



SAW Components

SAW bandpass filter

Bandpass filters for terrestrial TV applications

Series/type:	X 6778 M
Ordering code:	B39358-X6753-M100
Date:	February 17, 2006
Version:	2.0



SAW Components

X 6778 M

SAW bandpass filter

35.825 MHz

Data sheet

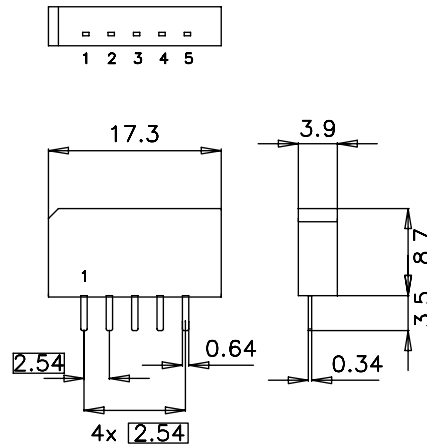
Application

- Bandpass filters for terrestrial TV applications
- Usable bandwidth 7.5 MHz



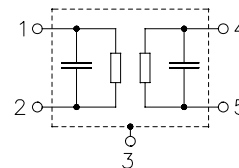
Features

- 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: $T_A = 25\text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 2\ \text{k}\Omega \parallel 3\ \text{pF}$

		min.	typ. @ 25 °C	max.	
Insertion attenuation	α				
Reference level for the 35.825 MHz following data		18.3	19.8	21.3	dB
Pass bandwidth					
$\alpha_{\text{rel}} \leq 1\ \text{dB}$	$B_{1\text{dB}}$	—	7.2	—	MHz
$\alpha_{\text{rel}} \leq 3\ \text{dB}$	$B_{3\text{dB}}$	—	7.5	—	MHz
$\alpha_{\text{rel}} \leq 30\ \text{dB}$	$B_{30\text{dB}}$	—	8.6	—	MHz
Relative attenuation	α_{rel}				
32.40 MHz		0.0	1.0	2.0	dB
39.63 MHz		0.4	1.4	2.4	dB
39.83 MHz		2.7	3.9	5.1	dB
31.90 MHz		—	16.7	—	dB
30.90 MHz		38.0	47.0	—	dB
40.40 MHz		27.0	32.0	—	dB
40.90 MHz		34.0	43.0	—	dB
41.40 MHz		36.0	44.0	—	dB
Lower sidelobe					
25.00 ... 30.90 MHz		34.0	39.0	—	dB
Upper sidelobe					
40.90 ... 50.00 MHz		31.0	38.0	—	dB
Reflected wave signal suppression					
1.2 μs ... 6.0 μs after main pulse (test pulse 250 ns, carrier frequency 35.825 MHz)		40.0	49.0	—	dB
Feedthrough signal suppression					
1.4 μs ... 1.3 μs before main pulse (test pulse 250 ns, carrier frequency 35.825 MHz)		—	50.0	—	dB
Group delay ripple (p-p)	Δt				
32.40 ... 39.63 MHz		—	50	—	ns
Impedance at 35.825 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	2.4 16.9	—	k Ω pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1.9 4.8	—	k Ω pF
Temperature coefficient of frequency	TC_f	—	-72	—	ppm/K



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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



