



# SAW Components

Data Sheet X 6965 M





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X 6965 M

Bandpass Filter

44,00 MHz

Data Sheet

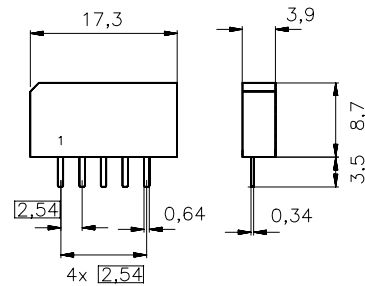
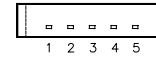
Plastic package **SIP5K**

**Features**

- IF filter for digital cable TV

**Terminals**

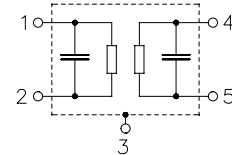
- Tinned CuFe alloy



Dimensions in mm, approx. weight 1,0 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 M	B39440-X6965-M100	C61157-A1-A15	F61074-V8067-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.	
<b>Center frequency</b>	$f_C$	—	44,00	—	MHz
(center between 3 dB points)					
<b>Insertion attenuation</b>	$\alpha$				
Reference level for the	44,06 (44,00) MHz	12,9	14,4	15,9	dB
following data					
<b>Pass bandwidth</b>					
$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	—	6,0	—	MHz
$\alpha_{\text{rel}} \leq 30 \text{ dB}$	$B_{30\text{dB}}$	—	7,6	—	MHz
<b>Amplitude ripple</b>	$\Delta\alpha$				
Aperture: 250 kHz	41,53 ... 46,59 MHz	—	0,4	0,8	dB
<b>Relative attenuation</b>	$\alpha_{\text{rel}}$				
	41,53 (41,47) MHz	—	0,4	—	dB
	46,59 (46,53) MHz	—	0,4	—	dB
	41,06 (41,00) MHz	1,8	3,0	4,2	dB
	47,06 (47,00) MHz	1,5	2,7	3,9	dB
	47,31 (47,25) MHz	—	6,2	—	dB
	39,81 (39,75) MHz	40,0	52,0	—	dB
<b>Lower sidelobe</b>					
	35,06 ... 39,46 (35,00 ... 39,40) MHz	44,0	50,0	—	dB
	39,46 ... 40,06 (39,40 ... 40,00) MHz	38,0	44,0	—	dB
<b>Upper sidelobe</b>					
	48,06 ... 50,06 (48,00 ... 50,00) MHz	36,0	43,0	—	dB
	50,06 ... 55,06 (50,00 ... 55,00) MHz	42,0	48,0	—	dB
<b>Reflected wave signal suppression</b>					
1,3 $\mu\text{s}$ ... 6,0 $\mu\text{s}$ after main pulse		42,0	52,0	—	dB
(test pulse 250 ns, carrier frequency 44,06 MHz)					
<b>Feedthrough signal suppression</b>					
1,3 $\mu\text{s}$ ... 1,2 $\mu\text{s}$ before main pulse		50,0	56,0	—	dB
(test pulse 250 ns, carrier frequency 44,06 MHz)					
<b>Group delay ripple (p-p)</b>	$\Delta\tau$				
Aperture 250 kHz	41,53 ... 46,59 MHz	—	20	40	ns
<b>Impedance at 44,06 MHz</b>					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	1,3 $\parallel$ 16,1	—	k $\Omega$ $\parallel$ pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1,1 $\parallel$ 5,6	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K



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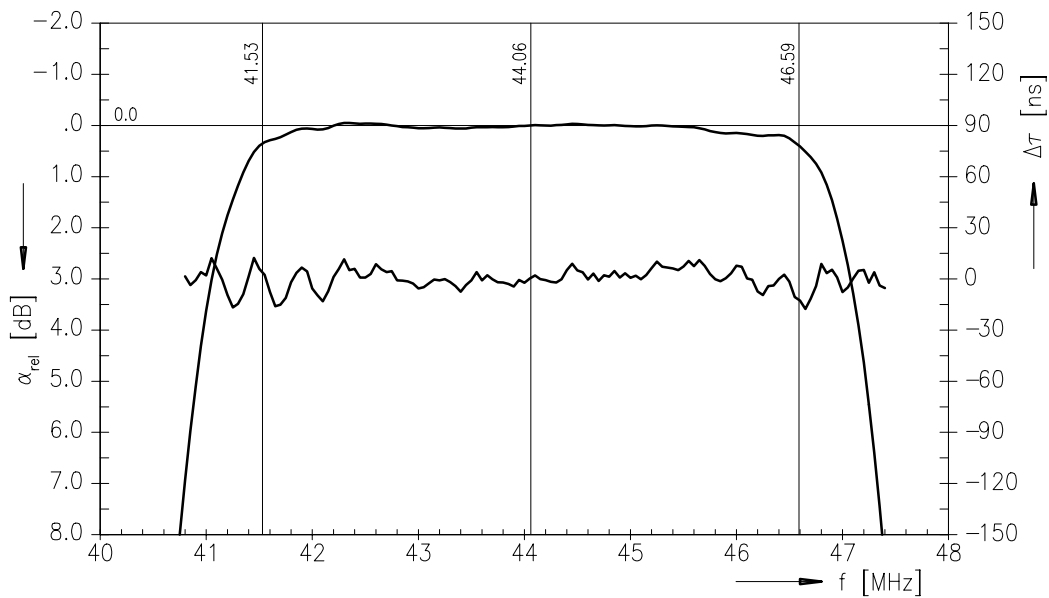
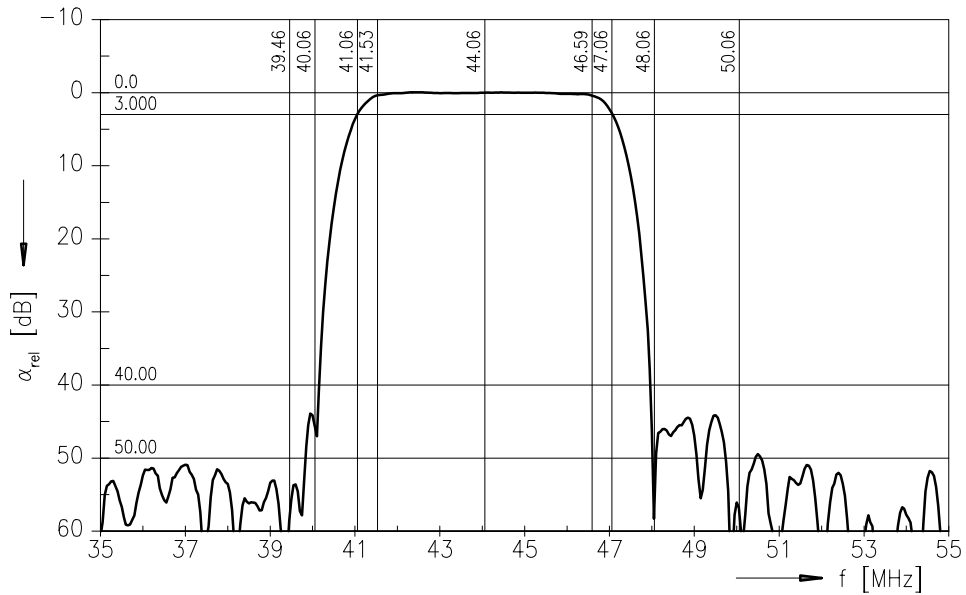
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Frequency response





