



SAW Components

Data Sheet X 6940 D





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X 6940 D

Bandpass Filter

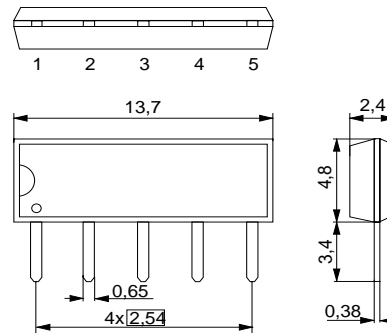
57,00 MHz

Data Sheet

Duroplast package SIP5D

Features

- IF filter for digital terrestrial TV
- Constant group delay
- Optimized for cascade of two devices
- Standard IC package



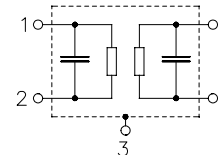
Terminals

- Tinned CuFe alloy

Dimensions in mm, approx. weight 0,5 g

Pin configuration

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



Type	Ordering code	Marking and package according to	Packing according to
X 6940 D	B39570-X6940-N201	C61157-A1-A21	F61074-V8049-Z000

Maximum ratings

Operable temperature range	T_A	-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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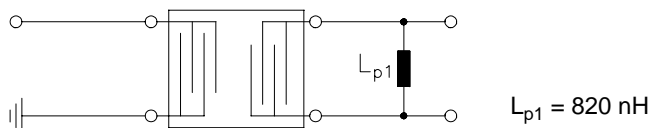
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Characteristics

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.	max.	
Insertion attenuation	α				
Reference level for the following data	57,02 (57,00) MHz	13,1	14,6	16,1	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		38,0	44,0	—	dB
54,12 (54,10) MHz		1,6	2,8	4,0	dB
59,52 (59,50) MHz		1,9	3,1	4,3	dB
60,27 (60,25) MHz		30,0	38,0	—	dB
62,40 (62,38) MHz		41,0	47,0	—	dB
64,77 (64,75) MHz		43,0	49,0	—	dB
Lower sidelobe					
45,02 ... 50,02 (45,00 ... 50,00) MHz		38,0	43,0	—	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		36,0	42,0	—	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: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1,3 23,5	—	k Ω pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	4,0 6,3	—	k Ω pF
Temperature coefficient of frequency	TC_f	—	-18	—	ppm/K

Matching network:





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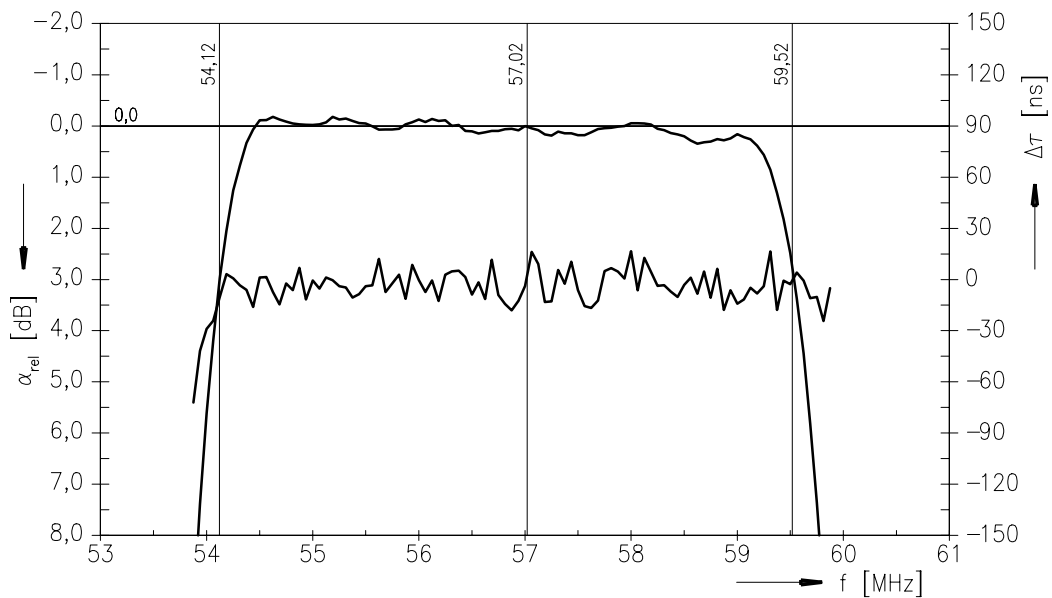
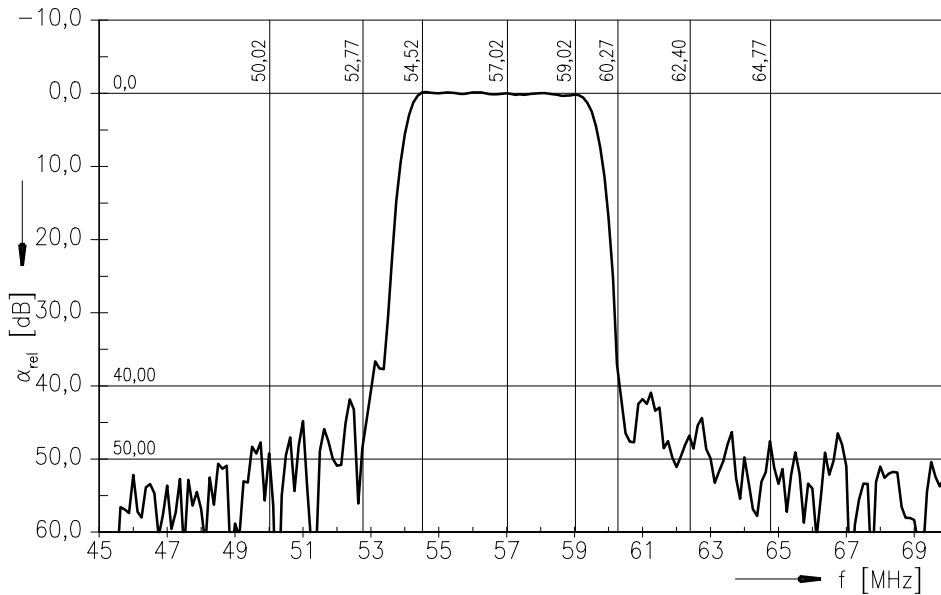
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Frequency response





