



SAW Components

Data Sheet X 7255 D





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X 7255 D

Bandpass Filter

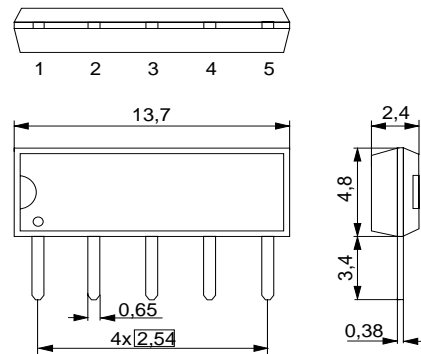
36,00 MHz

Data Sheet

Duroplast package **SIP5D**

Features

- IF filter for digital TV
- Switchable between two bandwidths
- Optimized for cascade of two devices
- Standard IC package



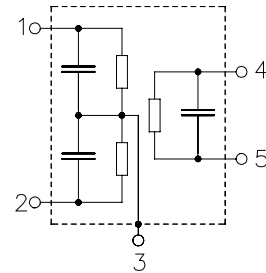
Terminals

- Tinned CuFe alloy

Dimensions in mm, approx. weight 0,5 g

Pin configuration

- 1 Input
- 2 Switching input
- 3 Chip carrier – ground
- 4 Output
- 5 Output



Type	Ordering code	Marking and package according to	Packing according to
X 7255 D	B39360-X7255-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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Characteristics of channel 1 (switching pin 2 connected to ground)

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.	max.	
Insertion attenuation					
	α				
Reference level for the following data	36,00 MHz	18,9	20,4	21,9	dB
Pass bandwidth					
$\alpha_{rel} \leq 1,5\text{ dB}$	$B_{1,5dB}$	—	7,1	—	MHz
$\alpha_{rel} \leq 3\text{ dB}$	B_{3dB}	—	7,4	—	MHz
$\alpha_{rel} \leq 15\text{ dB}$	B_{15dB}	—	8,4	—	MHz
$\alpha_{rel} \leq 30\text{ dB}$	B_{30dB}	—	8,8	—	MHz
Relative attenuation					
	α_{rel}				
Adjacent picture carrier	30,75 MHz	36,0	41,0	—	dB
Adjacent sound carrier	40,25 MHz	14,0	18,0	—	dB
	40,75 MHz	36,0	50,0	—	dB
	41,00 MHz	32,0	44,0	—	dB
	41,25 MHz	36,0	51,0	—	dB
Lower sidelobe	25,00 ... 31,30 MHz	32,0	37,0	—	dB
Upper sidelobe	40,70 ... 45,00 MHz	33,0	38,0	—	dB
Reflected wave signal suppression					
1,2 μ s ... 6,0 μ s after main pulse (test pulse 250 ns, carrier frequency 36,00 MHz)		40,0	48,0	—	dB
Feedthrough signal suppression					
1,3 μ s ... 1,2 μ s before main pulse (test pulse 250 ns, carrier frequency 36,00 MHz)		—	56,0	—	dB
Group delay ripple (p-p)					
	$\Delta\tau$				
	32,40 ... 39,60 MHz	—	50	—	ns
Impedance at 36,00 MHz					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1,7 \parallel 18,1	—	k Ω \parallel pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	2,0 \parallel 4,8	—	k Ω \parallel pF
Temperature coefficient of frequency					
	TC_f	—	-72	—	ppm/K



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Characteristics of channel 2 (switching pin 2 connected to pin 1)

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.	max.	
Insertion attenuation	α				
Reference level for the following data	36,00 MHz	19,4	20,9	22,4	dB
Pass bandwidth					
$\alpha_{rel} \leq 1,5\text{ dB}$	$B_{1,5dB}$	—	6,2	—	MHz
$\alpha_{rel} \leq 3\text{ dB}$	B_{3dB}	—	6,4	—	MHz
$\alpha_{rel} \leq 15\text{ dB}$	B_{15dB}	—	7,4	—	MHz
$\alpha_{rel} \leq 30\text{ dB}$	B_{30dB}	—	7,8	—	MHz
Relative attenuation	α_{rel}				
Adjacent picture carrier	31,42 MHz	35,0	42,0	—	dB
Adjacent sound carrier	39,67 MHz	11,0	15,0	—	dB
	39,92 MHz	24,0	30,0	—	dB
Lower sidelobe	25,00 ... 31,80 MHz	34,0	40,0	—	dB
Upper sidelobe	40,20 ... 45,00 MHz	32,0	37,0	—	dB
Reflected wave signal suppression					
1,2 μ s ... 6,0 μ s after main pulse (test pulse 250 ns, carrier frequency 36,00 MHz)		40,0	50,0	—	dB
Feedthrough signal suppression					
1,3 μ s ... 1,2 μ s before main pulse (test pulse 250 ns, carrier frequency 36,00 MHz)		—	50,0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
32,90 ... 39,10 MHz		—	50	—	ns
Impedance at 36,00 MHz					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1,9 \parallel 20,3	—	k Ω \parallel pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	2,0 \parallel 4,8	—	k Ω \parallel pF
Temperature coefficient of frequency	TC_f	—	-72	—	ppm/K



