



SAW Components

Data Sheet X 7256 D

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a blue glow and are positioned diagonally across the frame. In the background, there is a faint, stylized globe and some circuitry patterns, all in a dark, monochromatic color scheme.



SAW Components

X 7256 D

Bandpass Filter

57,00 MHz

Data Sheet

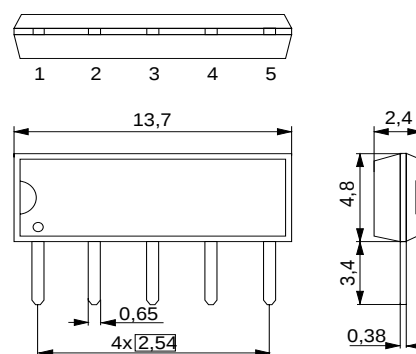
Duroplast package **SIP5D**

Features

- IF filter for ISDB-T
- Switchable between two bandwidths
- Standard IC package

Terminals

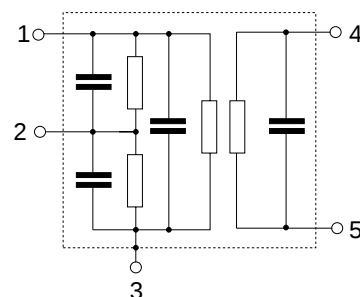
- Tinned CuFe alloy



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 7256 D	B39570-X7256-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:	$T_A = 25 (45) \text{ } ^\circ\text{C}$
Terminating source impedance:	$Z_S = 50 \text{ } \Omega$
Terminating load impedance:	$Z_L = 2 \text{ k}\Omega \parallel 3 \text{ pF} \parallel 3 \text{ pF}$

		min.	typ.	max.	
Insertion attenuation	α				
Reference level for the following data	57,08 (57,00) MHz	12,0	13,5	15,0	dB
Pass bandwidth					
$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	—	6,0	—	MHz
$\alpha_{\text{rel}} \leq 30 \text{ dB}$	$B_{30\text{dB}}$	—	7,5	—	MHz
Relative attenuation	α_{rel}				
	54,53 (54,45) MHz	-0,9	0,1	1,1	dB
	59,53 (59,45) MHz	-1,0	0,0	1,0	dB
	54,03 (53,95) MHz	—	3,1	—	dB
	60,03 (59,95) MHz	—	2,8	—	dB
	60,39 (60,31) MHz	—	11,0	—	dB
Lower sidelobe					
	45,08 ... 52,08 (45,00 ... 52,00) MHz	36,0	44,0	—	dB
	52,08 ... 53,03 (52,00 ... 52,95) MHz	38,0	46,0	—	dB
Upper sidelobe					
	60,88 ... 62,58 (60,80 ... 62,50) MHz	28,0	34,0	—	dB
	62,58 ... 65,08 (62,50 ... 65,00) MHz	37,0	43,0	—	dB
Reflected wave signal suppression					
1,2 μs ... 6,0 μs after main pulse (test pulse 250 ns, carrier frequency 57,08 MHz)		42,0	52,0	—	dB
Feedthrough signal suppression					
1,3 μs ... 1,2 μs before main pulse (test pulse 250 ns, carrier frequency 57,08 MHz)		—	50,0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
54,53 ... 59,53 (54,45 ... 59,45) MHz		—	60	—	ns
Impedance at 57,08 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	0,4 19,0	—	k Ω pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	0,6 6,0	—	k Ω 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: $T_A = 25 (45) ^\circ\text{C}$
Terminating source impedance: $Z_S = 50 \Omega$
Terminating load impedance: $Z_L = 2 \text{ k}\Omega \parallel 3 \text{ pF} \parallel 3 \text{ pF}$