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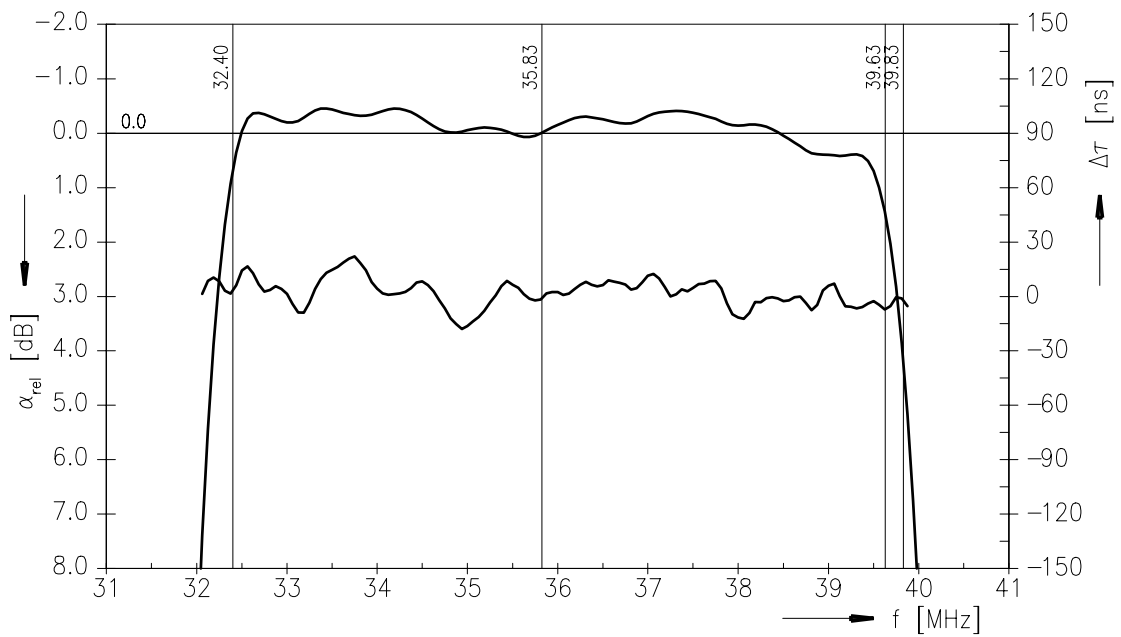
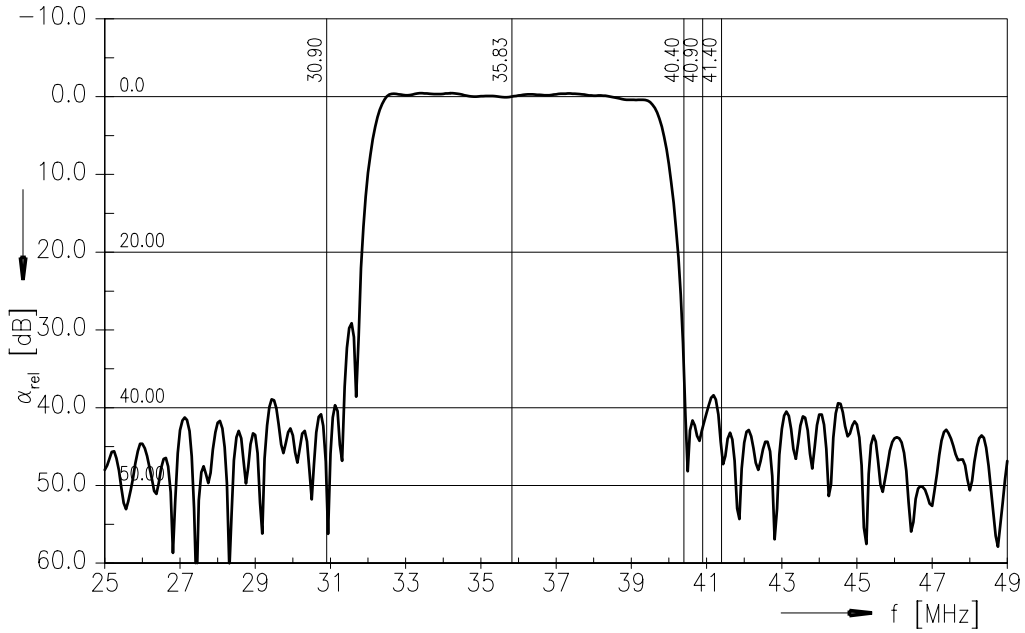
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Frequency response