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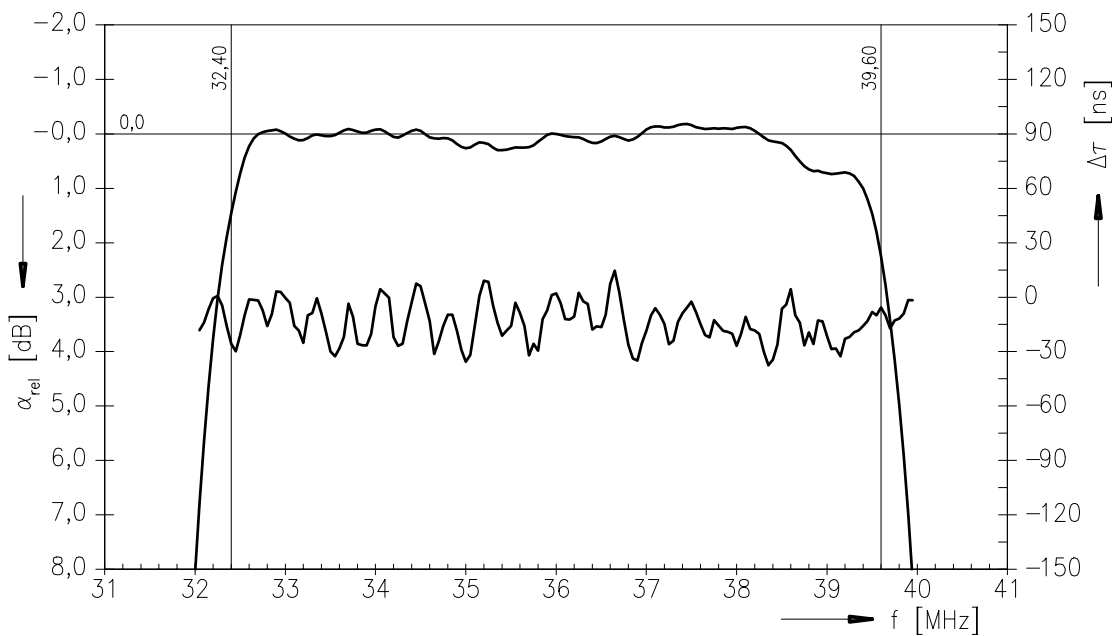
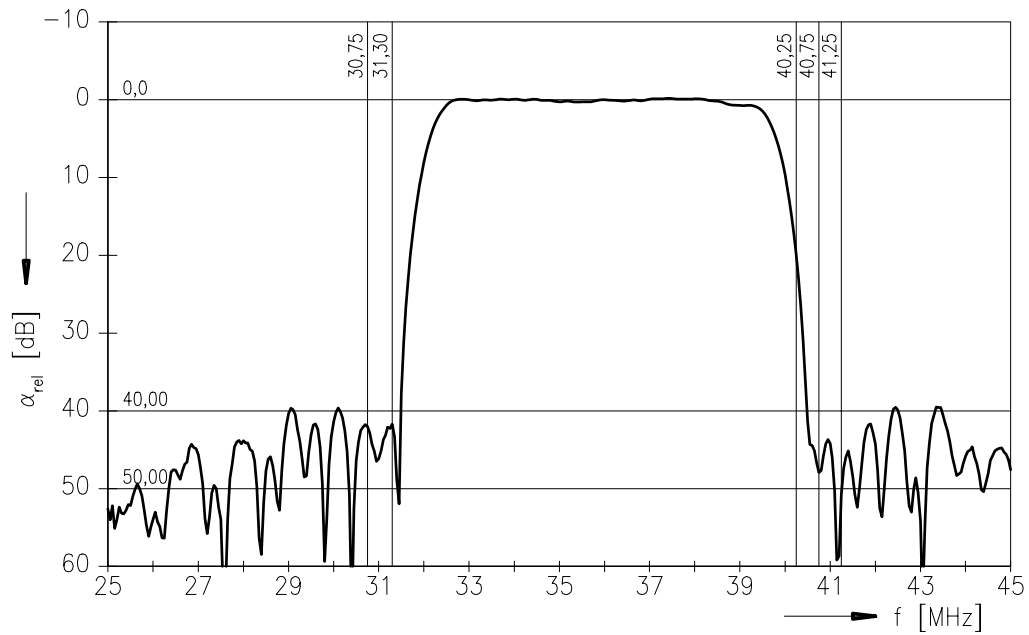
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Data Sheet

