



SAW Components

Data Sheet X 6965 D

Data Sheet

A large, stylized, 3D-rendered graphic of the word "EPCOS" in a light gray, sans-serif font. The letters are tilted and appear to be floating or emerging from a dark, textured background that resembles a globe or a complex circuit board. The overall effect is a sense of depth and modernity.



SAW Components

X 6965 D

Bandpass Filter

44,00 MHz

Data Sheet

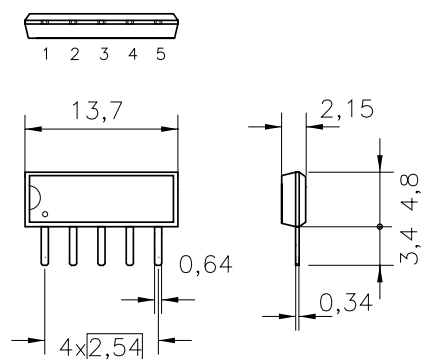
Duroplast package **SIP5D**

Features

- IF filter for digital cable TV
- Standard IC package

Terminals

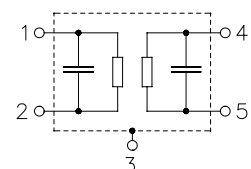
- Tinned CuFe alloy



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 6965 D	B39440-X6965-D100	C61157-A1-A18	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}	12	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	—	(44,00)	—	MHz
(center between 3 dB points)					
Insertion attenuation	α				
Reference level for the following data	44,06 (44,00) MHz	13,2	14,7	16,2	dB
Pass bandwidth					
$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	—	6,0	—	MHz
$\alpha_{\text{rel}} \leq 30 \text{ dB}$	$B_{30\text{dB}}$	—	7,6	—	MHz
Amplitude ripple	$\Delta\alpha$				
	41,53 ... 46,59 MHz	—	0,4	—	dB
Relative attenuation	α_{rel}				
	41,53 (41,47) MHz	—	0,3	—	dB
	46,59 (46,53) MHz	—	0,4	—	dB
	41,06 (41,00) MHz	1,5	2,7	3,8	dB
	47,06 (47,00) MHz	1,8	3,0	4,2	dB
	47,31 (47,25) MHz	—	8,3	—	dB
	39,81 (39,75) MHz	40,0	55,0	—	dB
Lower sidelobe					
	35,06 ... 39,46 (35,00 ... 39,40) MHz	43,0	47,0	—	dB
	39,46 ... 40,06 (39,40 ... 40,00) MHz	38,0	47,0	—	dB
Upper sidelobe					
	48,06 ... 50,06 (48,00 ... 50,00) MHz	37,0	42,0	—	dB
	50,06 ... 55,06 (50,00 ... 55,00) MHz	43,0	51,0	—	dB
Reflected wave signal suppression					
1,3 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)	$\Delta\tau$				
	41,53 ... 46,59 MHz	—	30	—	ns
Impedance at 44,06 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 5,6	—	$\text{k}\Omega \parallel \text{pF}$
Temperature coefficient of frequency	TC_f	—	-72	—	ppm/K