		min.	typ.	max.	
Insertion attenuation	α				
Reference level for the following data	57,08 (57,00) MHz	10,7,	12,2	13,7	dB
Pass bandwidth					
$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	—	4,1	—	MHz
$\alpha_{\text{rel}} \leq 30 \text{ dB}$	$B_{30\text{dB}}$	—	5,6	—	MHz
Relative attenuation	α_{rel}				
	55,18 (55,10) MHz	—	0,6	—	dB
	58,58 (58,50) MHz	—	0,4	—	dB
Adjacent picture carrier	53,83 (53,75) MHz	—	45,0	—	dB
Adjacent sound carrier	59,33 (59,25) MHz	—	11,0	—	dB
Lower sidelobe					
	45,08 ... 51,58 (45,00 ... 51,50) MHz	39,0	47,0	—	dB
	51,58 ... 53,83 (51,50 ... 53,75) MHz	32,0	40,0	—	dB
Upper sidelobe					
	60,03 ... 62,58 (59,95 ... 62,50) MHz	30,0	38,0	—	dB
	62,58 ... 65,08 (62,50 ... 65,00) MHz	37,0	43,0	—	dB
Reflected wave signal suppression					
1,2 μs ... 6,0 μs after main pulse (test pulse 250 ns, carrier frequency 57,08 MHz)		42,0	53,0	—	dB
Feedthrough signal suppression					
1,3 μs ... 1,2 μs before main pulse (test pulse 250 ns, carrier frequency 57,08 MHz)		—	50,0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
55,68 ... 58,08 (55,60 ... 58,00) MHz		—	50	—	ns
Impedance at 57,08 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	0,4 24,0	—	k Ω pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	0,6 6,0	—	k Ω pF
Temperature coefficient of frequency	TC_f	—	-72	—	ppm/K



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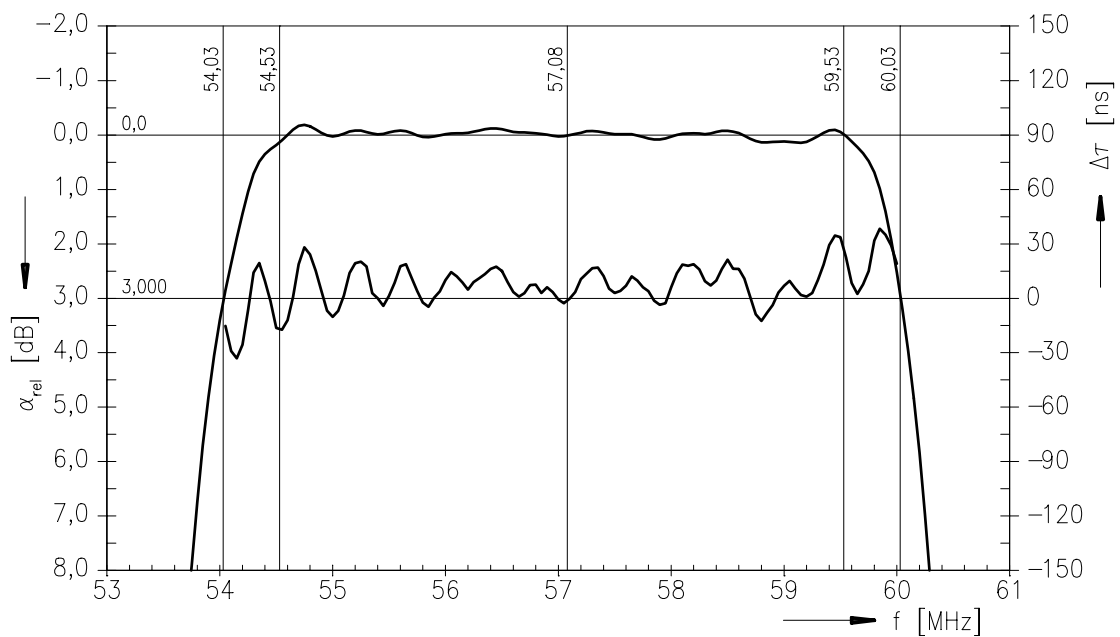
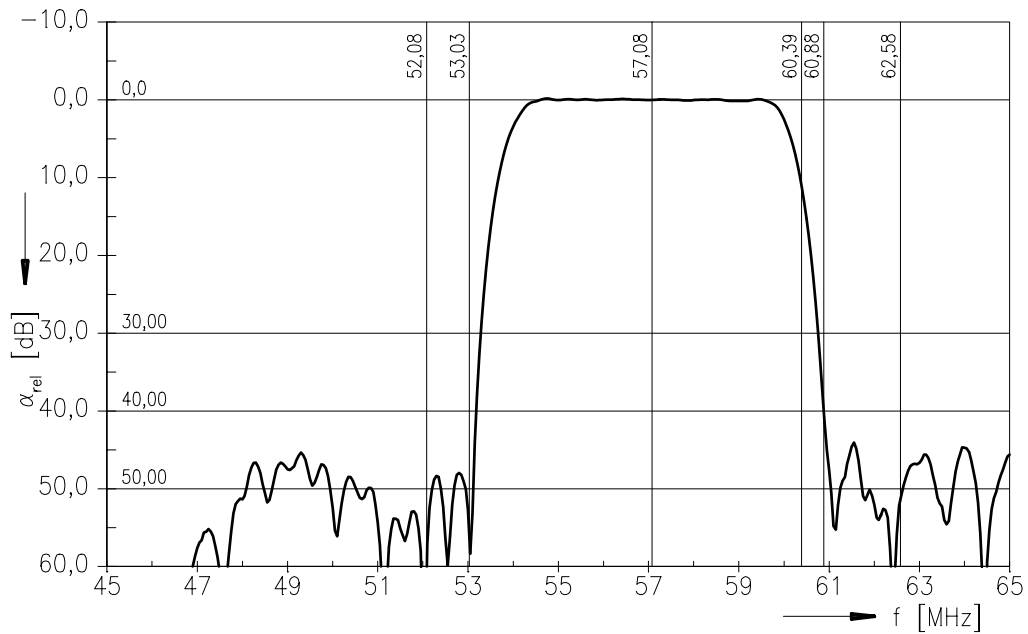
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57,00 MHz

