EPCOS

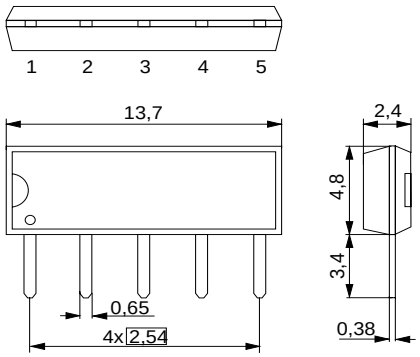
SAW Components

Data Sheet X 6933 D

Duroplast package **SIP5D**

Features

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



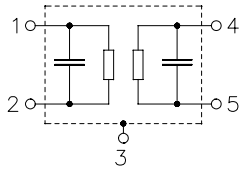
Terminals

- 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 6933 D	B39570–X6933–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

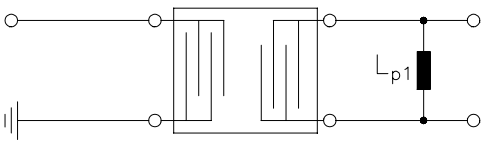
Data Sheet

Characteristics

Reference temperature: T_A = 25 (45) ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 2 kΩ || 3 pF and matching network

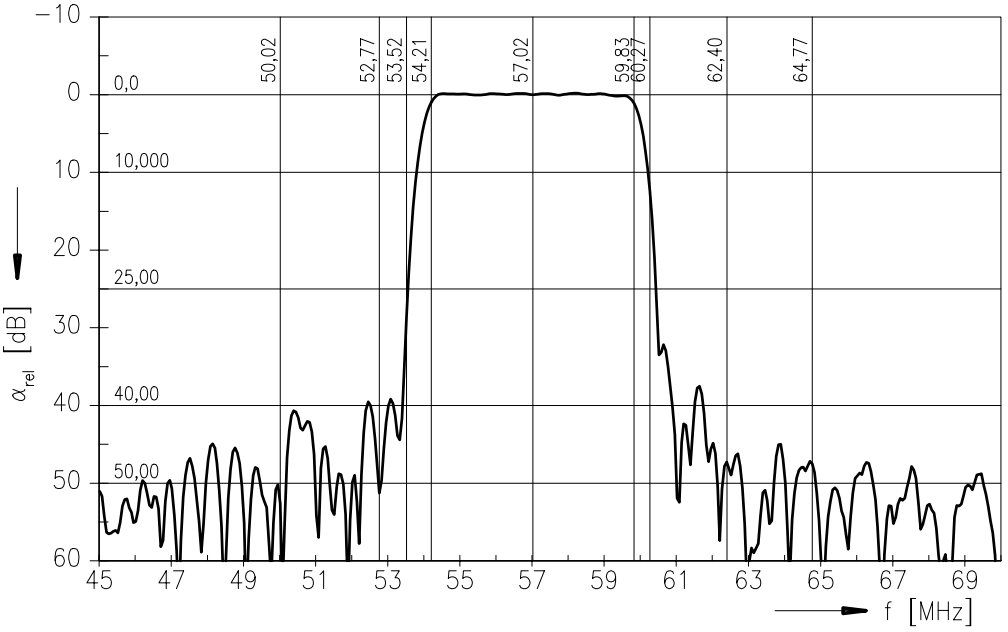
		min.	typ.	max.	
Insertion attenuation	α				
Reference level for the following data 57,02 (57,00) MHz		14,5	16,0	17,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
54,52 ... 59,52 (54,50 ... 59,50) MHz		—	0,5	—	dB
Relative attenuation	α_{rel}				
52,77 (52,75) MHz		40,0	46,0	—	dB
53,52 (53,50) MHz		—	27,0	—	dB
54,21 (54,19) MHz		–0,1	0,9	1,9	dB
59,83 (59,81) MHz		0,3	1,3	2,3	dB
60,27 (60,25) MHz		—	13,0	—	dB
62,40 (62,38) MHz		42,0	48,0	—	dB
64,77 (64,75) MHz		43,0	49,0	—	dB
Lower sidelobe					
45,02 ... 50,02 (45,00 ... 50,00) MHz		39,0	45,0	—	dB
50,02 ... 52,77 (50,00 ... 52,75) MHz		36,0	40,0	—	dB
Upper sidelobe					
62,40 ... 70,02 (62,38 ... 70,00) MHz		38,0	45,0	—	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)	$\Delta\tau$				
54,21 ... 59,83 (54,19 ... 59,81) MHz		—	40	—	ns
Impedance at 57,02 MHz					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1,3 ‖21,9	—	kΩ || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	4,0 ‖ 6,5	—	kΩ || pF
Temperature coefficient of frequency	TC_f	—	–18	—	ppm/K