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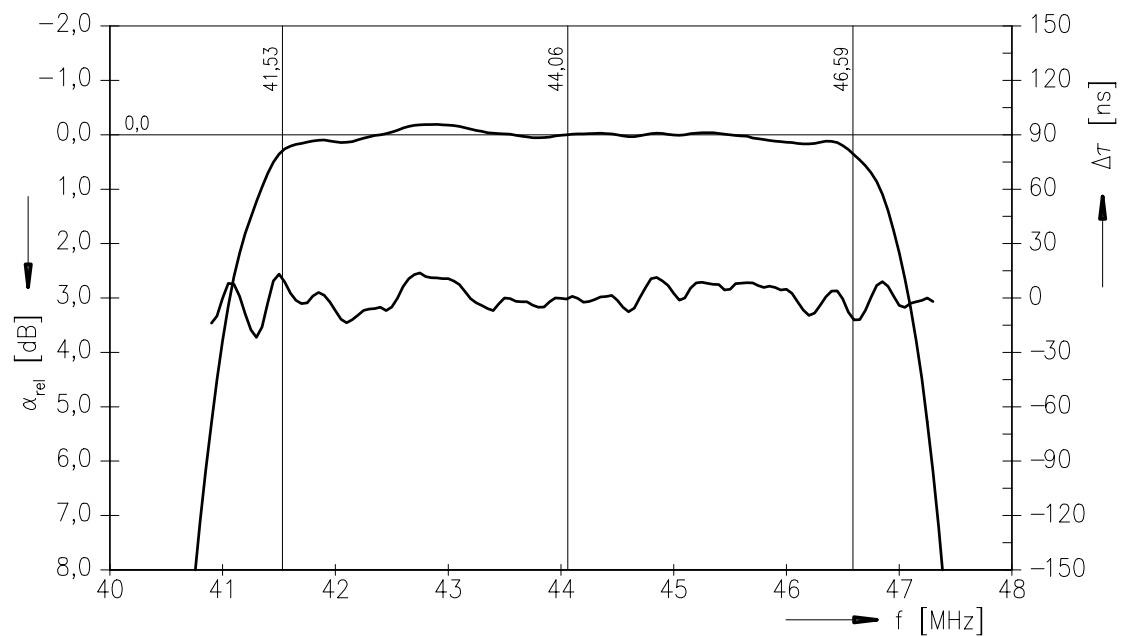
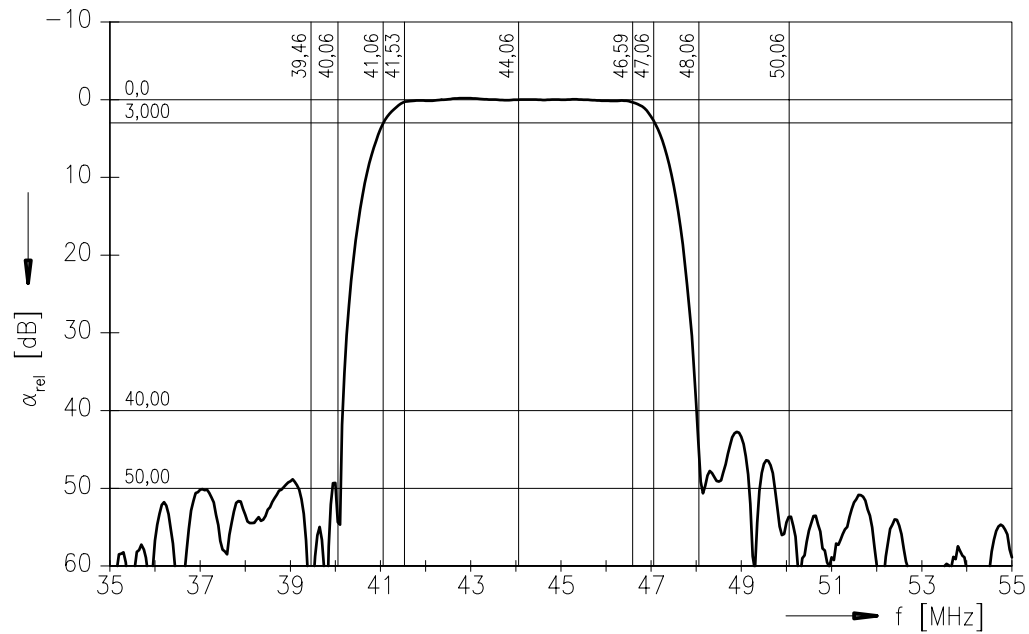
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Frequency response





