SAW Components

SAW bandpass filter

Bandpass Filter for Digital Cable Applications

Series/type:	**X 6756 M**
Ordering code:	**B39234-X6756-M100**
Date:	June 22, 2006
Version:	2.0

EPCOS

SAW Components	X 6756 M
SAW bandpass filter	**23.40 MHz**

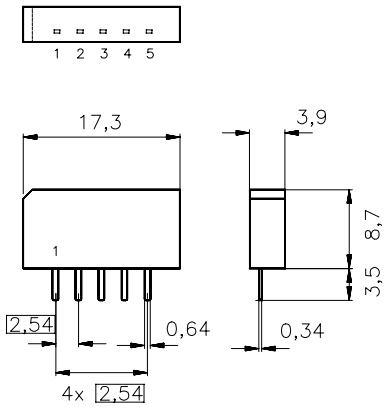
Data sheet

Application

- Constant group delay
- Low group delay ripple
- Low sideband suppression
- Usable bandwidth 2.3 MHz
- Balanced input option

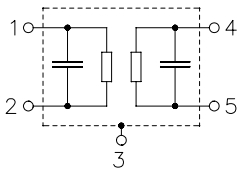
Features

- 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



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Characteristics

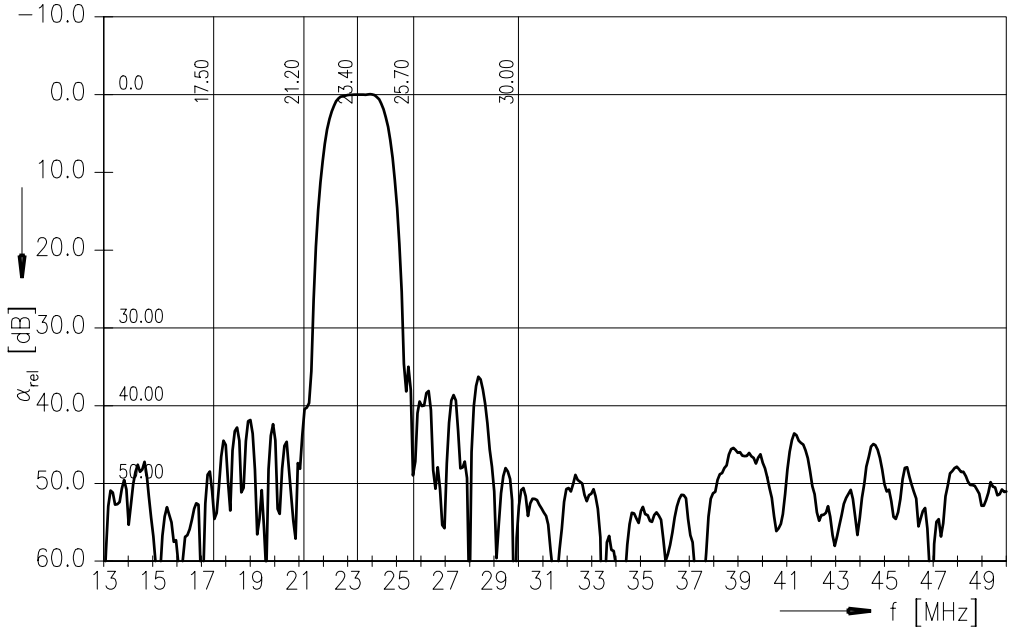
Reference temperature: T_A = 25 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 2 kΩ || 3 pF

