



# SAW Components

Data Sheet X 6857 D





**SAW Components**

**X 6857 D**

**Bandpass Filter**

**36,00 MHz**

Data Sheet

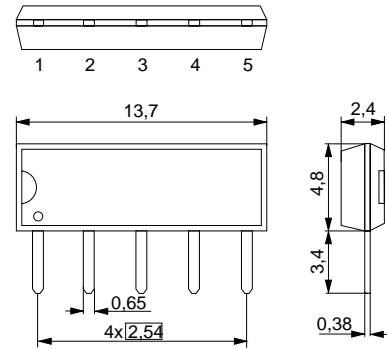
Duroplast package **SIP5D**

**Features**

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

**Terminals**

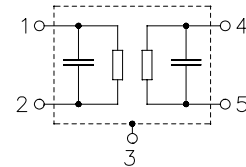
- Tinned CuFe alloy



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 6857 D	B39360-X6857-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**

Reference temperature:

$T_A = 25 \text{ }^\circ\text{C}$

Terminating source impedance:

$Z_S = 50 \text{ } \Omega$

Terminating load impedance:

$Z_L = 2 \text{ k}\Omega \parallel 3 \text{ pF}$

		min.	typ.	max.	
<b>Insertion attenuation</b>	$\alpha$				
Reference level for the following data	36,00 MHz	19,0	20,5	22,0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
	32,35 ... 39,65 MHz	—	0,7	—	dB
<b>Pass bandwidth</b>					
$\alpha_{\text{rel}} \leq 1,5 \text{ dB}$	$B_{1,5\text{dB}}$	—	7,8	—	MHz
$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	—	8,1	—	MHz
$\alpha_{\text{rel}} \leq 15 \text{ dB}$	$B_{15\text{dB}}$	—	8,9	—	MHz
$\alpha_{\text{rel}} \leq 30 \text{ dB}$	$B_{30\text{dB}}$	—	9,4	—	MHz
<b>Relative attenuation</b>	$\alpha_{\text{rel}}$				
	31,65 MHz	7,0	10,0	—	dB
	40,35 MHz	7,0	10,0	—	dB
	31,30 MHz	22,0	29,0	—	dB
	40,70 MHz	22,0	29,0	—	dB
Lower sidelobe	25,00 ... 31,00 MHz	36,0	40,0		
Upper sidelobe	41,00 ... 45,00 MHz	36,0	41,0		
<b>Reflected wave signal suppression</b>					
1,0 $\mu\text{s}$ ... 6,0 $\mu\text{s}$ after main pulse (test pulse 250 ns, carrier frequency 36,00 MHz)		42,0	52,0	—	dB
<b>Feedthrough signal suppression</b>					
1,3 $\mu\text{s}$ ... 1,2 $\mu\text{s}$ before main pulse (test pulse 250 ns, carrier frequency 36,00 MHz)		—	50,0	—	dB
<b>Group delay ripple (p-p)</b>	$\Delta\tau$				
	32,35 ... 39,65 MHz	—	50	—	ns
<b>Impedance at 36,00 MHz</b>					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	2,8 $\parallel$ 15,5	—	k $\Omega$ $\parallel$ pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	2,4 $\parallel$ 4,4	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K