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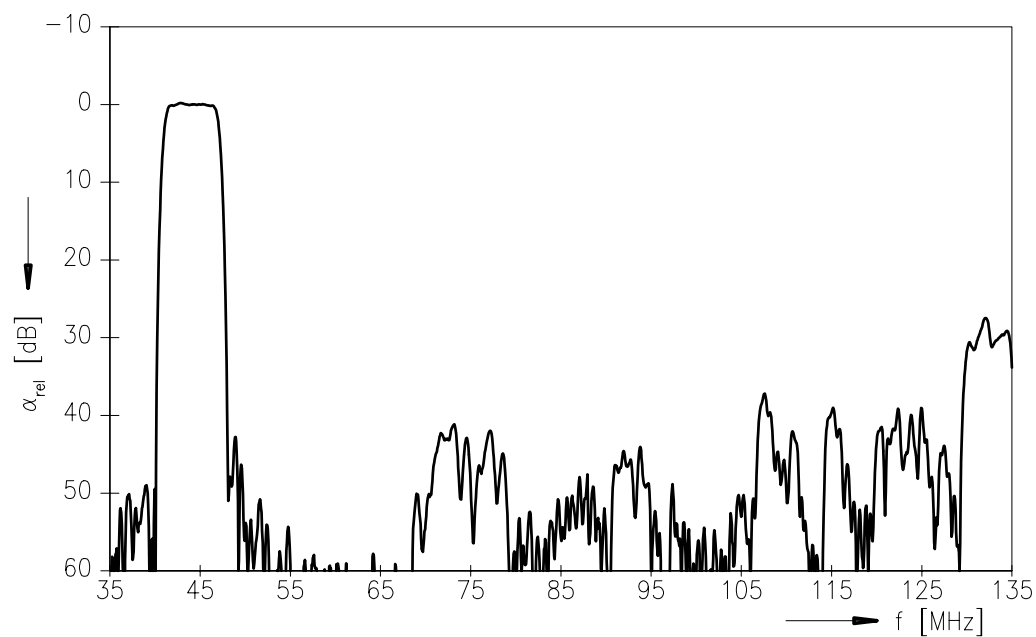
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Bandpass Filter

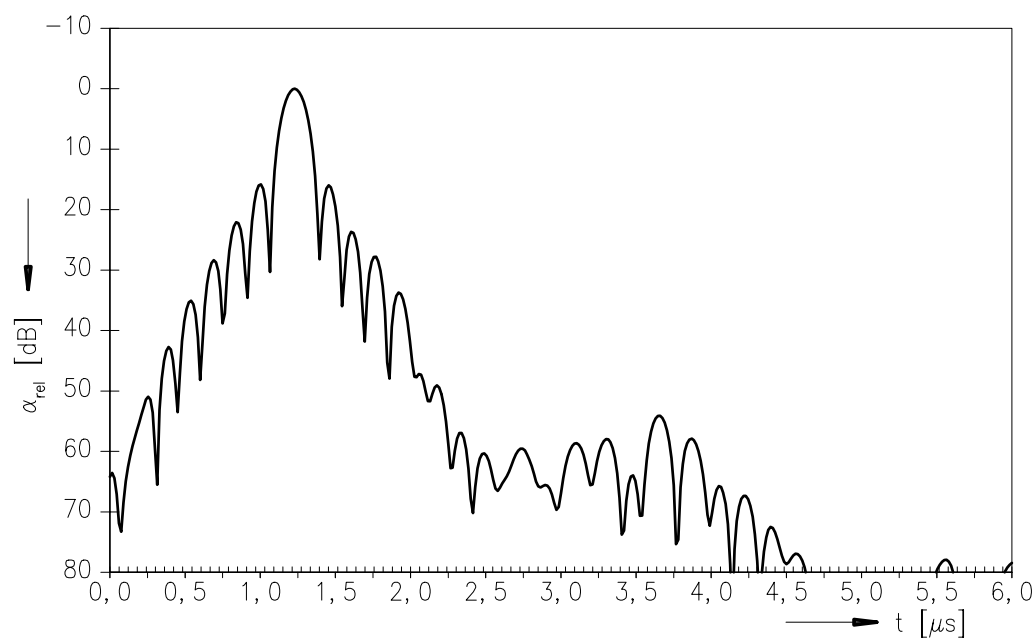
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Frequency response



Time domain response





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