
Reference level for the	43,81 (43,75) MHz	13,7	15,2	16,7	dB
following data					
Pass bandwidth					
$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	—	6,2	—	MHz
$\alpha_{\text{rel}} \leq 30 \text{ dB}$	$B_{30\text{dB}}$	—	7,6	—	MHz
Relative attenuation	α_{rel}				
	40,71 (40,65) MHz	—	3,0	—	dB
	46,91 (46,85) MHz	—	2,2	—	dB
Lower sidelobe					
	35,06 ... 39,06 (35,00 ... 39,00) MHz	40,0	46,0	—	dB
	39,06 ... 39,76 (39,00 ... 39,70) MHz	38,0	45,0	—	dB
Upper sidelobe					
	47,86 ... 49,66 (47,80 ... 49,60) MHz	38,0	44,0	—	dB
	49,66 ... 55,06 (49,60 ... 55,00) MHz	41,0	47,0	—	dB
Reflected wave signal suppression					
1,3 μs ... 6,0 μs after main pulse		42,0	52,0	—	dB
(test pulse 250 ns, carrier frequency 43,81 MHz)					
Feedthrough signal suppression					
1,3 μs ... 1,2 μs before main pulse		50,0	56,0	—	dB
(test pulse 250 ns, carrier frequency 43,81 MHz)					
Group delay ripple (p-p)	$\Delta\tau$				
Aperture 50 kHz					
	40,71 ... 46,91 (40,65 ... 46,85) MHz	—	40	—	ns
Impedance at 43,81 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	1,3 $\parallel$ 16,1	—	$\text{k}\Omega \parallel \text{pF}$
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1,1 $\parallel$ 5,5	—	$\text{k}\Omega \parallel \text{pF}$
Temperature coefficient of frequency	TC_f	—	-72	—	ppm/K



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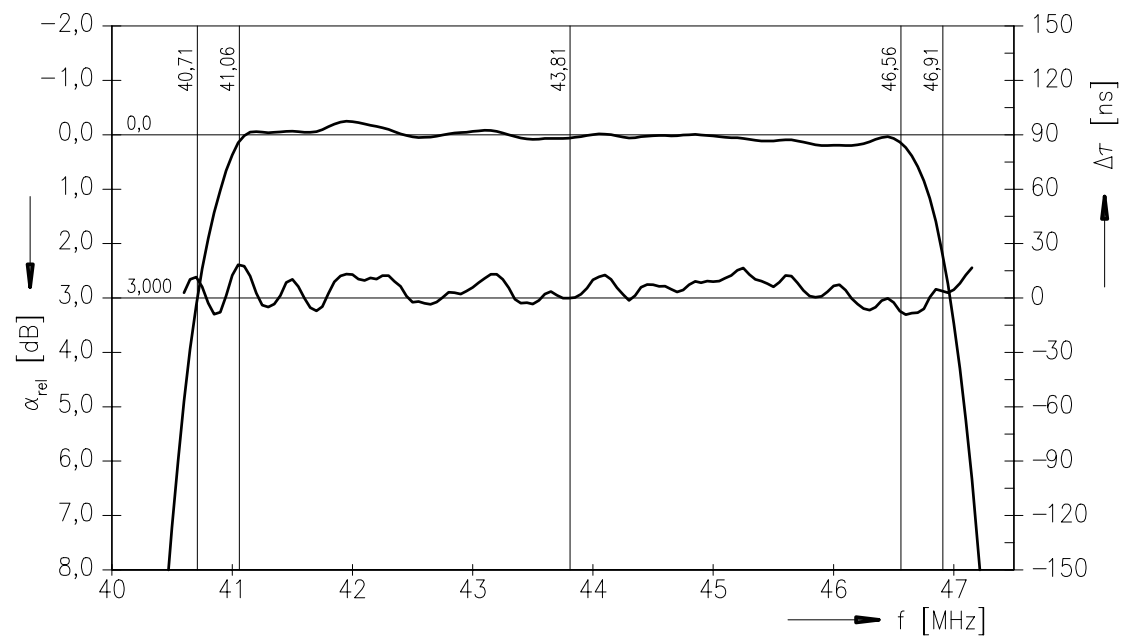
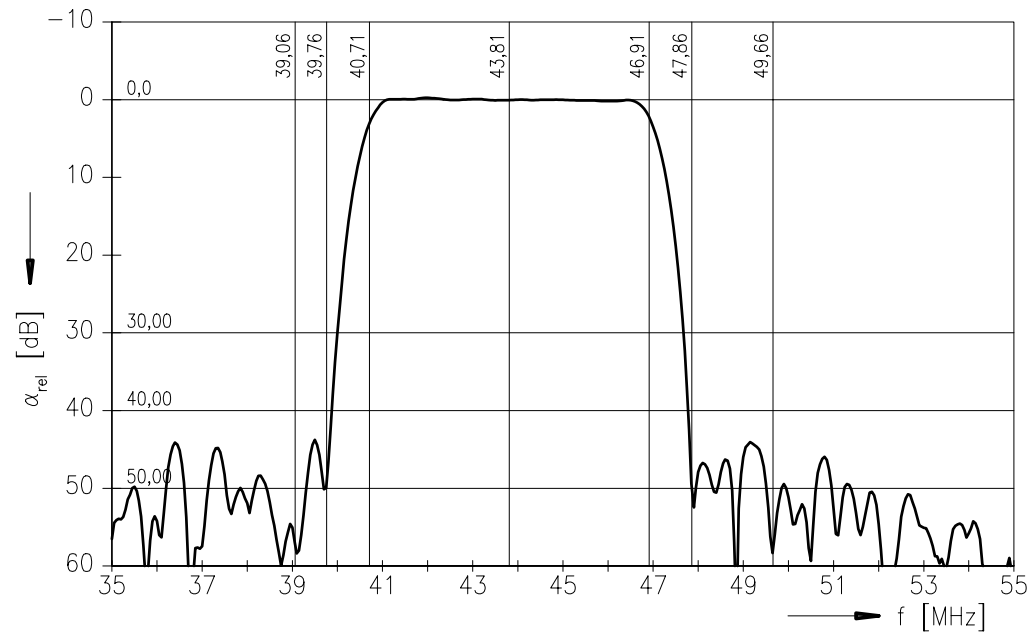
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Frequency response





