SAW Components

SAW Bandpass Filter

Bandpass Filter for Digital Cable Applications

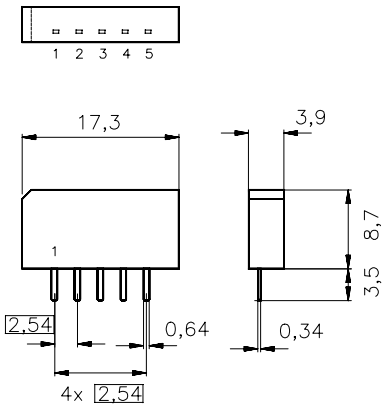
Series/type:	**X 6761 M**
Ordering code:	**B39440-X6761-M100**
Date:	December 15, 2006
Version:	2.0

Application

- IF filter for digital cable TV
- Usable bandwidth 6 MHz
- Low Amplitude Ripple
- Low Group Delay Ripple

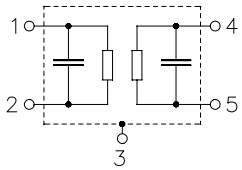
Features

- Plastic package **SIP5K**
- Approximate weight 1.0 g
- RoHS compatible
- Tinned CuFe alloy terminals



Pin configuration

- 1 Input
- 2 Input - ground
- 3 Chip carrier - ground
- 4 Output
- 5 Output



Characteristics

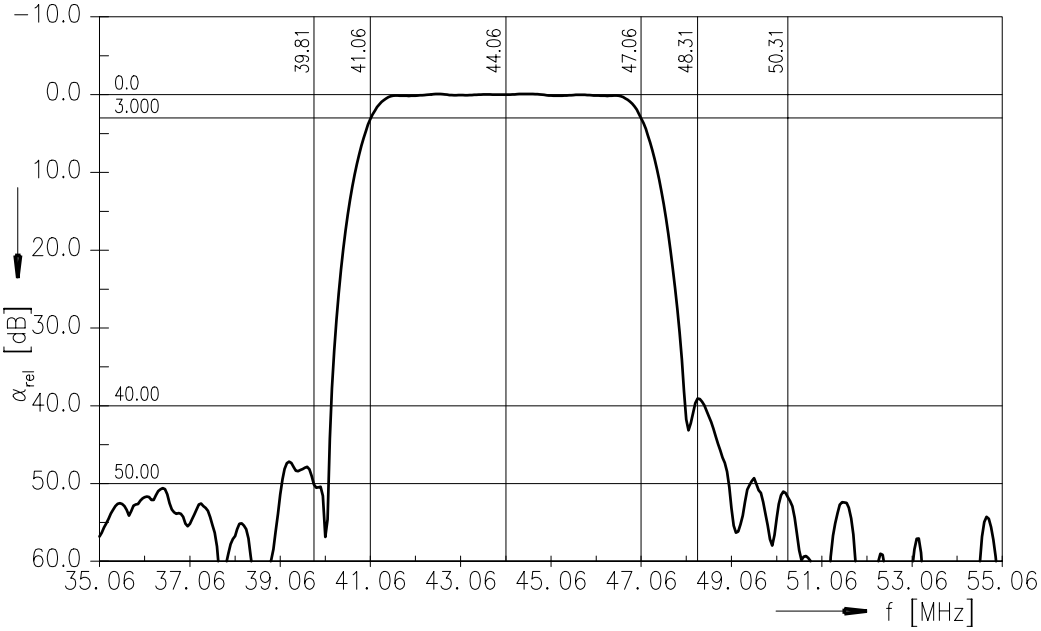
Reference temperature: T_A = 25 (45) ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 2 kΩ || 3 pF

