EPCOS

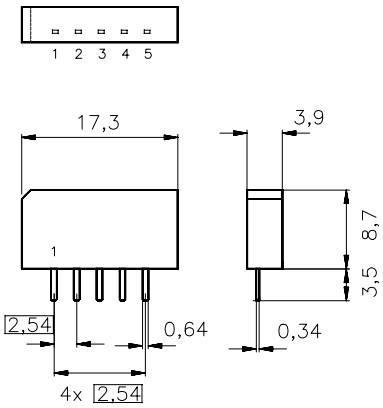
SAW Components

Data Sheet X 6965 M

Plastic package **SIP5K**

Features

- IF filter for digital cable TV



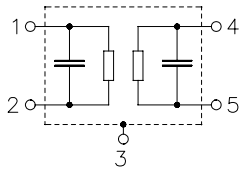
Terminals

- 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

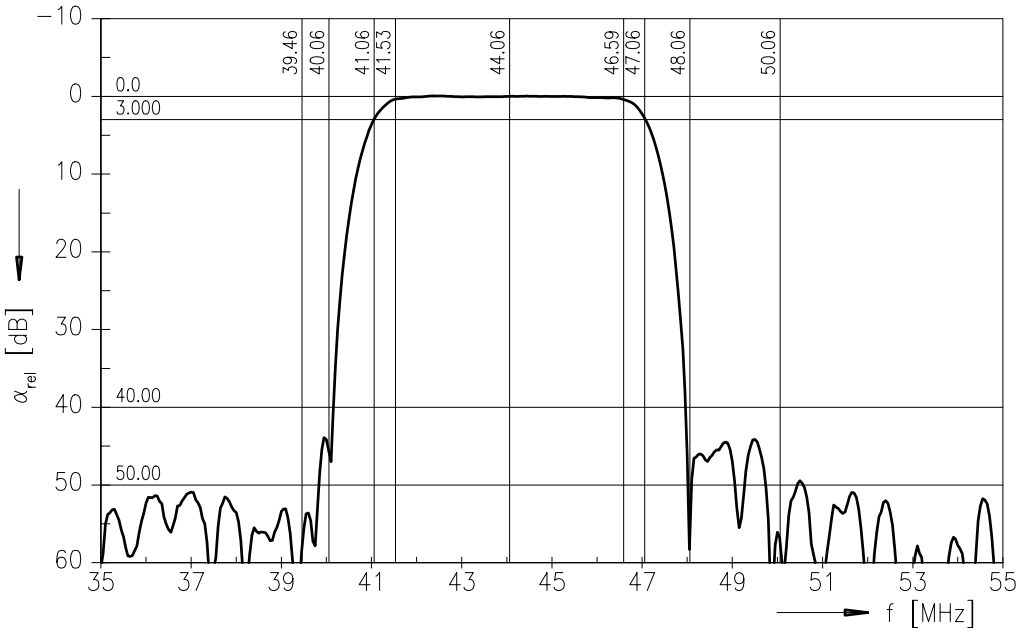
Operable temperature range	T_A	–25/+65	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	12	V	between any terminals
AC voltage	V_{pp}	10	V	between any terminals

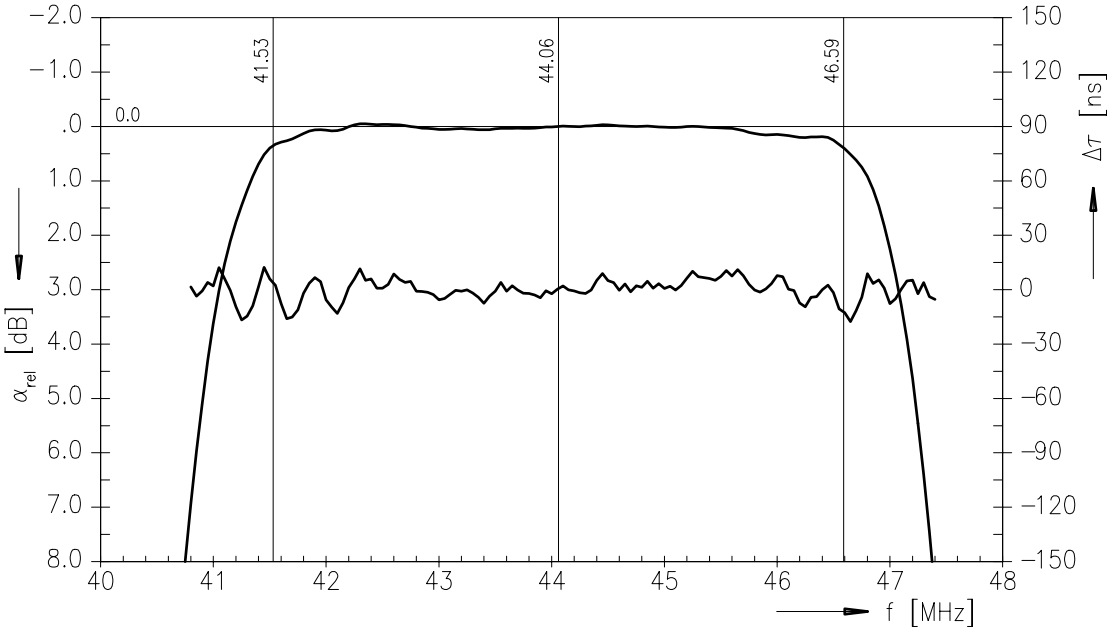
Characteristics

Reference temperature: T_A = 25 (45) °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 2 kΩ || 3 pF

