



SAW Components

SAW bandpass filter

Bandpass Filter for Digital Cable Applications

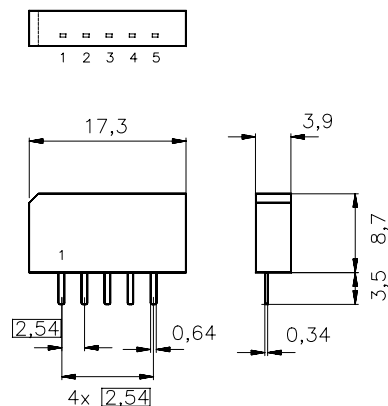
Series/type:	X 6756 M
Ordering code:	B39234-X6756-M100
Date:	June 22, 2006
Version:	2.0

Data sheet
Application

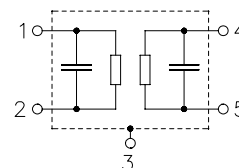
- Constant group delay
- Low group delay ripple
- Low sideband suppression
- Usable bandwidth 2.3 MHz
- Balanced input option


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





SAW Components	X 6756 M
SAW bandpass filter	23.40 MHz

Data sheet

Characteristics

Reference temperature:	$T_A = 25\text{ °C}$
Terminating source impedance:	$Z_S = 50\ \Omega$
Terminating load impedance:	$Z_L = 2\text{ k}\Omega \parallel 3\text{ pF}$

		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)	$\Delta\alpha$				
	22.65 ... 24.15 MHz	—	0.5	—	MHz
Pass bandwidth					
$\alpha_{\text{rel}} \leq 3\text{ dB}$	$B_{3\text{dB}}$	—	2.3	—	MHz
$\alpha_{\text{rel}} \leq 10\text{ dB}$	$B_{10\text{dB}}$	—	3.0	—	MHz
$\alpha_{\text{rel}} \leq 30\text{ dB}$	$B_{30\text{dB}}$	—	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: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	2.0 12.8	—	k Ω pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	5.0 3.6	—	k Ω 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

Please read *cautions and warnings* and *important notes* at the end of this document.



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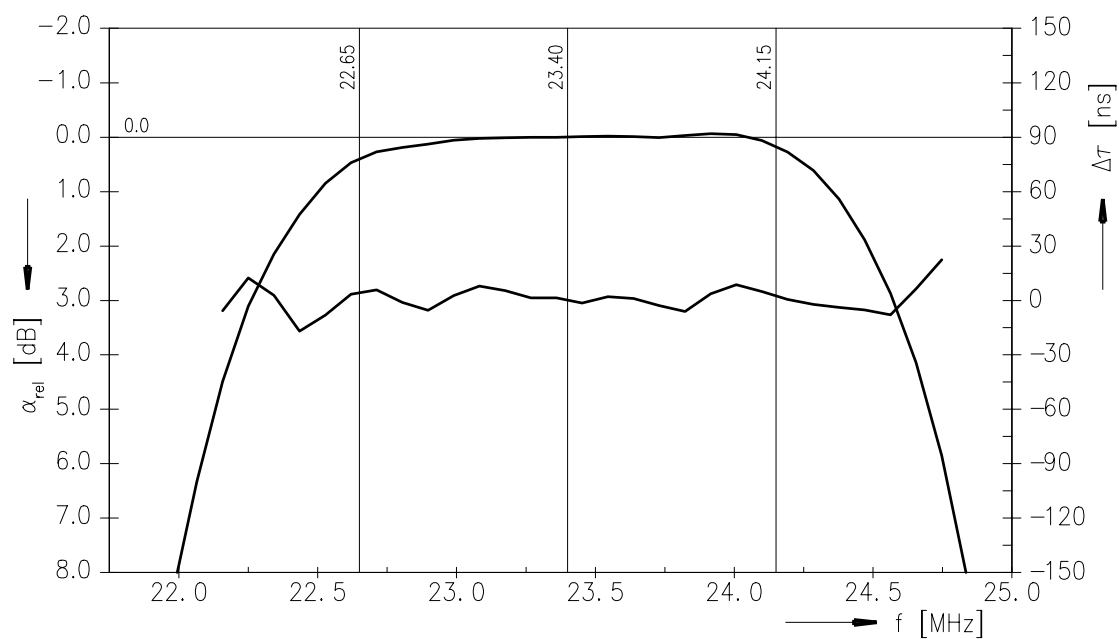
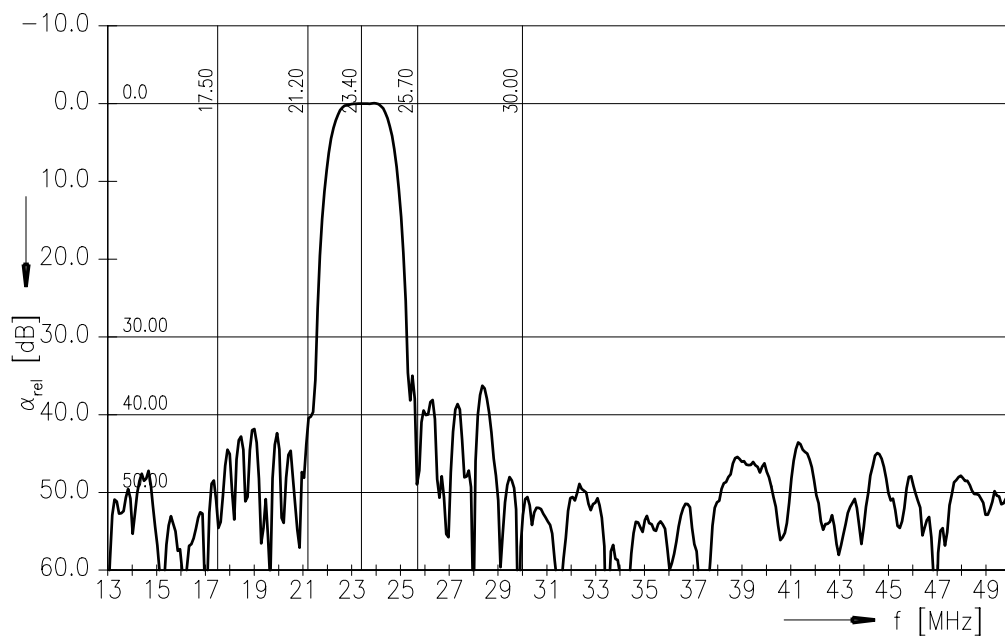
X 6756 M