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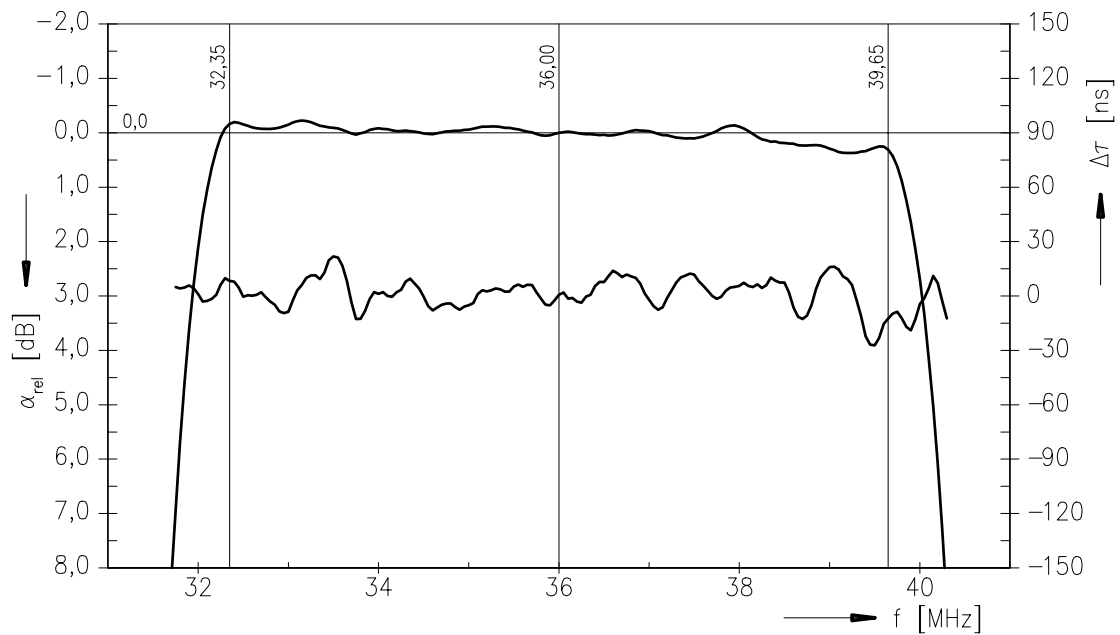
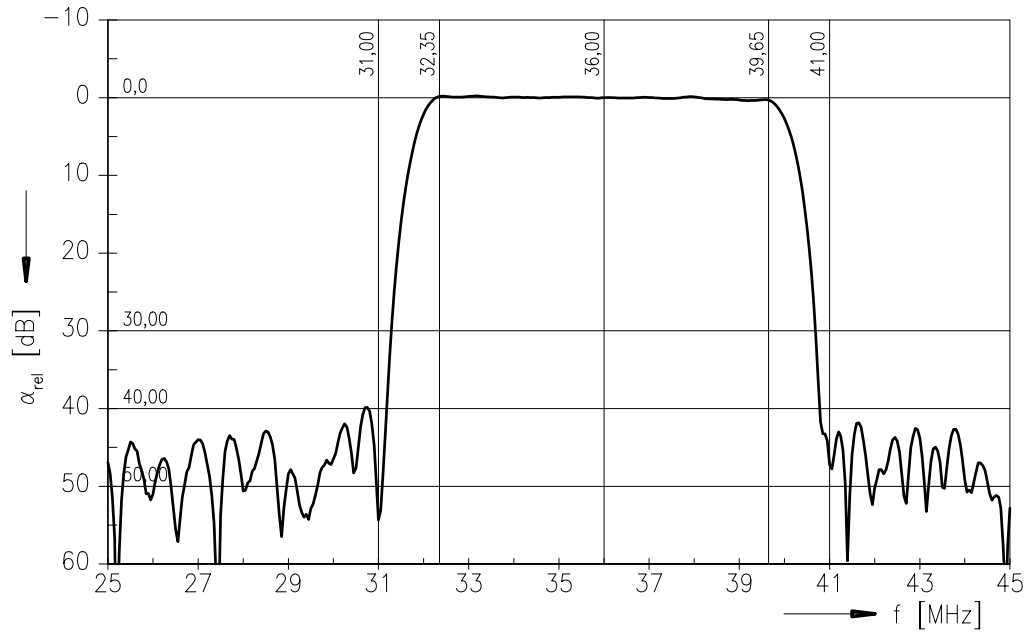
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Frequency response