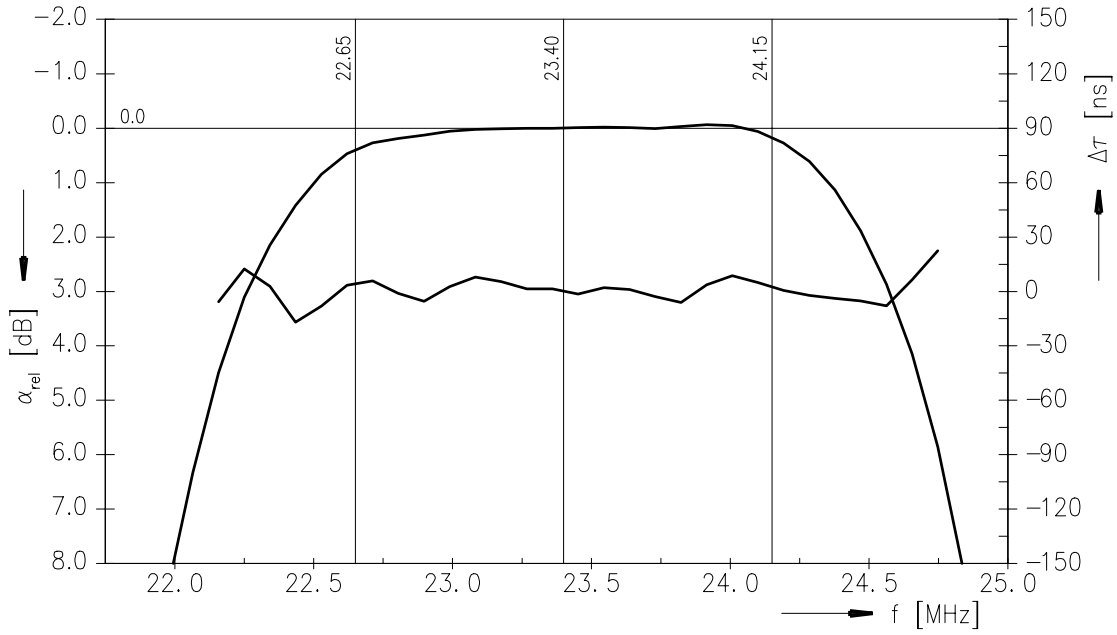
		min.	typ. @ 25 °C	max.	
Insertion attenuation	α				
Reference level for the following data 23.40 MHz		13.0	14.5	16.0	dB
Amplitude ripple in passband (p-p)	Δα				
22.65 ... 24.15 MHz		—	0.5	—	MHz
Pass bandwith					
α_{rel} ≤3 dB	B_{3dB}	—	2.3	—	MHz
α_{rel} ≤10 dB	B_{10dB}	—	3.0	—	MHz
α_{rel} ≤30 dB	B_{30dB}	—	3.7	—	MHz
Relative attenuation	α_{rel}				
Lower sidelobe 13.00 ... 17.50 MHz		36.0	42.0	—	dB
17.50 ... 21.20 MHz		35.0	41.0	—	dB
Upper sidelobe 25.70 ... 30.00 MHz		29.0	35.0	—	dB
30.00 ... 50.00 MHz		39.0	45.0	—	dB
Reflected wave signal suppression					
1.3 µs ... 6.0 µs after main pulse (test pulse 250 ns, carrier frequency 23.40 MHz)		—	50.0	—	dB
Feedthrough signal suppression					
1.3 µs ... 1.2 µs before main pulse (test pulse 250 ns, carrier frequency 23.40 MHz)		—	50.0	—	dB
Group delay ripple (p-p)	Δt				
22.65 ... 24.15 MHz		—	30	—	ns
Impedance at 23.40 MHz					
Input: Z_{IN} = R_{IN} || C_{IN}		—	2.0||12.8	—	kΩ || pF
Output: Z_{OUT} = R_{OUT} || C_{OUT}		—	5.0|| 3.6	—	kΩ || pF
Temperature coefficient of frequency	TC_f	—	–72	—	ppm/K