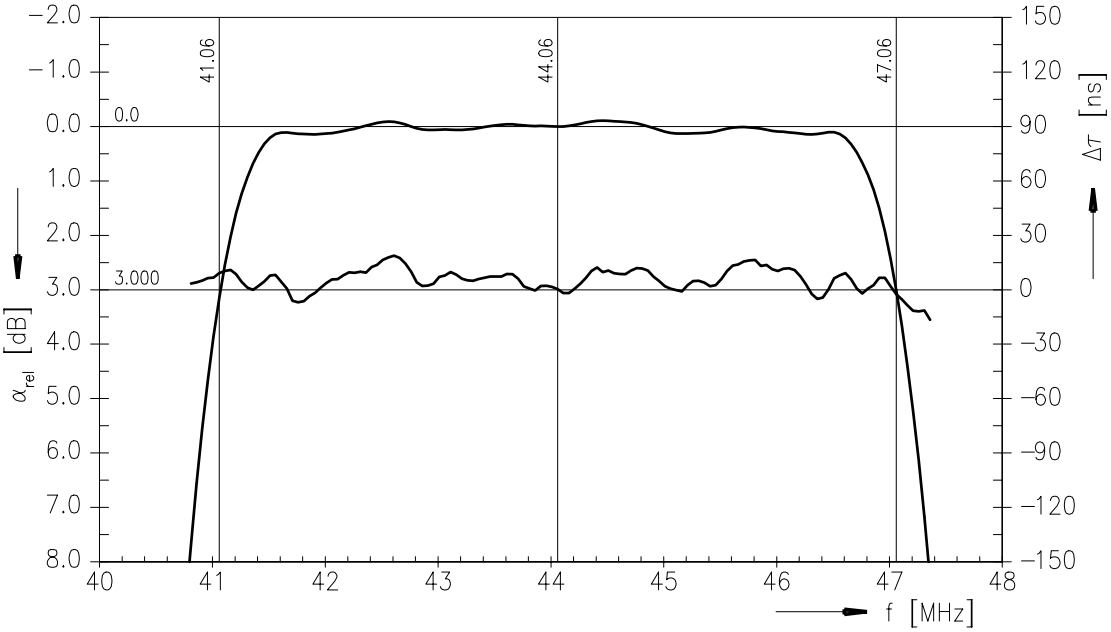
		min.	typ. @ 25 ˚C	max.	
Insertion attenuation	α				
Reference level for 44.06 (44.00) MHz		13.7	15.2	16.7	dB
the following data					
Pass bandwidth					
$\alpha_{rel} \leq$ 3 dB	B_{3dB}	—	6.0	—	MHz
$\alpha_{rel} \leq$ 30 dB	B_{30dB}	—	7.6	—	MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
41.53 ... 46.59 (41.47 ... 46.53) MHz		—	0.3	—	dB
Relative attenuation	α_{rel}				
41.06 (41.00) MHz		2.0	3.2	4.4	dB
47.06 (47.00) MHz		1.8	3.0	4.2	dB
47.31 (47.25) MHz		—	7.2	—	dB
39.81 (39.75) MHz		40.0	50.0	—	dB
Lower sidelobe					
35.06 ... 39.81 (35.00 ... 39.75) MHz		39.0	46.0	—	dB
Upper sidelobe					
48.31 ... 50.31 (48.25 ... 50.25) MHz		32.0	38.0	—	dB
50.31 ... 55.06 (50.25 ... 55.00) MHz		42.0	49.0	—	dB
Reflected wave signal suppression					
1.1 µs ... 6.0 µs after main pulse		42.0	52.0	—	dB
(test pulse 250 ns,					
carrier frequency 44.06 MHz)					
Feedthrough signal suppression		—	50.0	—	dB
1.3 µs ... 1.2 µs after main pulse					
(test pulse 250 ns,					
carrier frequency 44.06 MHz)					
Group delay ripple (p-p)	$\Delta\tau$				
41.53 ... 46.59 (41.47 ... 46.53) MHz		—	50.0	—	ns
Impedance at 44.00 MHz					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1.7‖12.2	—	kΩ || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	1.6‖ 3.9	—	kΩ || pF
Temperature coefficient of frequency	TC_f	—	–72	—	ppm/K