SAW bandpass filter

23.40 MHz

Data sheet

Frequency response



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SAW Components

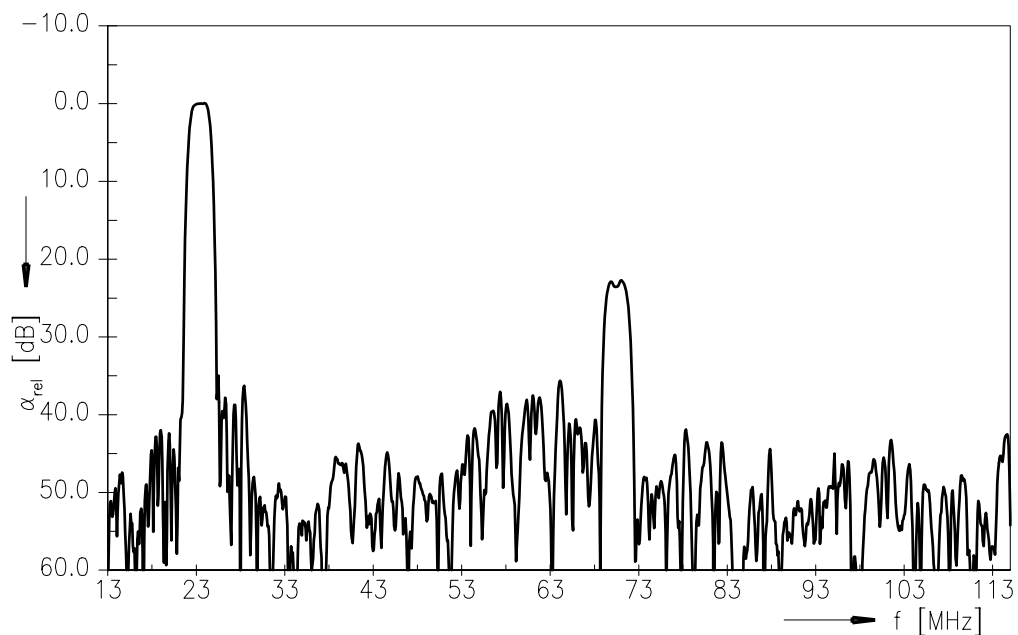
X 6756 M

SAW bandpass filter

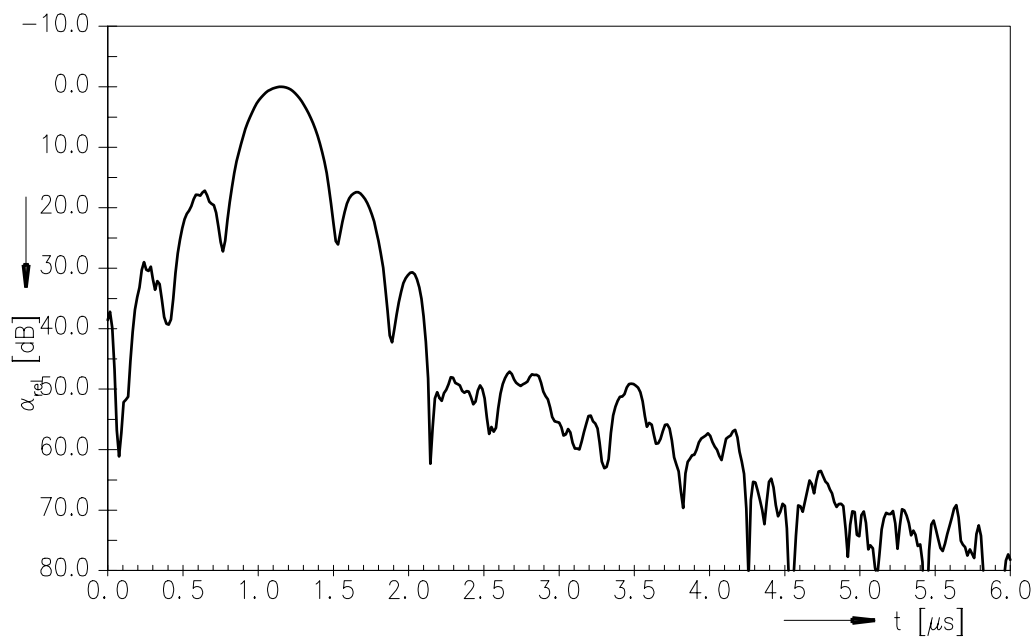
23.40 MHz

Data sheet

Frequency response



Time domain response





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Data sheet

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."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com .

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