



SAW Components

SAW bandpass filter

Bandpass IF filters for TV applications

Series/type:	X 6948 D
Ordering code:	B39570-X6948-N201
Date:	Aug 20, 2007
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X 6948 D

SAW bandpass filter

57.00 MHz

Data Sheet

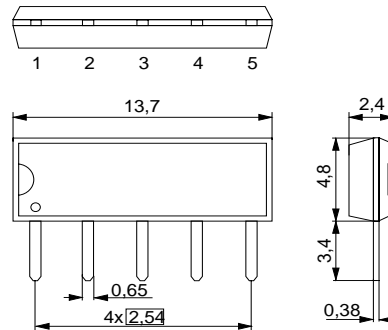
Application

- IF filter for digital terrestrial TV
- Usable bandwidth 5.4MHz
- Constant group delay
- Balance input option



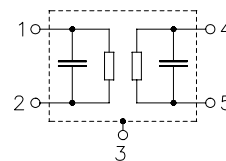
Features

- Duroplast package **SIP5D**
- Standard IC package
- Approximate weight 0.5 g
- RoHS compatible
- Tinned CuFe alloy terminals



Pin configuration

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



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



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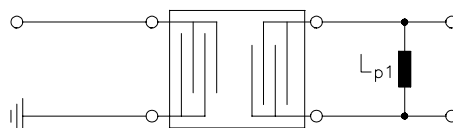
Data Sheet

Characteristics

Reference temperature: $T_A = 25 (45) \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$
 Terminating load impedance: $Z_L = 2 \text{ k}\Omega \parallel 3\text{pF}$ and matching network

	min.	typ. @ 25 °C	max.	
Insertion attenuation α Reference level for 57.02 (57.00) MHz the following data	17.7	19.2	20.7	dB
Amplitude ripple (p-p) $\Delta\alpha$ 54.52 ... 59.02 (54.50 ... 59.00) MHz	—	0.5	—	dB
Relative attenuation α_{rel}				
52.77 (52.75) MHz	36.0	42.0	—	dB
54.12 (54.10) MHz	0.7	2.2	3.7	dB
59.52 (59.50) MHz	1.5	3.0	4.5	dB
60.27 (60.25) MHz	32.0	40.0	—	dB
62.40 (62.38) MHz	37.0	47.0	—	dB
64.77 (64.75) MHz	38.0	45.0	—	dB
Lower sidelobe				
45.02 ... 50.02 (45.00 ... 50.00) MHz	37.0	42.0	—	dB
50.02 ... 52.77 (50.00 ... 52.75) MHz	34.0	39.0	—	dB
Upper sidelobe				
62.40 ... 70.02 (62.38 ... 70.00) MHz	34.0	39.0	—	dB
Reflected wave signal suppression 1.5 μs ... 6.0 μs after main pulse (test pulse 250 ns, carrier frequency 57.02 MHz)	42.0	52.0	—	dB
Group delay ripple (p-p) $\Delta\tau$ 54.52 ... 59.02 (54.50 ... 59.00) MHz	—	40	—	ns
Impedance at 57.02 MHz				
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$	—	2.0 17.6	—	k Ω pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	—	5.2 4.6	—	k Ω pF
Temperature coefficient of frequency TC_f	—	-18	—	ppm/K

Matching network



$L_{p1} = 820 \text{ nH}$

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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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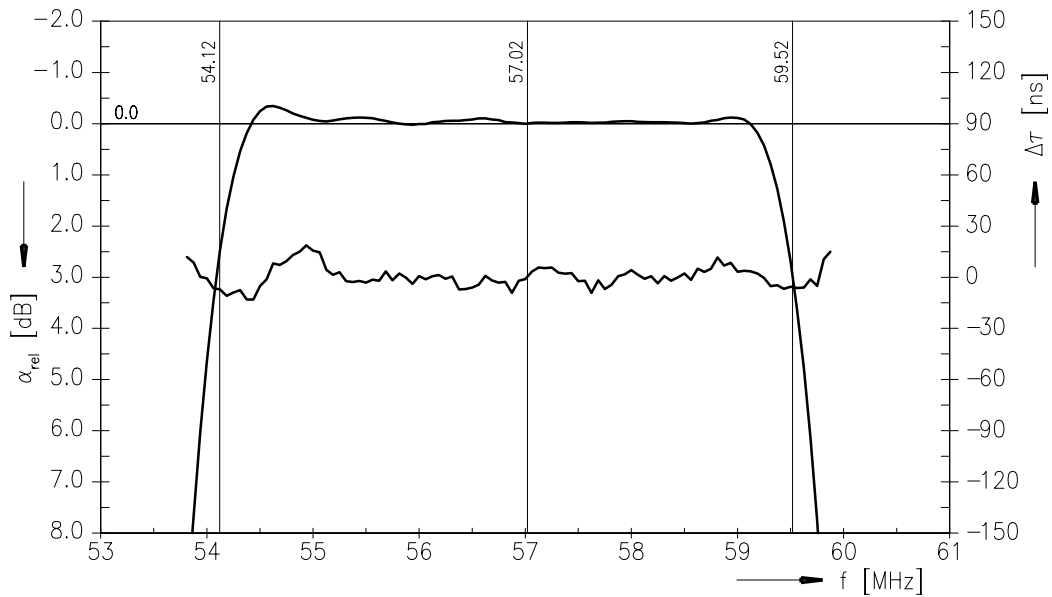
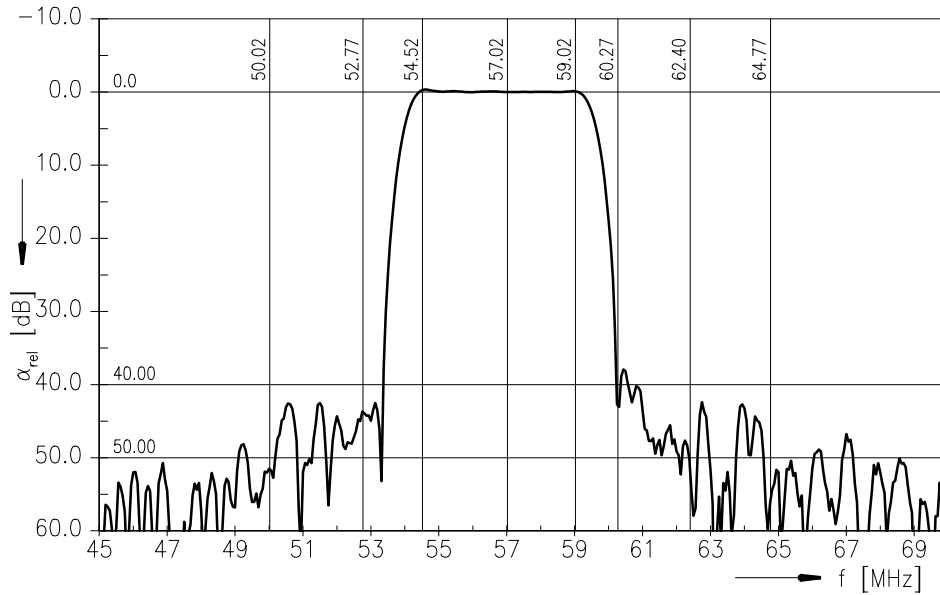
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Frequency response