Maximum ratings

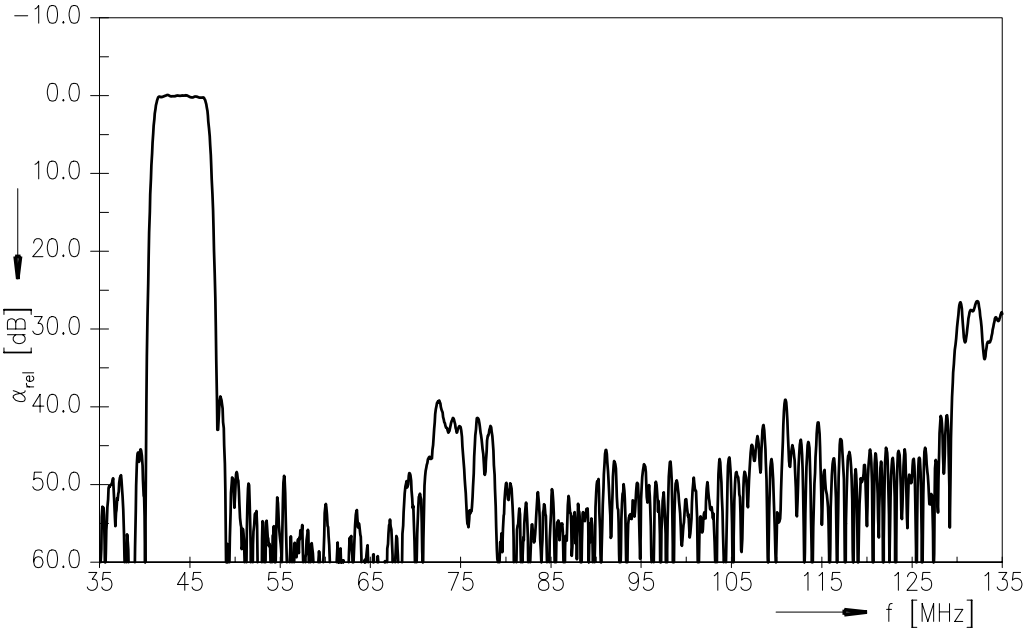
Operable temperature range	T	–25 / +65	˚C	
Storage temperature range	T_{stg}	–40 / +85	˚C	
DC voltage	V_{DC}	5	V	between any terminals
AC voltage	V_{pp}	10	V	between any terminals

Frequency response

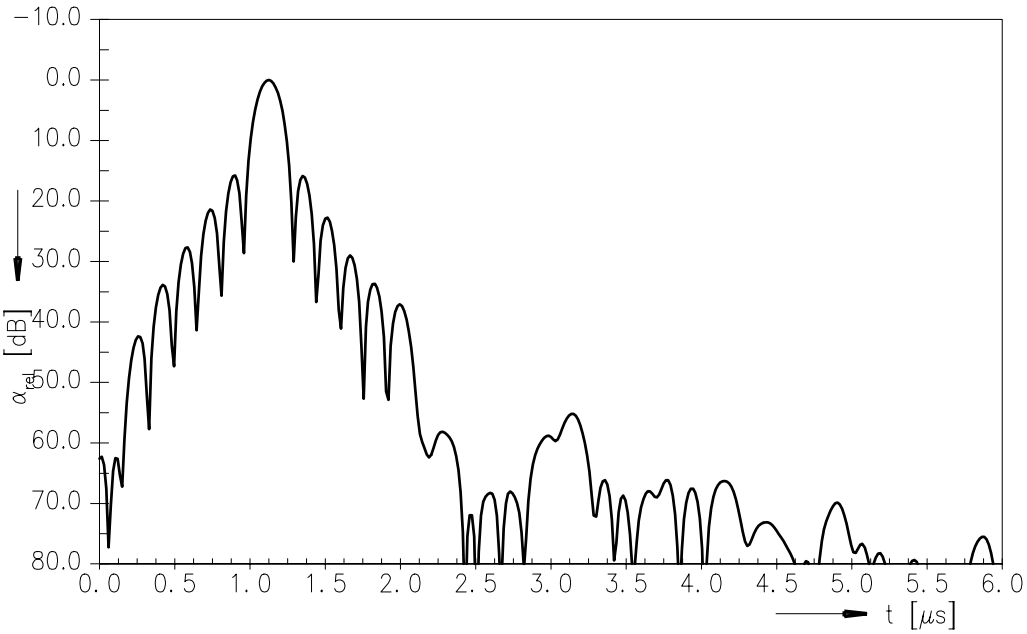




Frequency response



Time domain response



References

Type	X 6761 M	
Ordering code	B39440-X6761-M100	
Marking and package	C61157-A1-A15	
Packaging	F61074-V8067-Z000	
Date codes	L_1126	
S-parameters	X6761M_NB_UN.s4p	
Soldering profile	S_6001	

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