Data Sheet

Frequency response of channel 1





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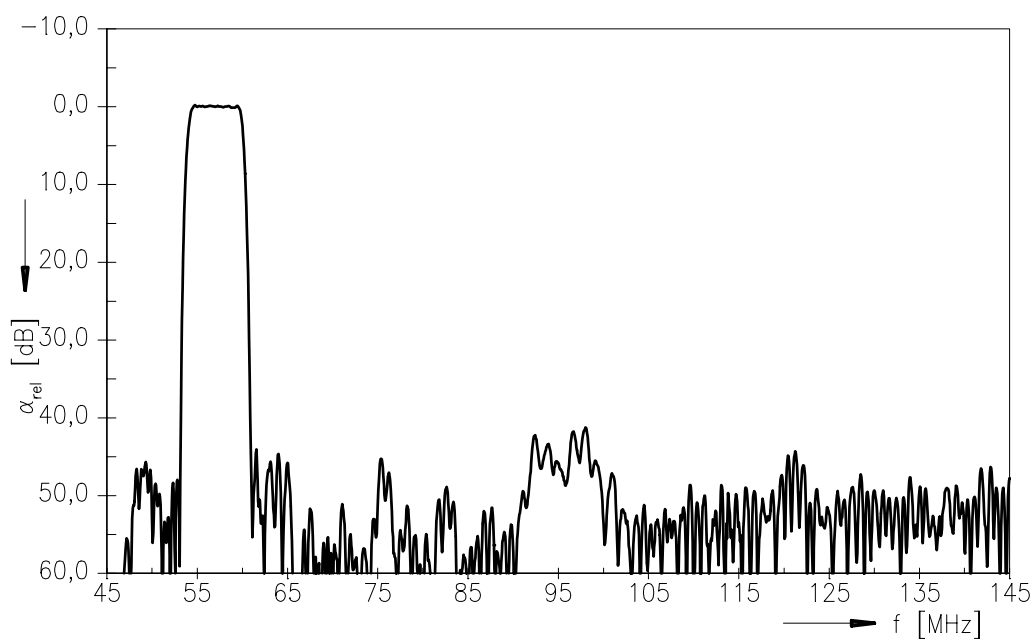
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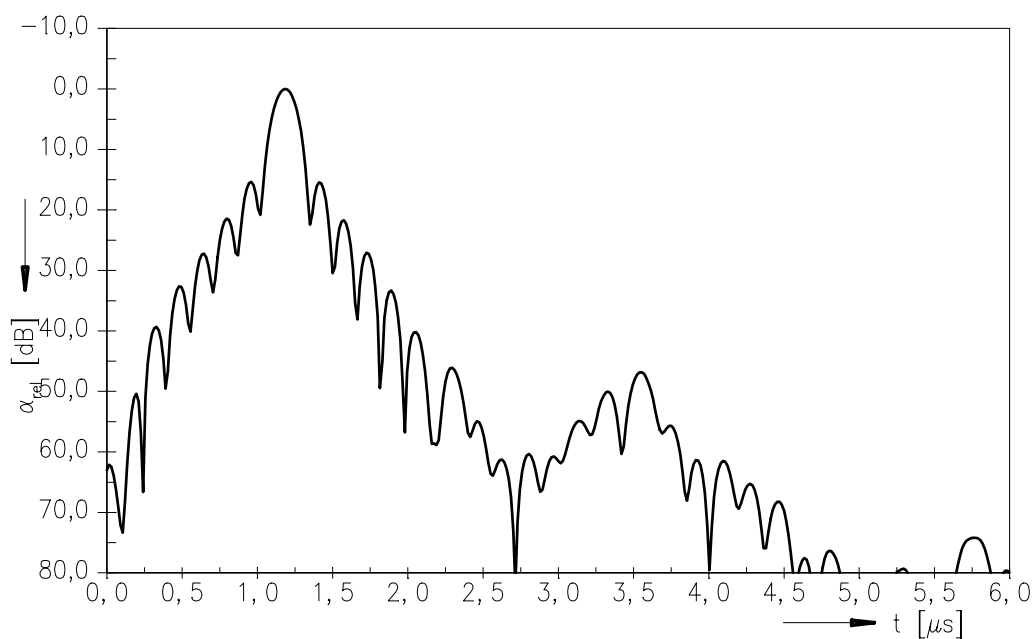
57,00 MHz