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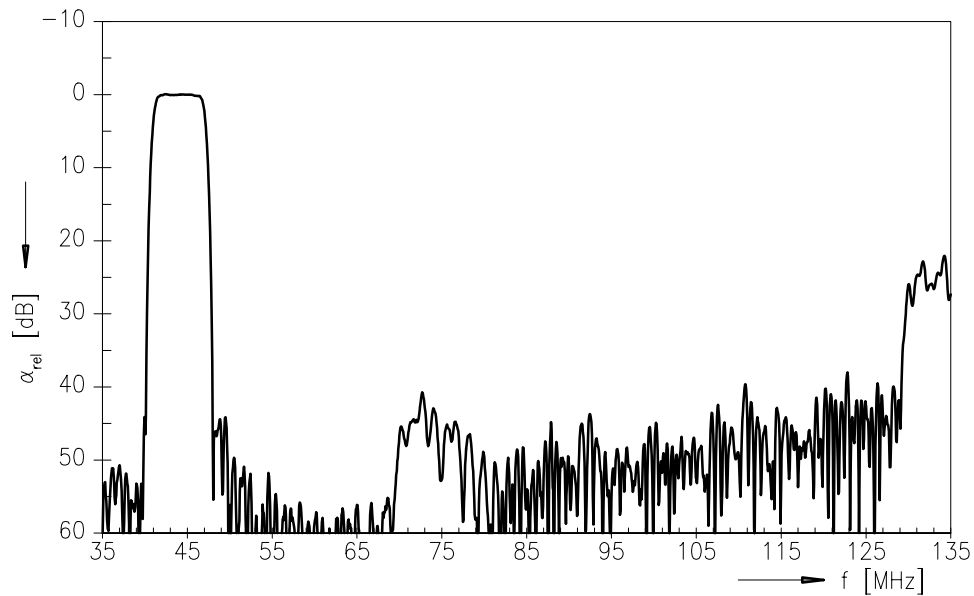
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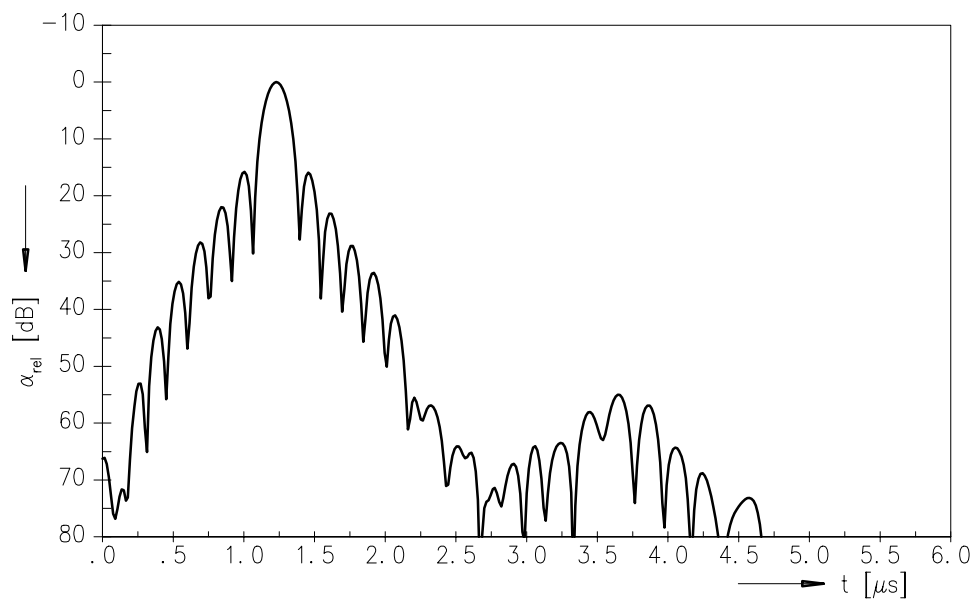
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Frequency response



Time domain response





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