



SAW Components

Data Sheet X 6941 D

Data Sheet

An abstract, grayscale background graphic featuring a globe with a grid of latitude and longitude lines. Overlaid on the globe is a large, stylized, 3D-effect word "EPCOS" in a light gray color, tilted diagonally from the bottom left towards the top right.

EPCOS



SAW Components

X 6941 D

Bandpass Filter

44,00 MHz

Data Sheet

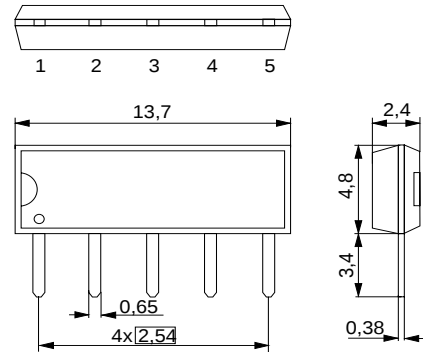
Standard

Duroplast package **SIP5D**

- HDTV

Features

- Constant group delay
- Optimized for cascade of two devices
- Optimized for balanced to balanced operation
- Standard IC package



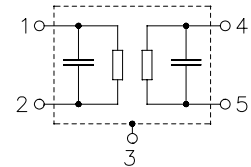
Terminals

- Tinned CuFe alloy

Dimensions in mm, approx. weight 0,5 g

Pin configuration

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



Type	Ordering code	Marking and package according to	Packing according to
X 6941 D	B39440-X6941-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:

$$T_A = 25\text{ }^{\circ}\text{C}$$

Terminating source impedance:

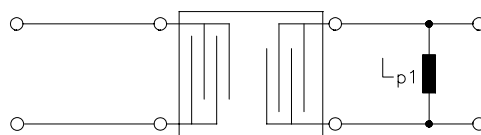
$$Z_S = 50\text{ }\Omega$$

Terminating load impedance:

$$Z_L = 2\text{ k}\Omega \parallel 3\text{ pF and matching network}$$

		min.	typ.	max.	
Insertion attenuation	α				
Reference level for the following data	44,00 MHz	18,5	20,0	21,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
41,60 ... 46,40 MHz		—	0,4	—	dB
Relative attenuation	α_{rel}				
40,75 MHz		25,0	32,0	—	dB
41,31 MHz		1,1	1,6	2,1	dB
41,43 MHz		-0,4	0,3	1,0	dB
41,60 MHz		-0,4	0,1	0,6	dB
46,40 MHz		-0,4	0,1	0,6	dB
46,57 MHz		0,1	0,6	1,1	dB
46,69 MHz		1,5	2,0	2,5	dB
47,25 MHz		25,0	36,0	—	dB
Lower sidelobe 35,00 ... 39,10 MHz		34,0	42,0	—	dB
39,10 ... 40,35 MHz		27,0	32,0	—	dB
Upper sidelobe 47,65 ... 48,65 MHz		25,0	30,0	—	dB
48,65 ... 55,00 MHz		32,0	37,0	—	dB
Reflected wave signal suppression					
1,5 μs ... 6,0 μs after main pulse (test pulse 250 ns, carrier frequency 44,00 MHz)		42,0	56,0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
41,31 ... 46,69 MHz		—	30	80	ns
Impedance at 44,00 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	1,9 $\parallel$ 22,2	—	k Ω $\parallel$ pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	6,1 $\parallel$ 5,7	—	k Ω $\parallel$ pF
Temperature coefficient of frequency	TC_f	—	-18	—	ppm/K

Matching network:



$$L_{p1} = 1800\text{ nH}$$



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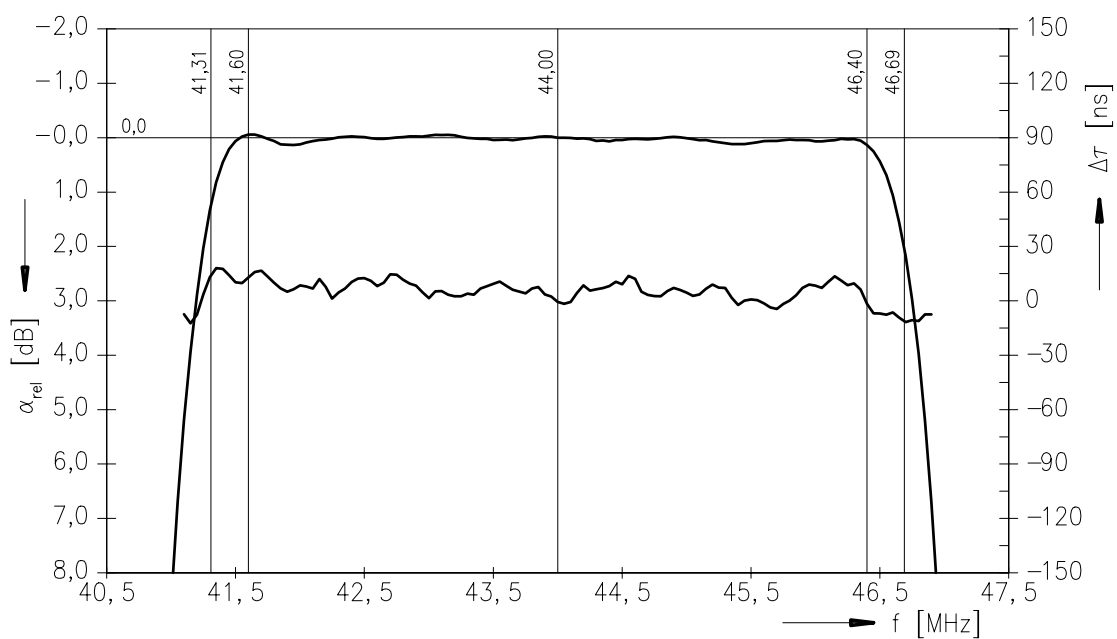
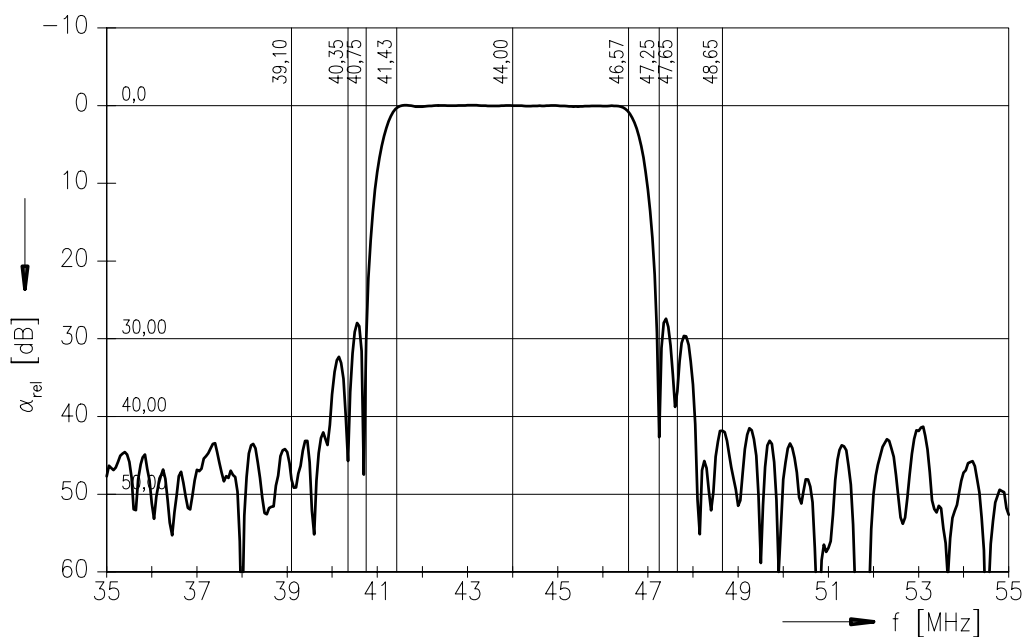
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Frequency response