Data Sheet

Frequency response of channel 1



Time domain response of channel 1





SAW Components

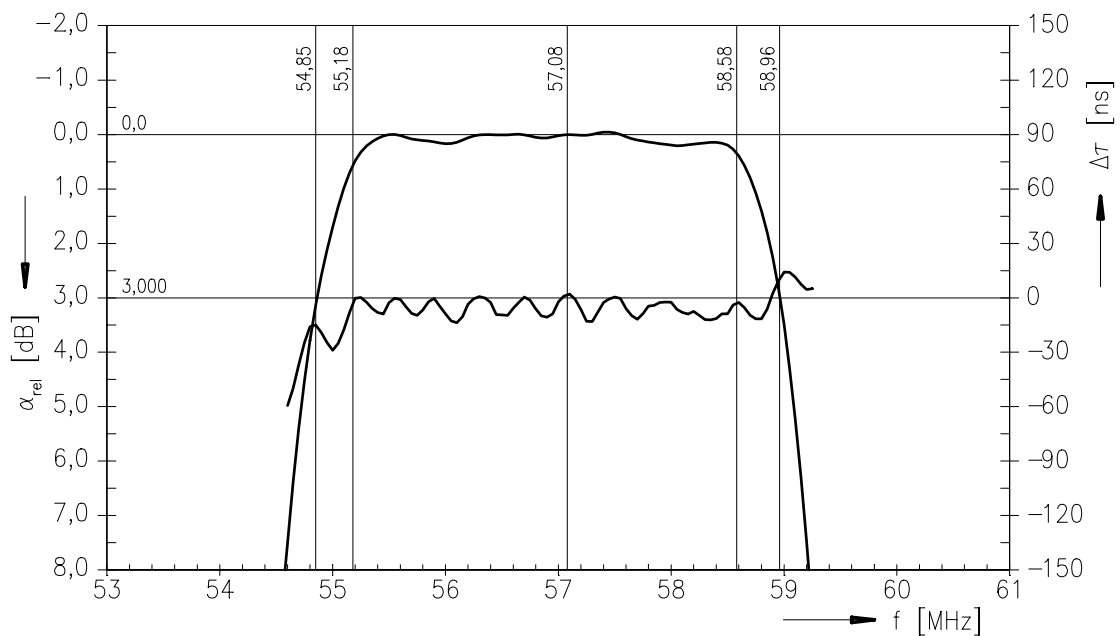
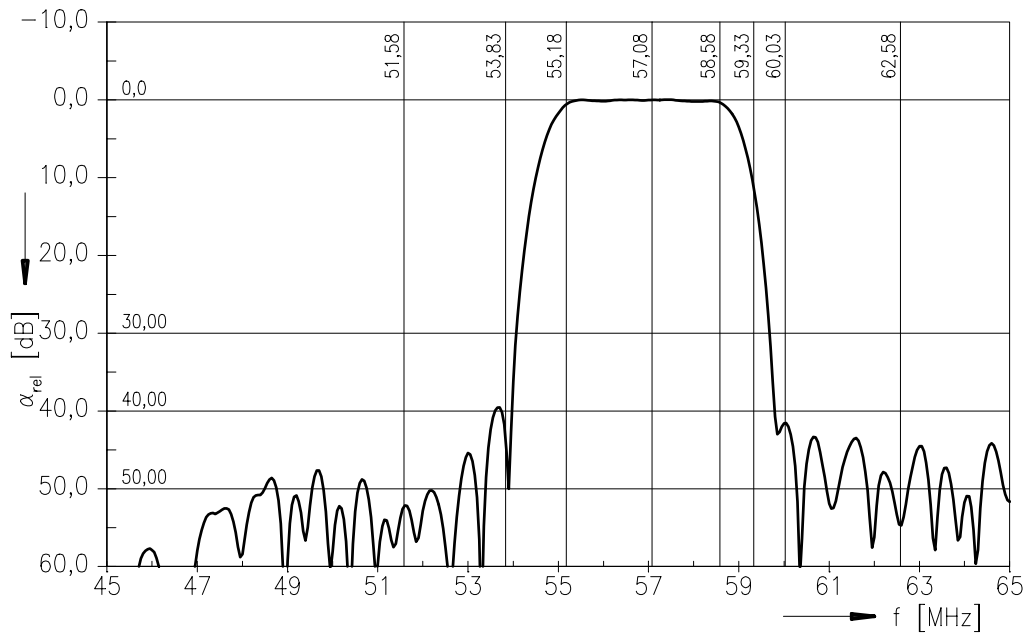
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Bandpass Filter