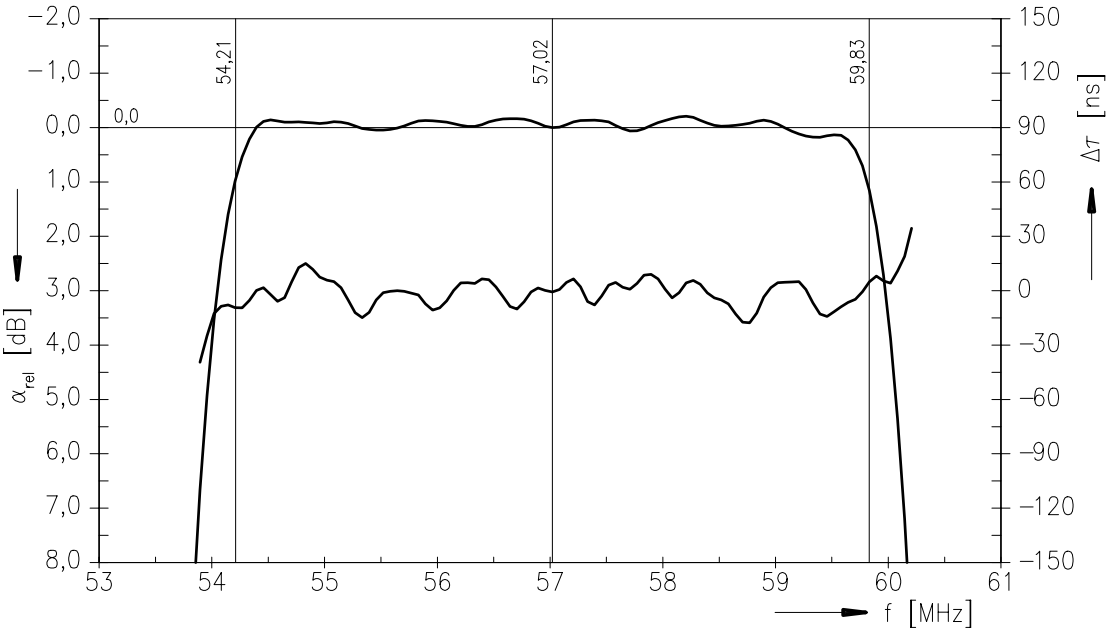
Matching network:



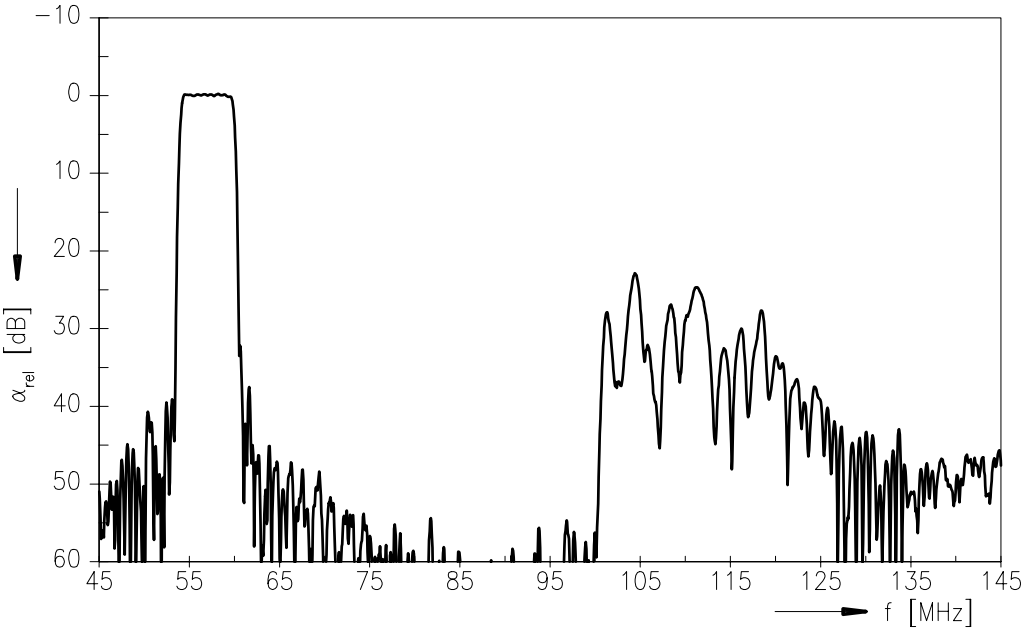
L_{p1} = 820 nH

Frequency response

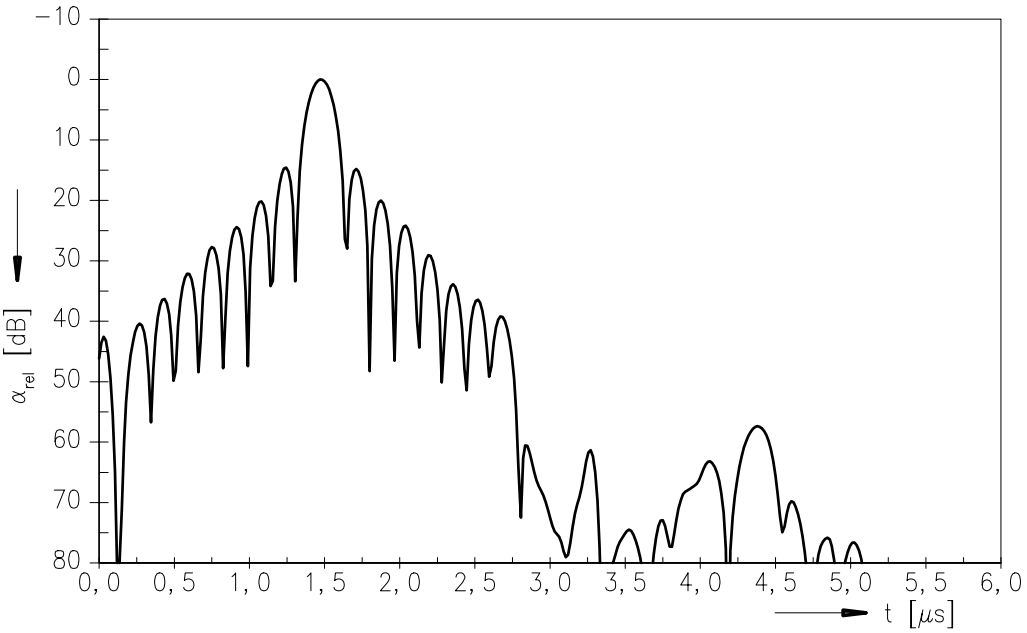




Frequency response



Time domain response



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