



# SAW Components

Data Sheet X 6941 D





**SAW Components**

**X 6941 D**

**Bandpass Filter**

**44,00 MHz**

**Data Sheet**

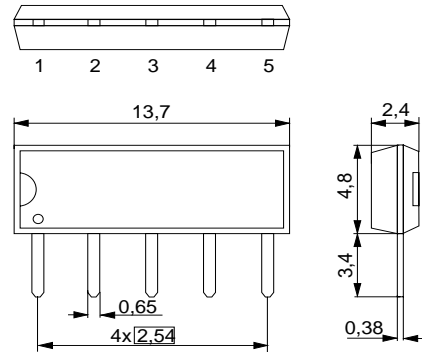
**Standard**

Duroplast package **SIP5D**

- HDTV

**Features**

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



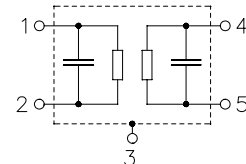
**Terminals**

- 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:

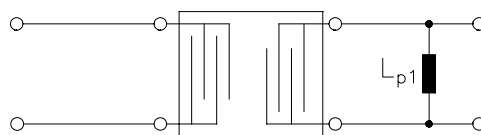
$$Z_S = 50 \text{ } \Omega$$

Terminating load impedance:

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

		min.	typ.	max.	
<b>Insertion attenuation</b>					
Reference level for the following data	44,00 MHz	18,5	20,0	21,5	dB
<b>Amplitude ripple (p-p)</b>					
	41,60 ... 46,40 MHz	—	0,4	—	dB
<b>Relative attenuation</b>					
	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
<b>Reflected wave signal suppression</b>					
1,5 $\mu$ s ... 6,0 $\mu$ s after main pulse (test pulse 250 ns, carrier frequency 44,00 MHz)		42,0	56,0	—	dB
<b>Group delay ripple (p-p)</b>					
	41,31 ... 46,69 MHz	—	30	80	ns
<b>Impedance at 44,00 MHz</b>					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1,9 $\parallel$ 22,2	—	k $\Omega$ $\parallel$ pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	6,1 $\parallel$ 5,7	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b>					
		—	-18	—	ppm/K

Matching network:



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



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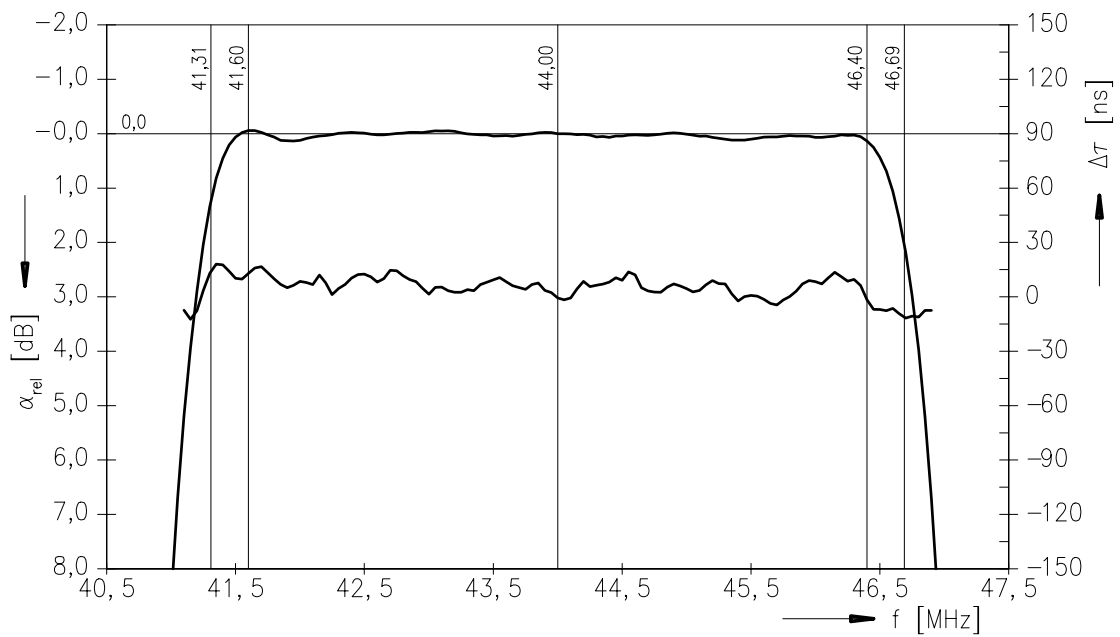
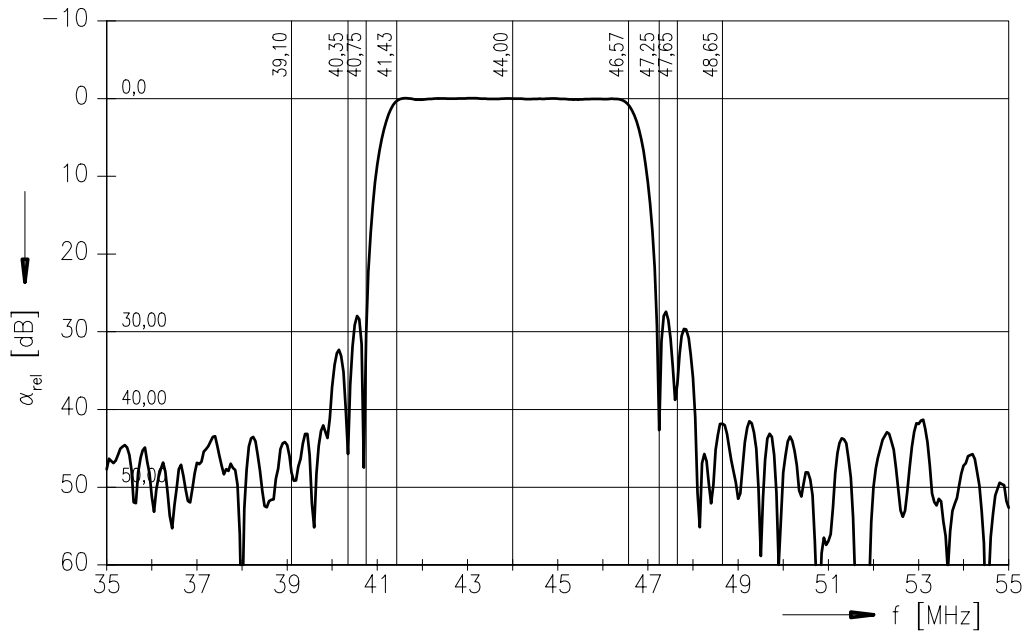
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Frequency response





