



# SAW Components

Data Sheet X 6875 D





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X 6875 D

Bandpass Filter

44,00 MHz

Data Sheet

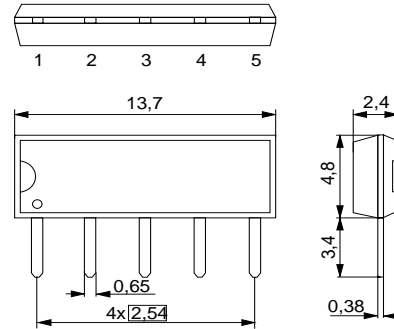
Duroplast package SIP5D

**Features**

- IF filter for digital cable TV
- Standard IC package

**Terminals**

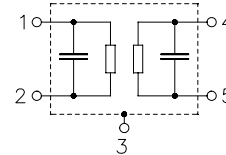
- Tinned CuFe alloy



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 6875 D	B39440-X6875-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.	
<b>Center frequency</b> (center between 3 dB points)	$f_C$	—	(44,00)	—	MHz
<b>Insertion attenuation</b>	$\alpha$				
Reference level for the following data	44,06 (44,00) MHz	13,3	14,8	16,3	dB
<b>Pass bandwidth</b>					
$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	—	6,0	—	MHz
$\alpha_{\text{rel}} \leq 30 \text{ dB}$	$B_{30\text{dB}}$	—	7,9	—	MHz
<b>Amplitude ripple</b>	$\Delta\alpha$				
41,53 ... 46,59 (41,47 ... 46,53) MHz		—	0,5	—	dB
<b>Relative attenuation</b>	$\alpha_{\text{rel}}$				
41,53 (41,47) MHz		—	0,3	—	dB
46,59 (46,53) MHz		—	0,3	—	dB
41,06 (41,00) MHz		1,6	2,8	4,0	dB
47,06 (47,00) MHz		2,0	3,2	4,4	dB
47,31 (47,25) MHz		—	6,7	—	dB
39,81 (39,75) MHz		39,0	49,0	—	dB
<b>Lower sidelobe</b>					
35,06 ... 38,81 (35,00 ... 38,75) MHz		44,0	50,0	—	dB
38,81 ... 39,81 (38,75 ... 39,75) MHz		38,0	46,0	—	dB
<b>Upper sidelobe</b>					
48,31 ... 50,31 (48,25 ... 50,25) MHz		37,0	47,0	—	dB
50,31 ... 55,06 (50,25 ... 55,00) MHz		43,0	53,0	—	dB
<b>Reflected wave signal suppression</b>					
1,1 $\mu\text{s}$ ... 6,0 $\mu\text{s}$ after main pulse (test pulse 250 ns, carrier frequency 44,06 MHz)		42,0	52,0	—	dB
<b>Feedthrough signal suppression</b>					
1,3 $\mu\text{s}$ ... 1,2 $\mu\text{s}$ before main pulse (test pulse 250 ns, carrier frequency 44,06 MHz)		50,0	56,0	—	dB
<b>Group delay ripple (p-p)</b>	$\Delta\tau$				
41,53 ... 46,59 (41,47 ... 46,53) MHz		—	40	—	ns
<b>Impedance at 44,06 MHz</b>					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	1,6 $\parallel$ 14,3	—	k $\Omega$ $\parallel$ pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1,6 $\parallel$ 4,3	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K



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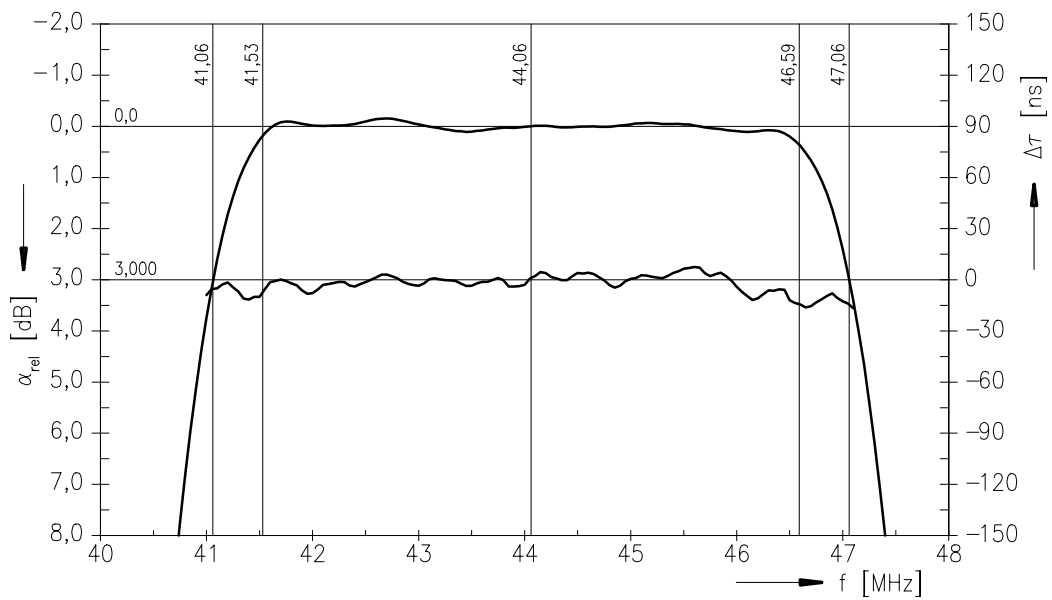
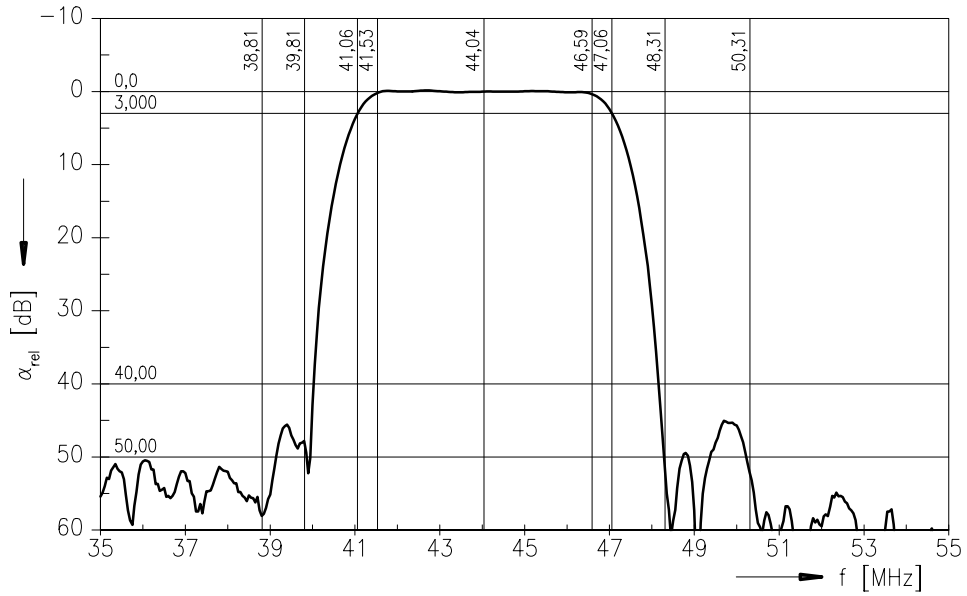
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Frequency response