Frequency response of channel 1





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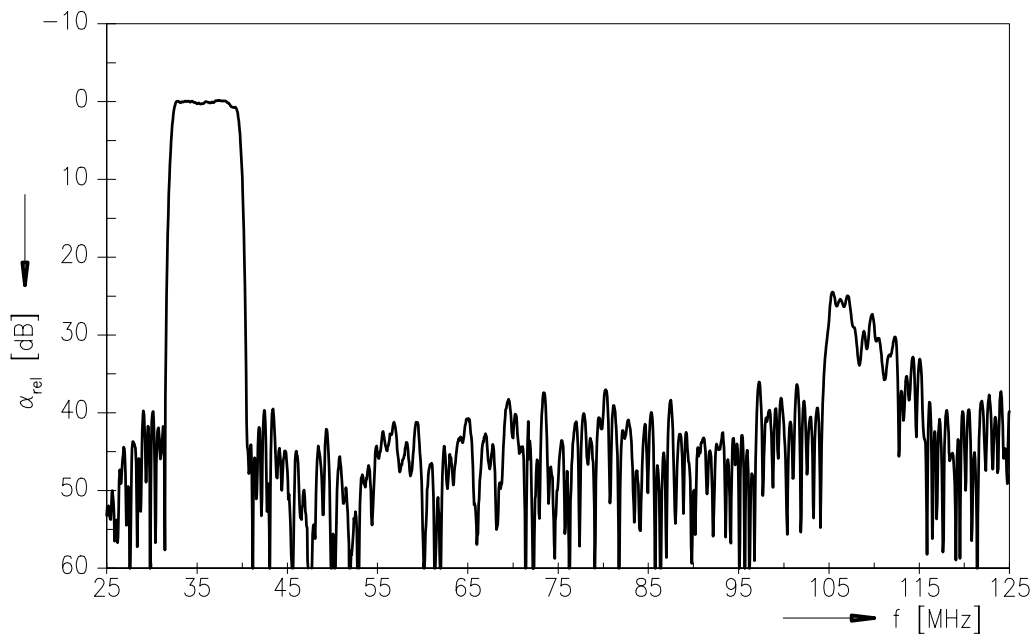
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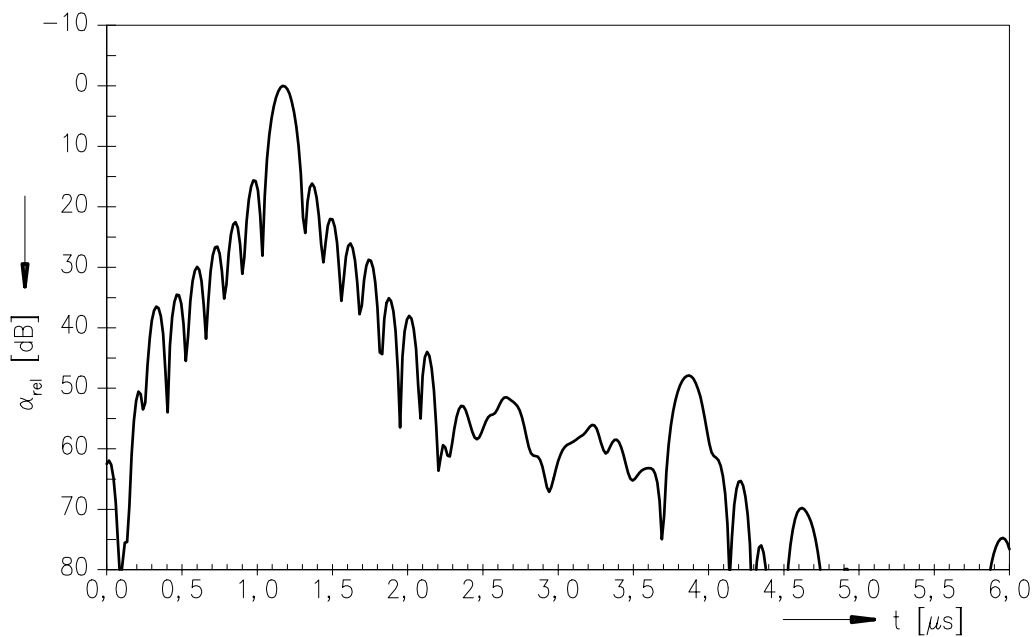
36,00 MHz