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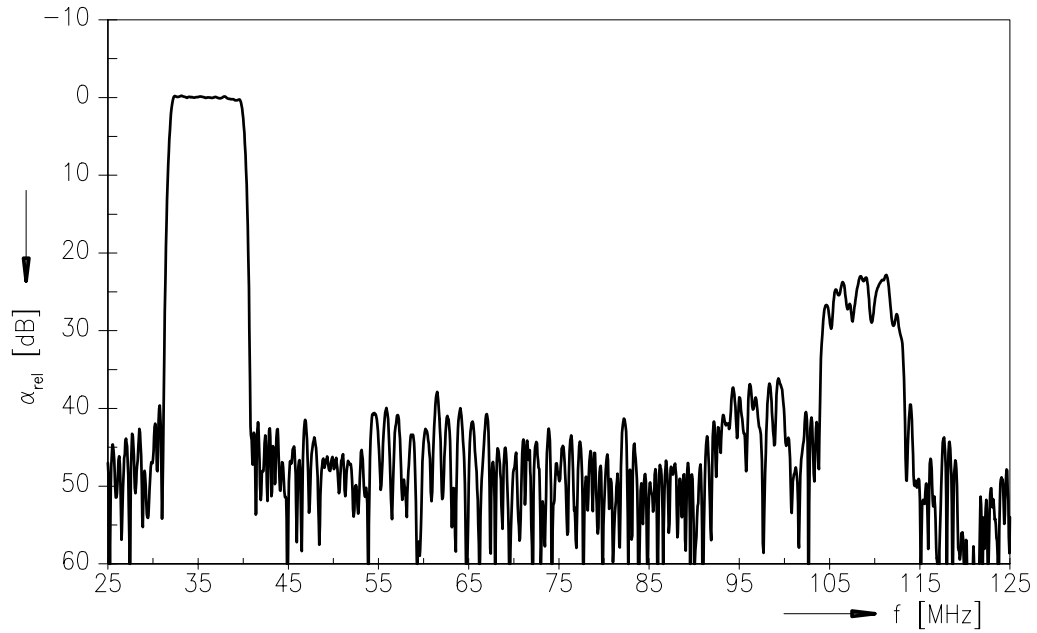
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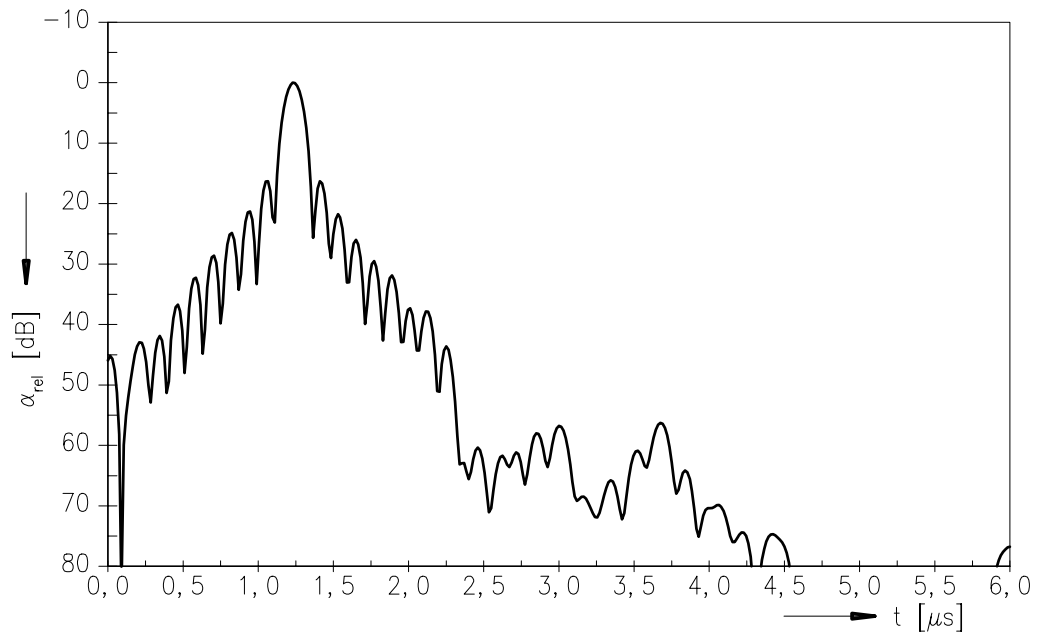
36,00 MHz