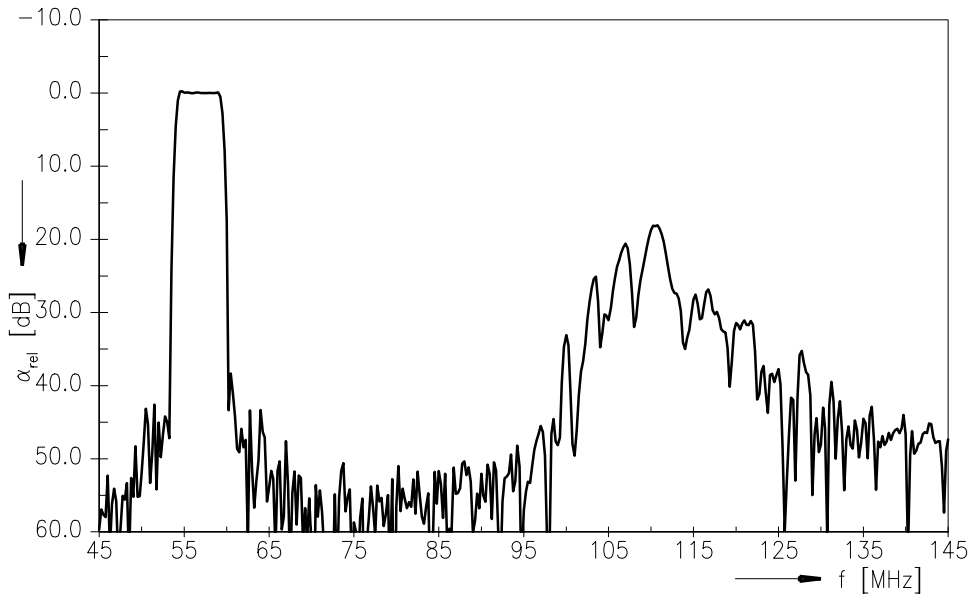


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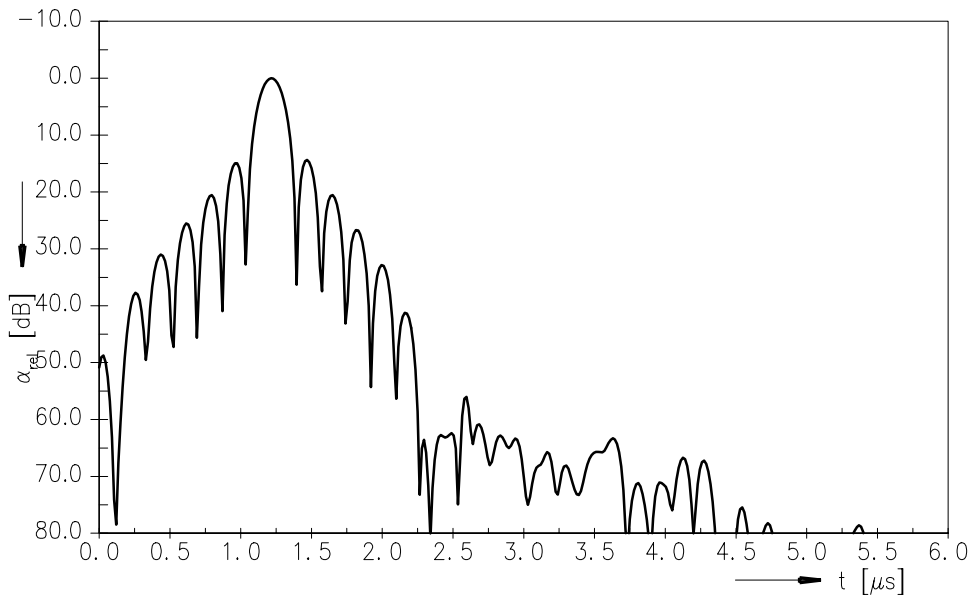


Data Sheet

Frequency response



Time domain response



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SAW bandpass filter 57.00 MHz

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References

Type	X 6948 D
Ordering code	B39570-X6948-N201
Marking and package	C61157-A1-A21
Packaging	F61074-V8049-Z000
Date codes	L_1126
S-parameters	X6948N_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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