Data Sheet

Frequency response of channel 1



Time domain response of channel 1





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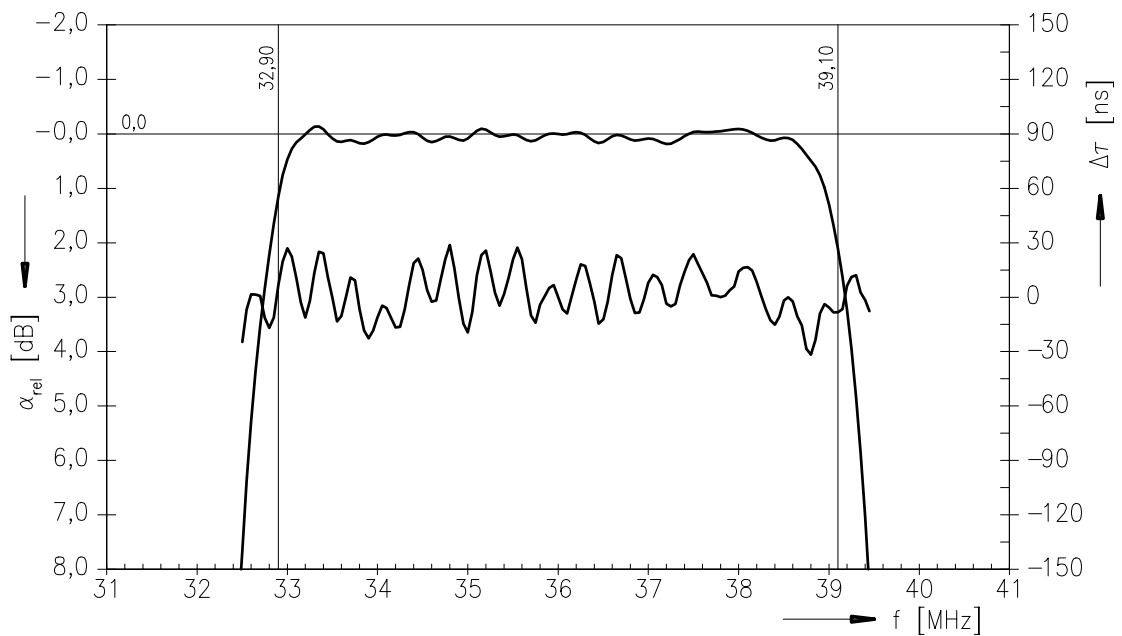
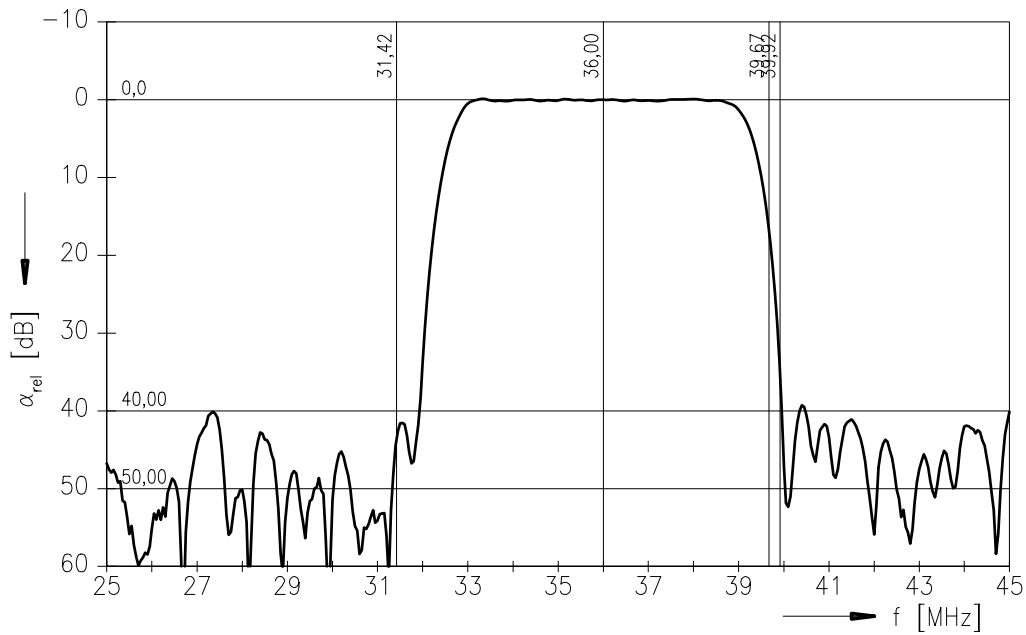
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Data Sheet