Data Sheet

Frequency response



Time domain response





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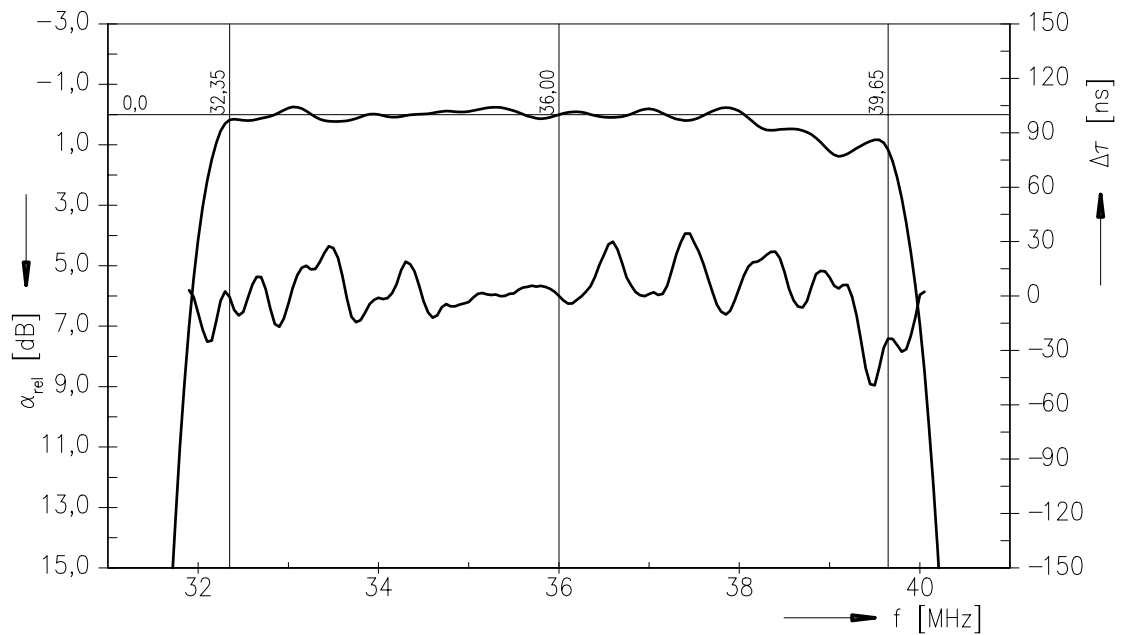
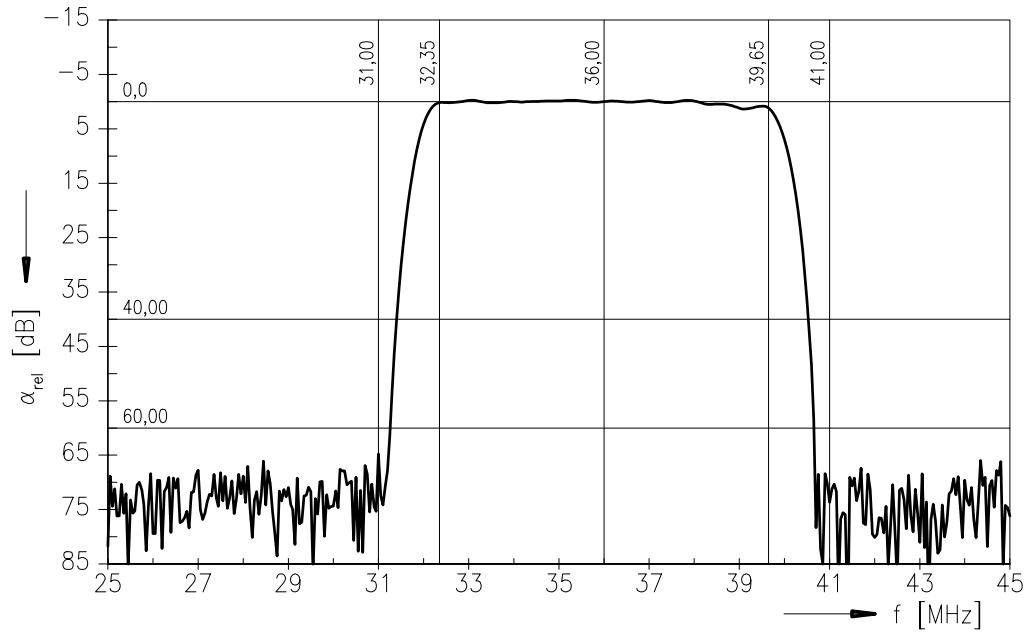
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Frequency response of two cascaded devices





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