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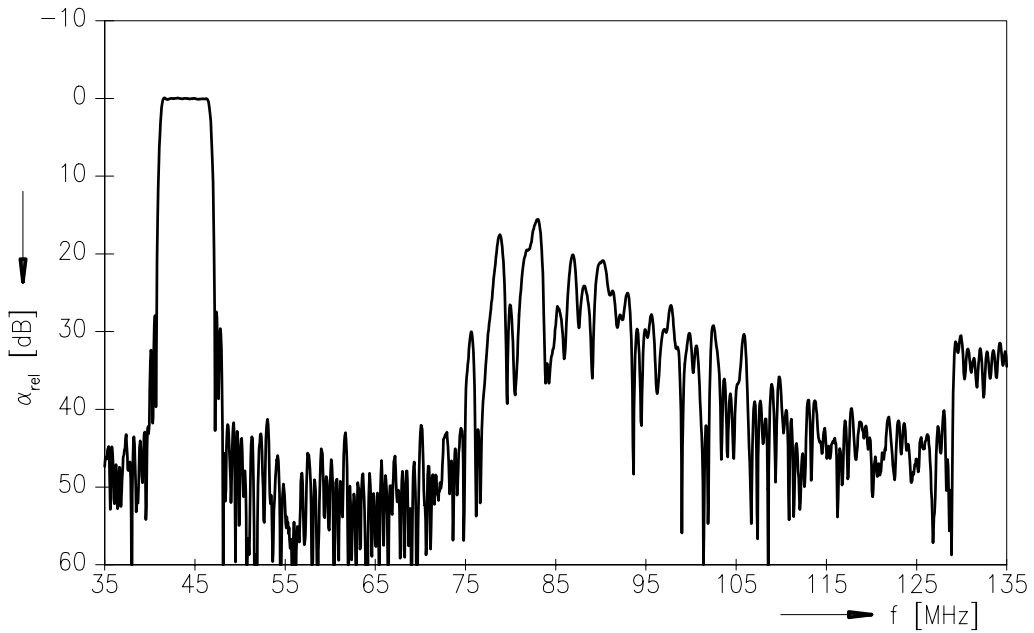
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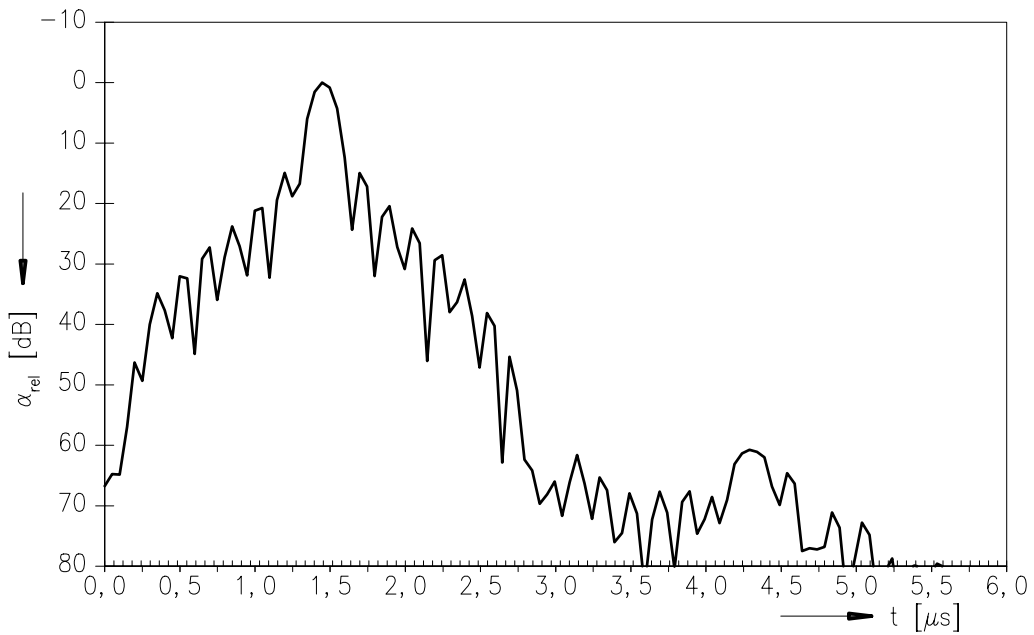
44,00 MHz

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Frequency response



Time domain response





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