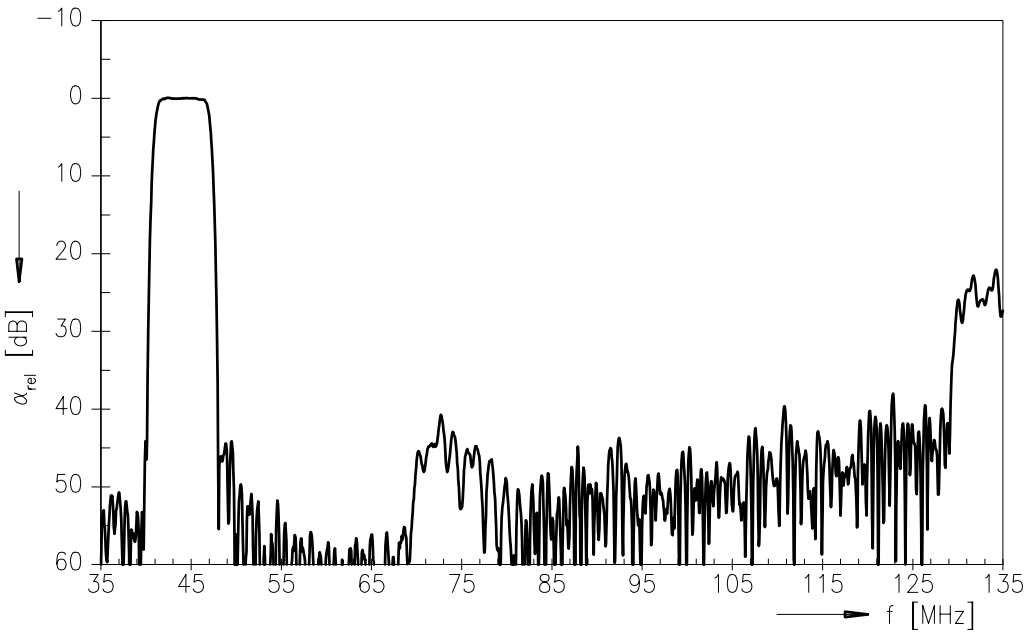
		min.	typ.	max.	
Center frequency (center between 3 dB points)	f_C	—	44,00	—	MHz
Insertion attenuation	α				
Reference level for the following data 44,06 (44,00) MHz		12,9	14,4	15,9	dB
Pass bandwith					
α_{rel} ≤3 dB	B_{3dB}	—	6,0	—	MHz
α_{rel} ≤30 dB	B_{30dB}	—	7,6	—	MHz
Amplitude ripple	Δα				
Aperture: 250 kHz 41,53 ... 46,59 MHz		—	0,4	0,8	dB
Relative attenuation	α_{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
Lower sidelobe					
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
Upper sidelobe					
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
Reflected wave signal suppression 1,3 µs ... 6,0 µs after main pulse (test pulse 250 ns, carrier frequency 44,06 MHz)		42,0	52,0	—	dB
Feedthrough signal suppression 1,3 µs ... 1,2 µs before main pulse (test pulse 250 ns, carrier frequency 44,06 MHz)		50,0	56,0	—	dB
Group delay ripple (p-p)	Δτ				
Aperture 250 kHz 41,53 ... 46,59 MHz		—	20	40	ns
Impedance at 44,06 MHz					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1,3 ‖ 16,1	—	kΩ ‖ pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	1,1 ‖ 5,6	—	kΩ ‖ pF
Temperature coefficient of frequency	TC_f	—	–72	—	ppm/K

Frequency response

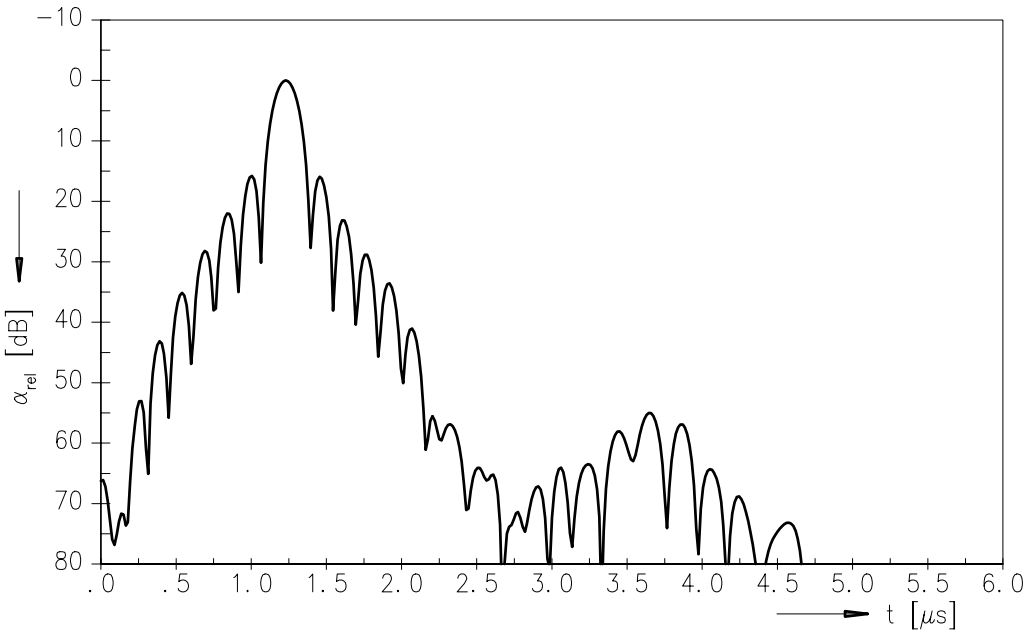




Frequency response



Time domain response



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