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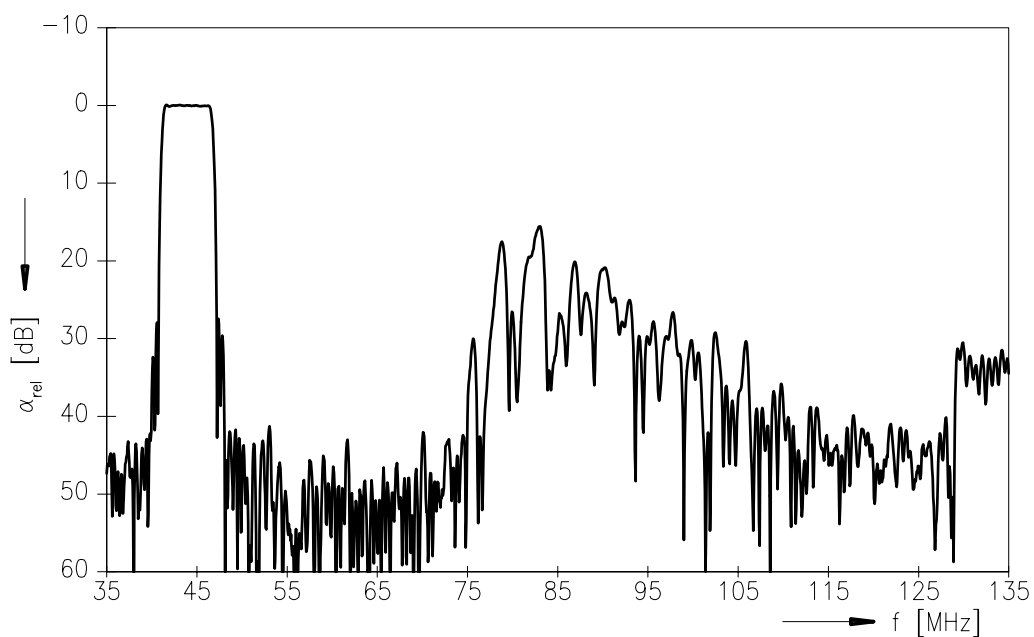
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Bandpass Filter

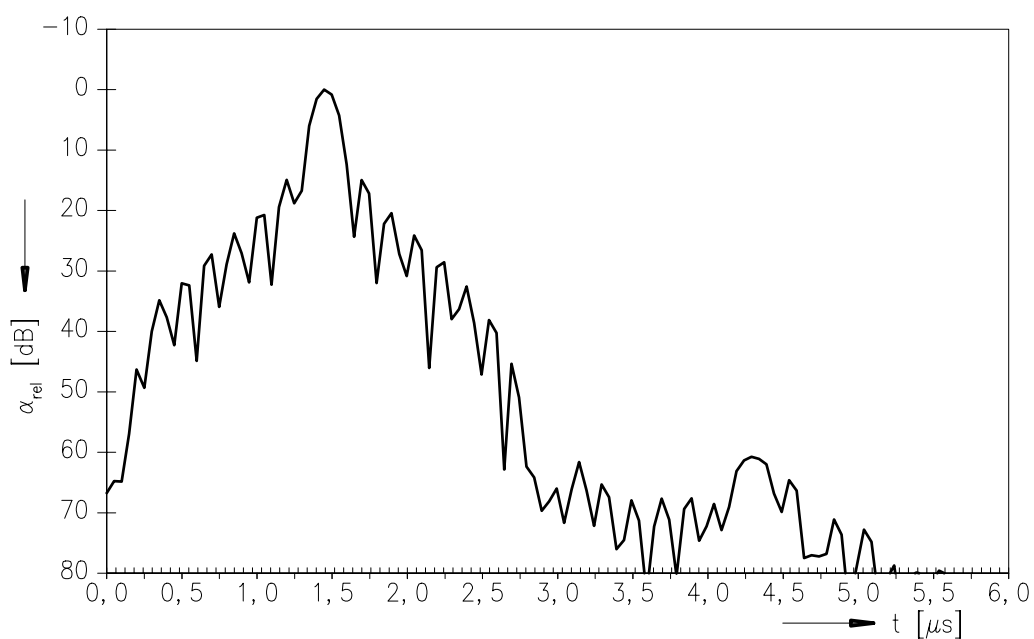
44,00 MHz

Data Sheet

Frequency response



Time domain response





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