Maximum ratings

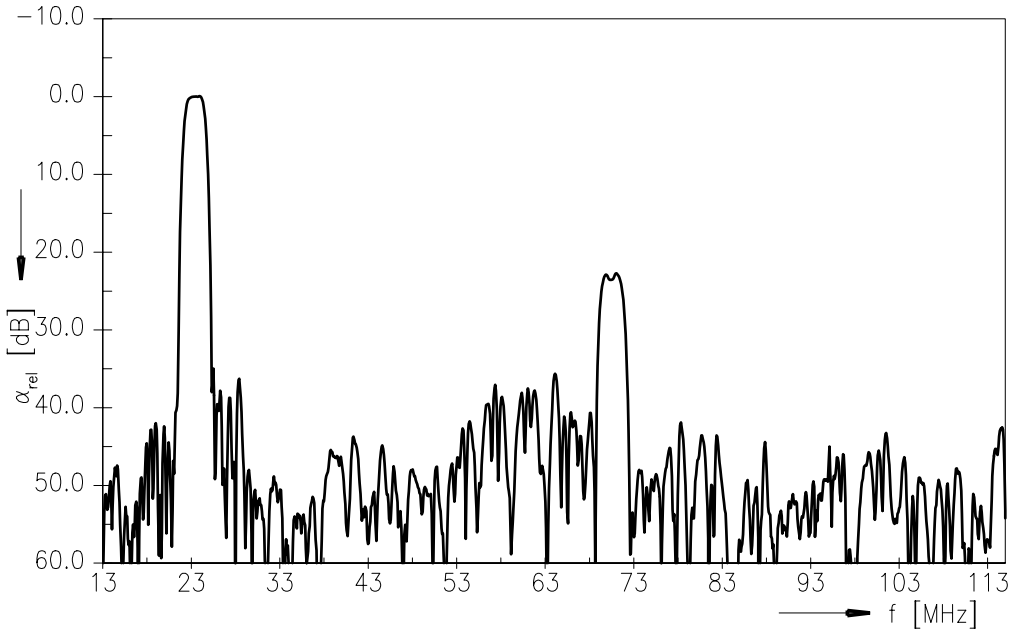
Operable temperature range	T	–40 / +65	°C	
Storage temperature range	T_{stg}	–40 / +85	°C	
DC voltage	V_{DC}	5	V	between any terminals
AC voltage	V_{pp}	10	V	between any terminals

Frequency response

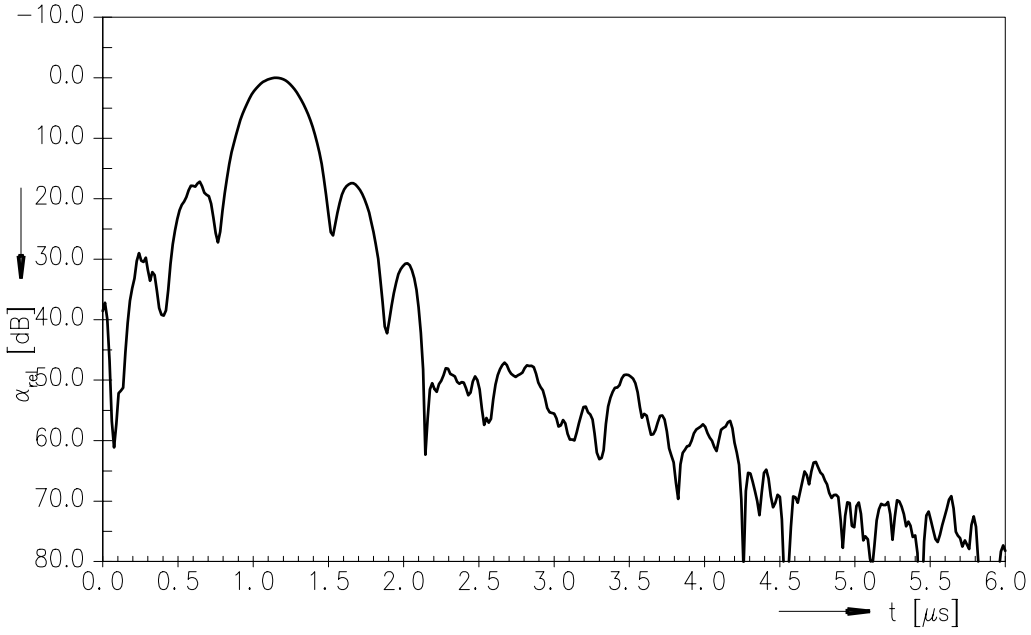




Frequency response



Time domain response



References

Type	X 6756 M
Ordering code	B39234-X6756-M100
Marking and package	C61157-A1-A15
Packaging	F61074-V8067-Z000
Date codes	L_1126
S-parameters	X6756M_NB.s4p
Soldering profile	S_6001
RoHS compatible	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."

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