



SAW Components

Data Sheet X 6941 D





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X 6941 D

Bandpass Filter

44,00 MHz

Data Sheet

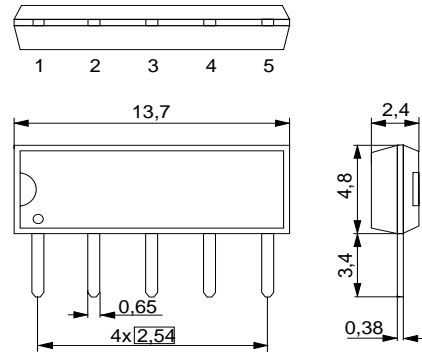
Standard

Duroplast package **SIP5D**

- HDTV

Features

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



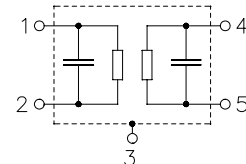
Terminals

- 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:

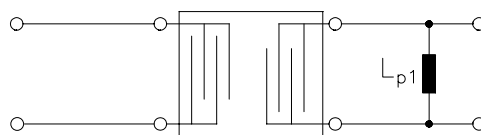
$$Z_S = 50 \text{ } \Omega$$

Terminating load impedance:

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

		min.	typ.	max.	
Insertion attenuation					
Reference level for the following data	44,00 MHz	18,5	20,0	21,5	dB
Amplitude ripple (p-p)					
	41,60 ... 46,40 MHz	—	0,4	—	dB
Relative attenuation					
	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)					
	41,31 ... 46,69 MHz	—	30	80	ns
Impedance at 44,00 MHz					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1,9 \parallel 22,2	—	k Ω \parallel pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	6,1 \parallel 5,7	—	k Ω \parallel pF
Temperature coefficient of frequency					
		—	-18	—	ppm/K

Matching network:



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



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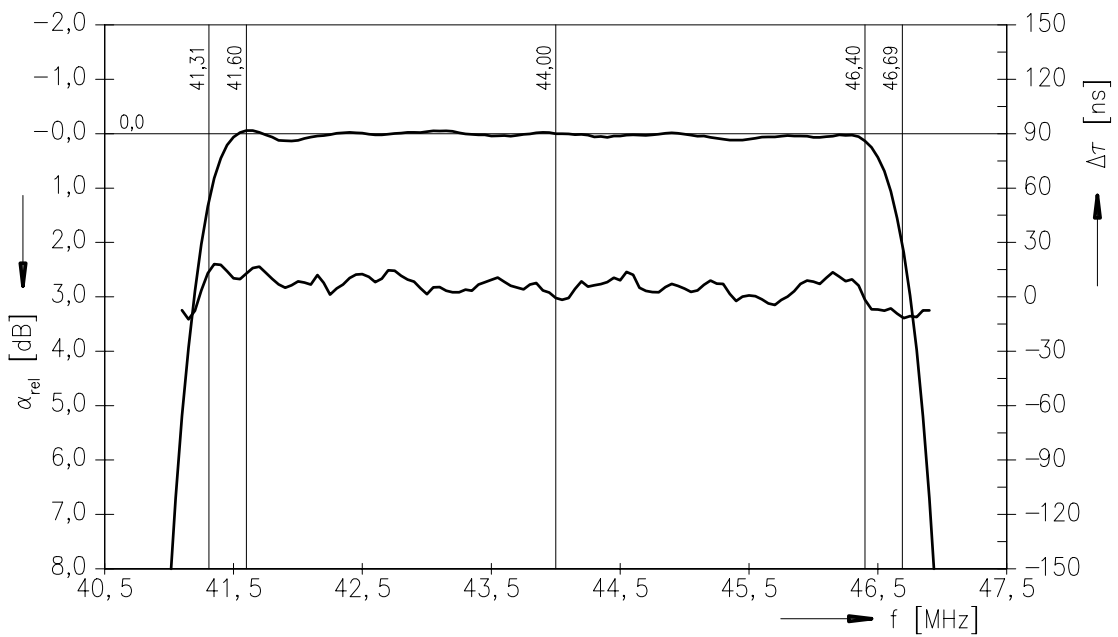
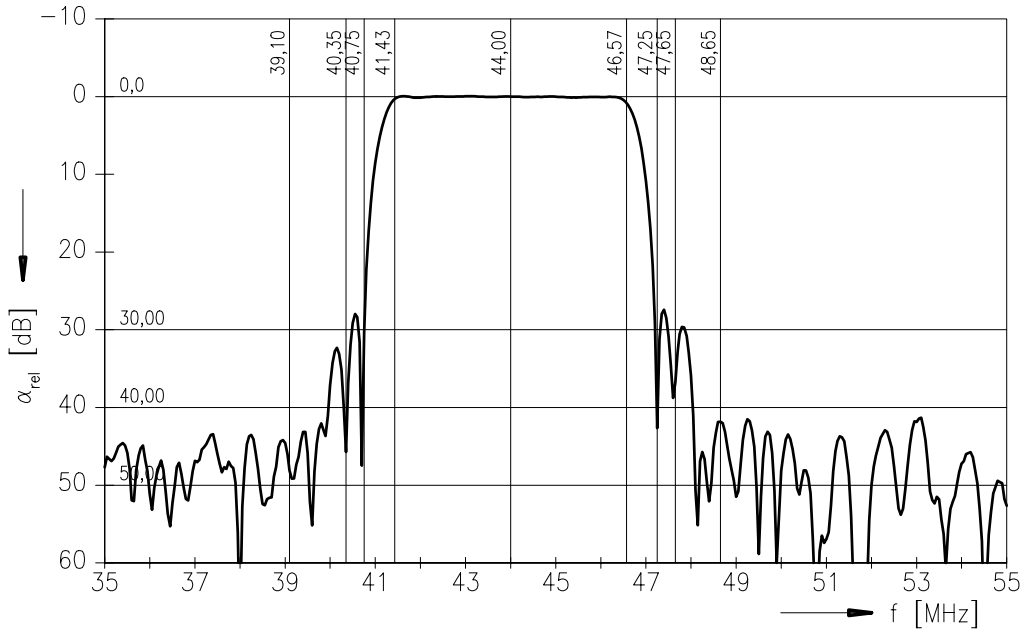
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Frequency response