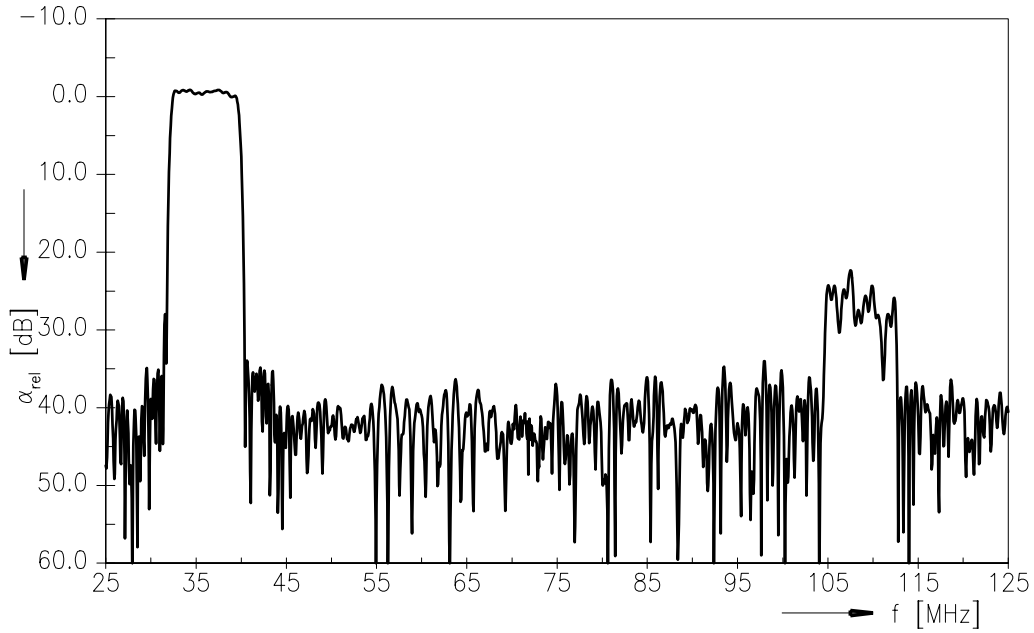


Please read *cautions and warnings* and *important notes* at the end of this document.

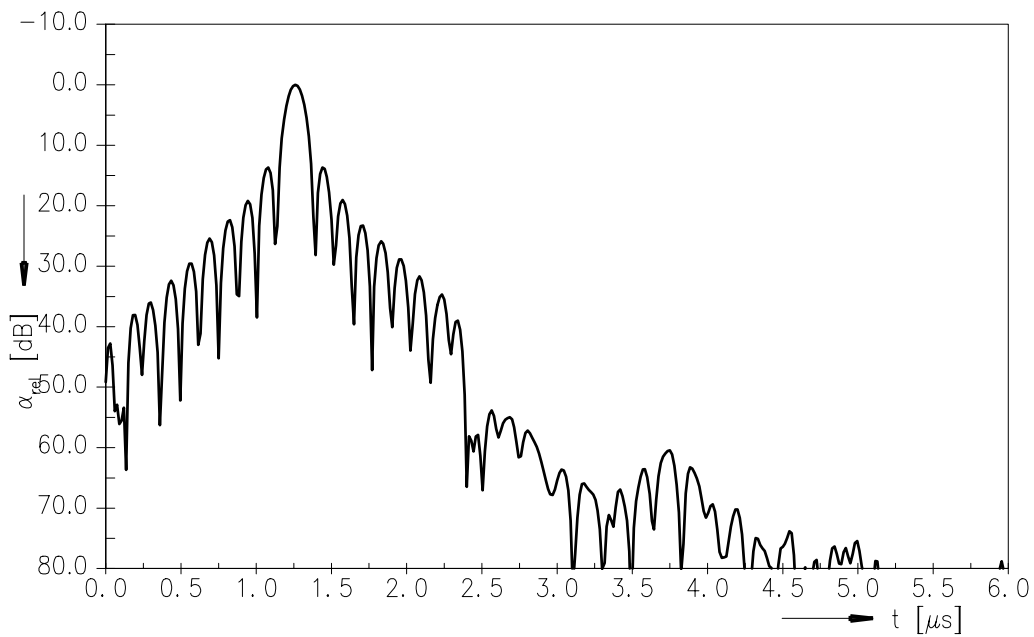


Data sheet

Frequency response



Time domain response





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References

Type	X 6778 M
Ordering code	B39358-X6753-M100
Marking and package	C61157-A1-A15
Packaging	F61074-V8067-Z000
Date codes	L_1126
S-parameters	X6753M_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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