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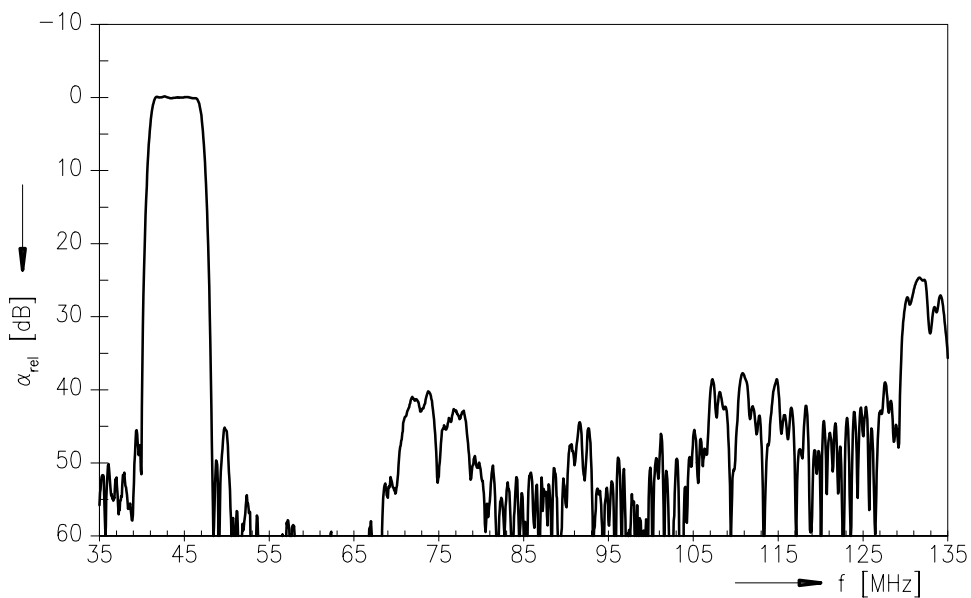
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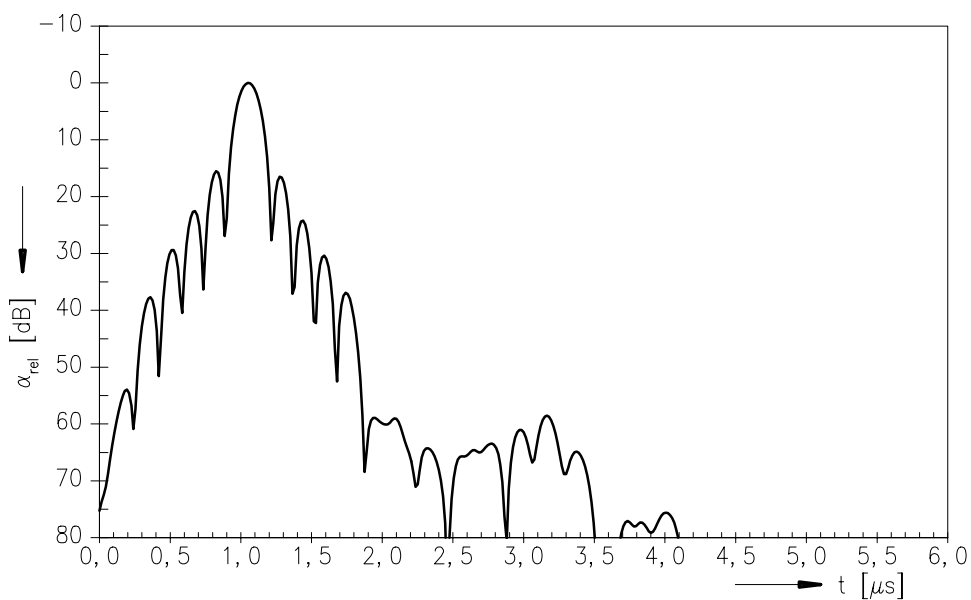
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Frequency response



Time domain response





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