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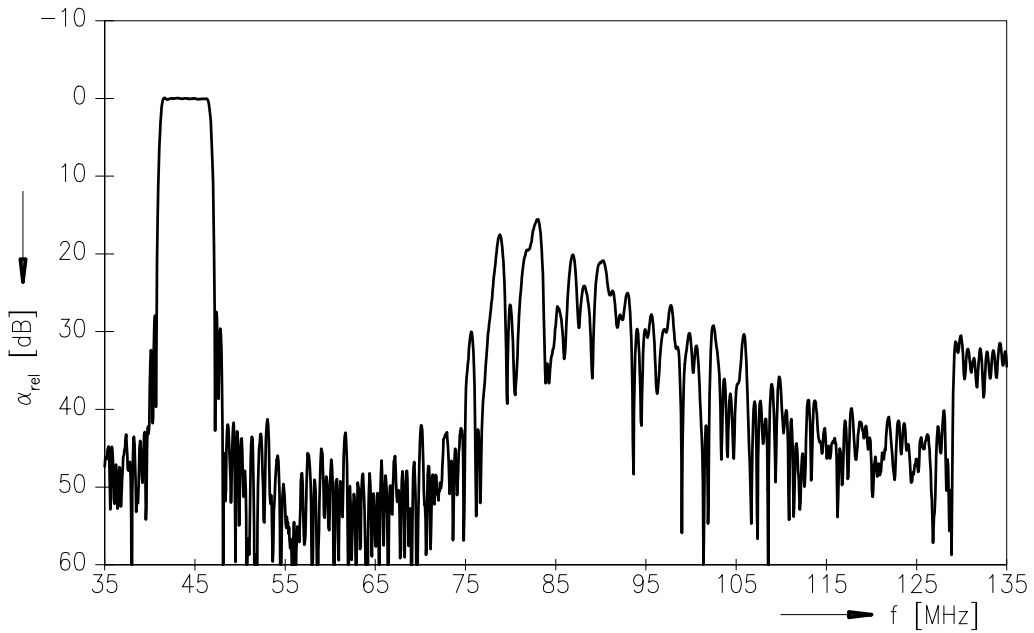
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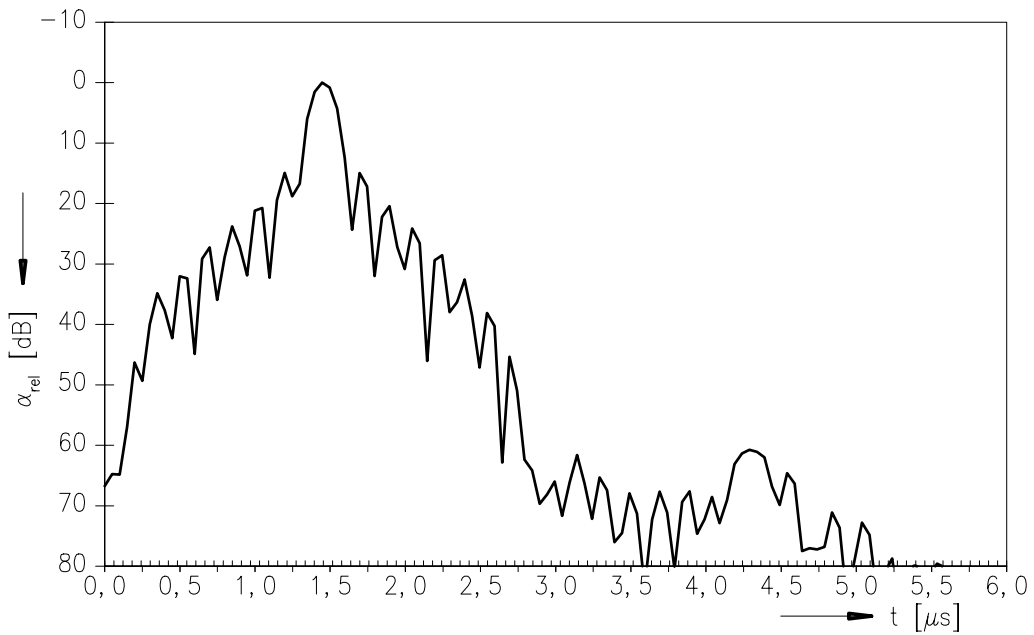
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Frequency response



Time domain response





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Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW CE MM PD

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