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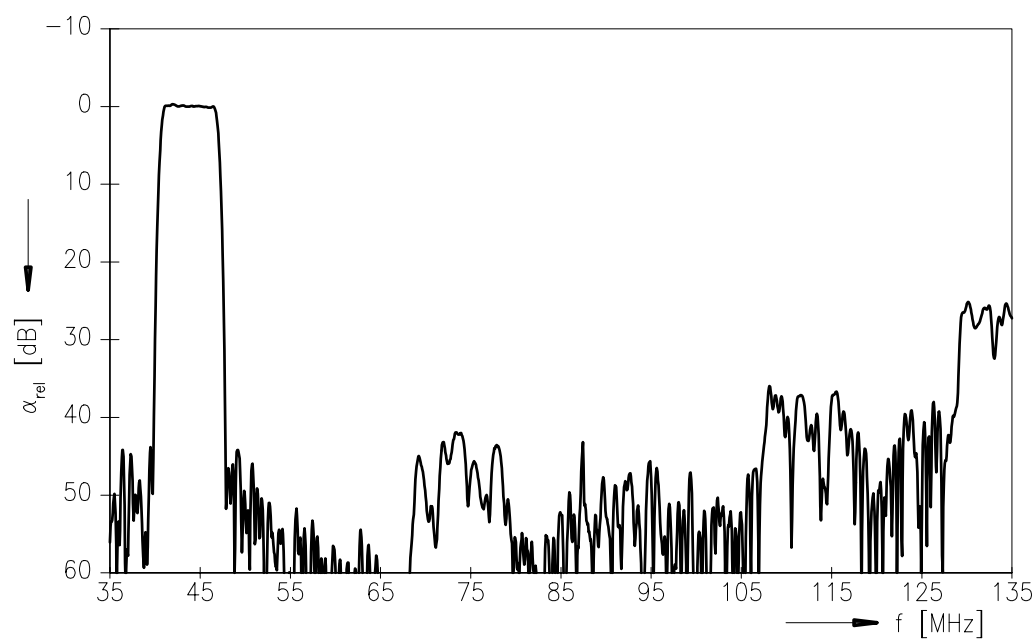
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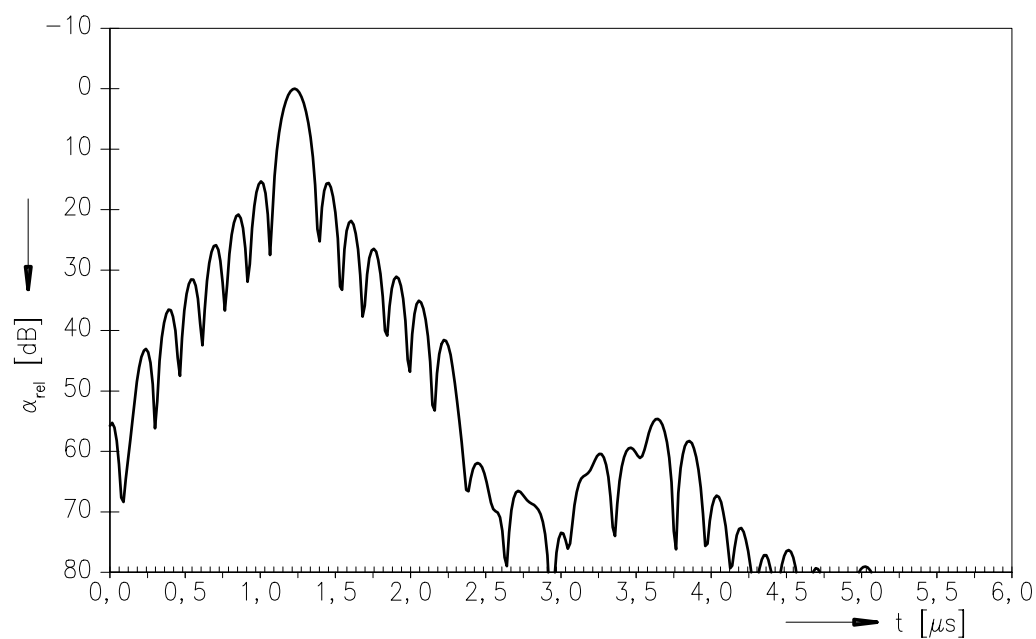
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Frequency response



Time domain response





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