57,00 MHz

Data Sheet

Frequency response of channel 2





SAW Components

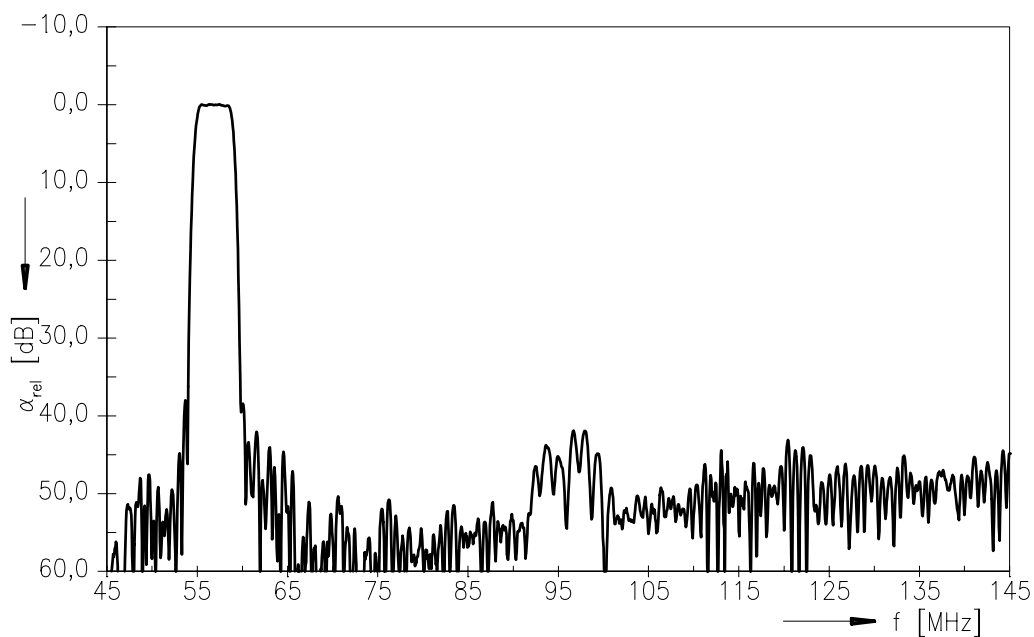
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Bandpass Filter

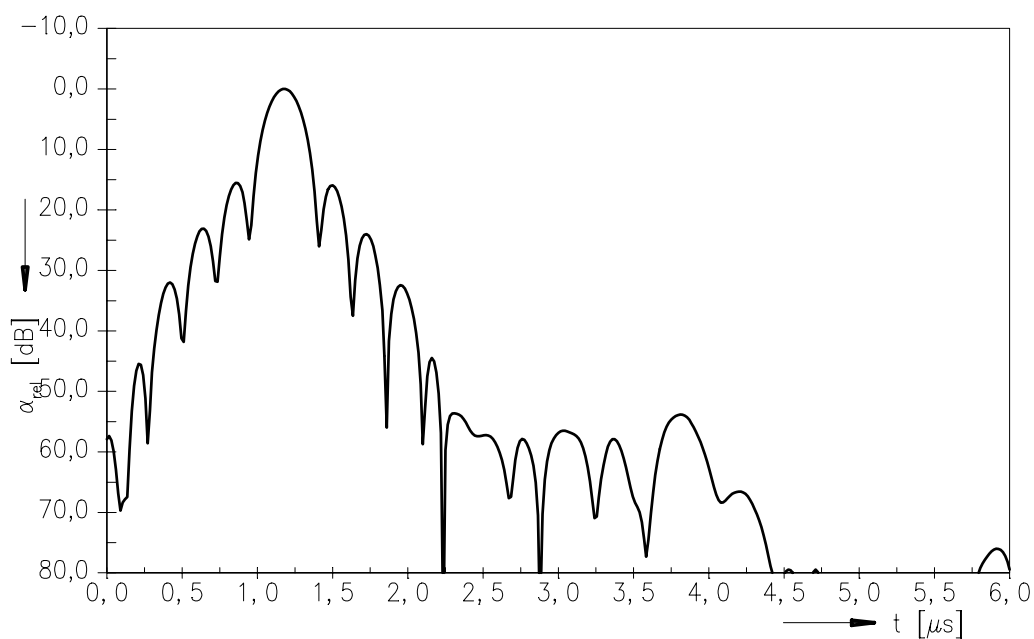
57,00 MHz

Data Sheet

Frequency response of channel 2



Time domain response of channel 2





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