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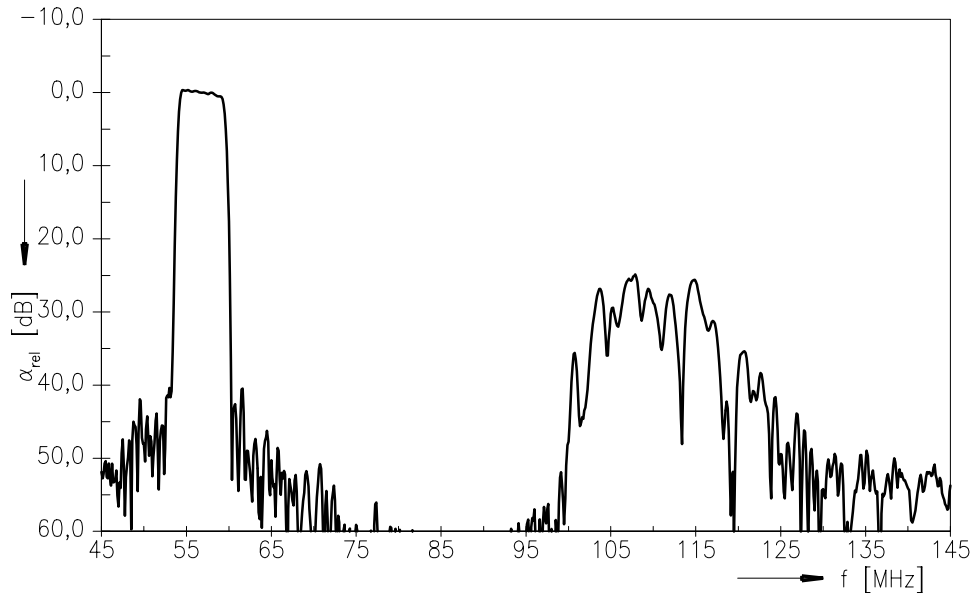
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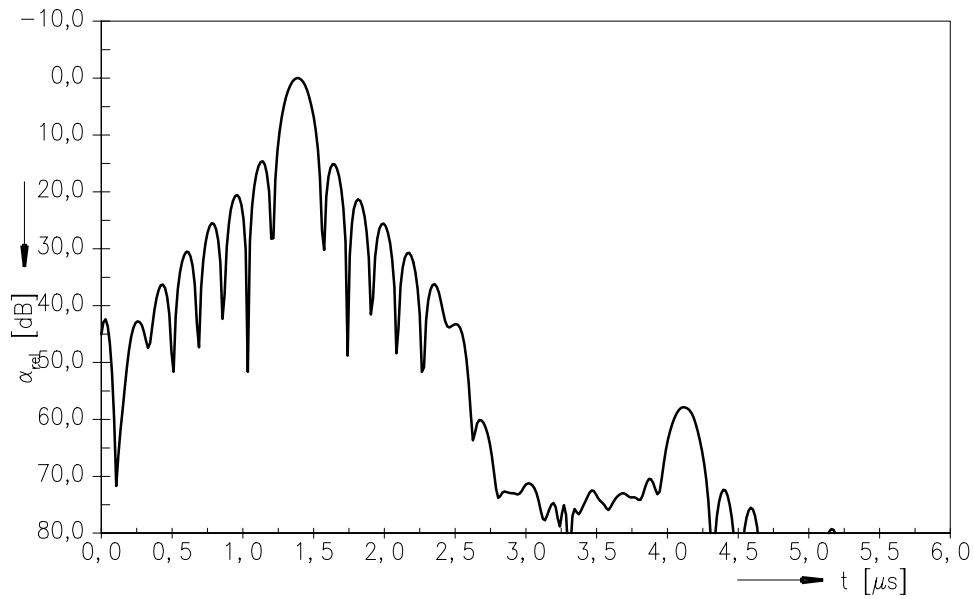
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Frequency response



Time domain response





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