Frequency response of channel 2





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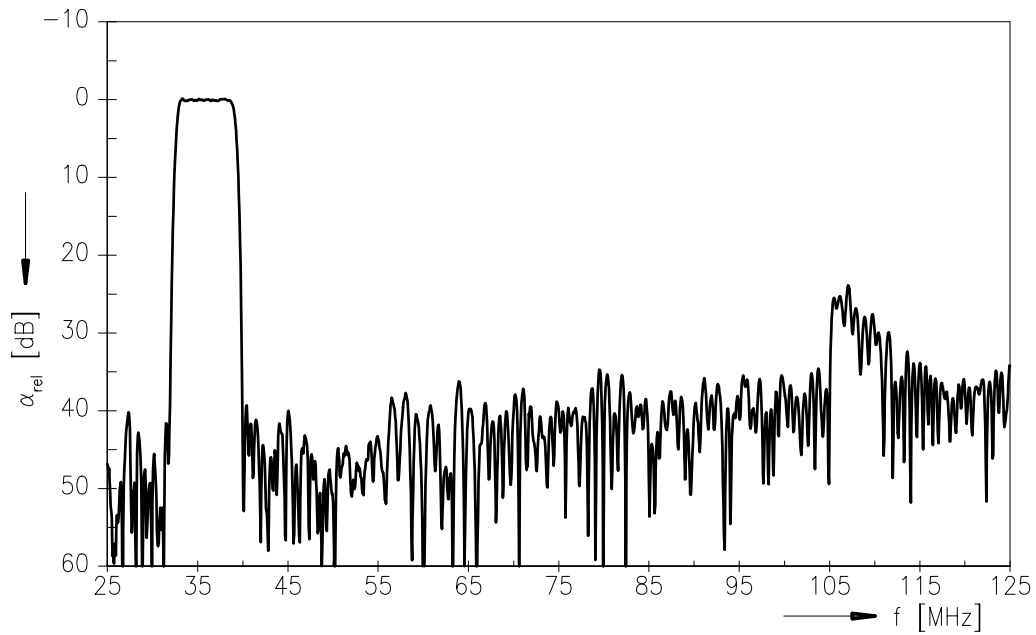
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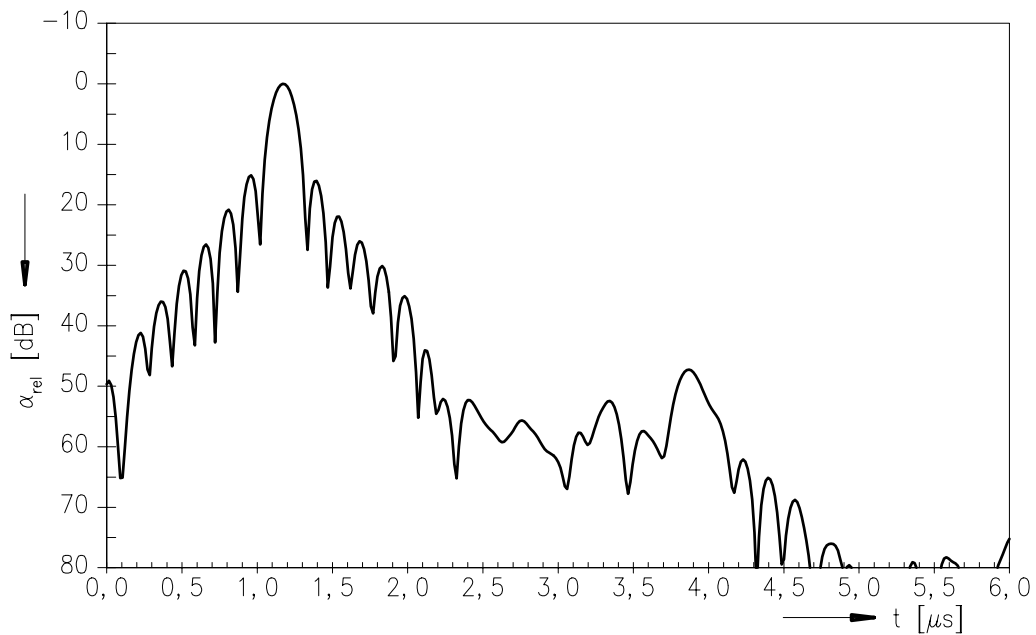
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Data Sheet

Frequency response of channel 2



Time domain response of channel 2





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