



SAW Components

Data Sheet X 7001 L

Data Sheet



EPCOS



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X 7001 L

IF Bandpass Filter

30,72 MHz

Data Sheet

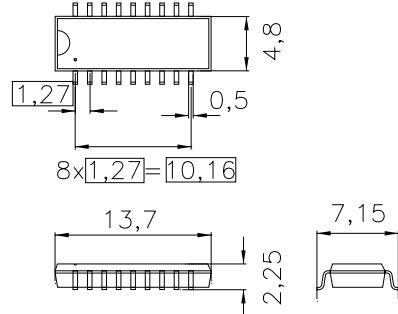
Duroplast package DIP18D

Features

- IF filter for Digital Audio Broadcasting
- Constant group delay
- Surface Mounted Technology (SMT)
- Standard IC small outline (SO) package

Terminals

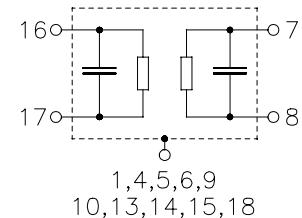
- Tinned CuFe alloy



Dimensions in mm, approx. weight 0,5 g

Pin configuration

16,17	Input
7,8	Output
1,4,5,6,9,10,	
13,14,15,18	Chip carrier - ground
2,3,11,12	Not connected



Type	Ordering code	Marking and package according to	Packing according to
X 7001 L	B39307-X7001-L100	C61157-A2-A4	F61074-V8058-Z000

Maximum ratings

Operable temperature range	T_A	-40/+85	°C	
Storage temperature range	T_{stg}	-40/+85	°C	
DC voltage	V_{DC}	0	V	between any terminals
AC voltage	V_{pp}	10	V	between any terminals



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Characteristics

Reference temperature: $T_A = 25^\circ\text{C}$
Terminating source impedance: $Z_S = 150 \Omega$
Terminating load impedance: $Z_L = 1 \text{ k}\Omega$

		min.	typ.	max.	
Center frequency (center between 3 dB points)	f_C	—	30,72	—	MHz
Insertion attenuation Reference level for the following data	α 30,72 MHz	19,3	20,8	22,3	dB
Pass bandwidth					
$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	—	1,6	—	MHz
$\alpha_{\text{rel}} \leq 20 \text{ dB}$	$B_{20\text{dB}}$	—	2,4	—	MHz
$\alpha_{\text{rel}} \leq 30 \text{ dB}$	$B_{30\text{dB}}$	—	2,6	—	MHz
Relative attenuation	α_{rel}				
Lower sidelobe	22,00 ... 27,92 MHz	40,0	47,0	—	dB
	27,92 ... 28,82 MHz	37,0	44,0	—	dB
Lower sidelobe	32,62 ... 42,00 MHz	40,0	47,0	—	dB
Reflected wave signal suppression					
1,6 μs ... 6,0 μs after main pulse (test pulse 250 ns, carrier frequency 30,72 MHz)		38,0	45,0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
Aperture 50 kHz	29,95 ... 31,49 MHz	—	50	—	ns
Impedance at 30,72 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	2,0 \parallel 19,8	—	$\text{k}\Omega \parallel \text{pF}$
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	2,5 \parallel 10,1	—	$\text{k}\Omega \parallel \text{pF}$
Temperature coefficient of frequency	TC_f	—	-18	—	ppm/K



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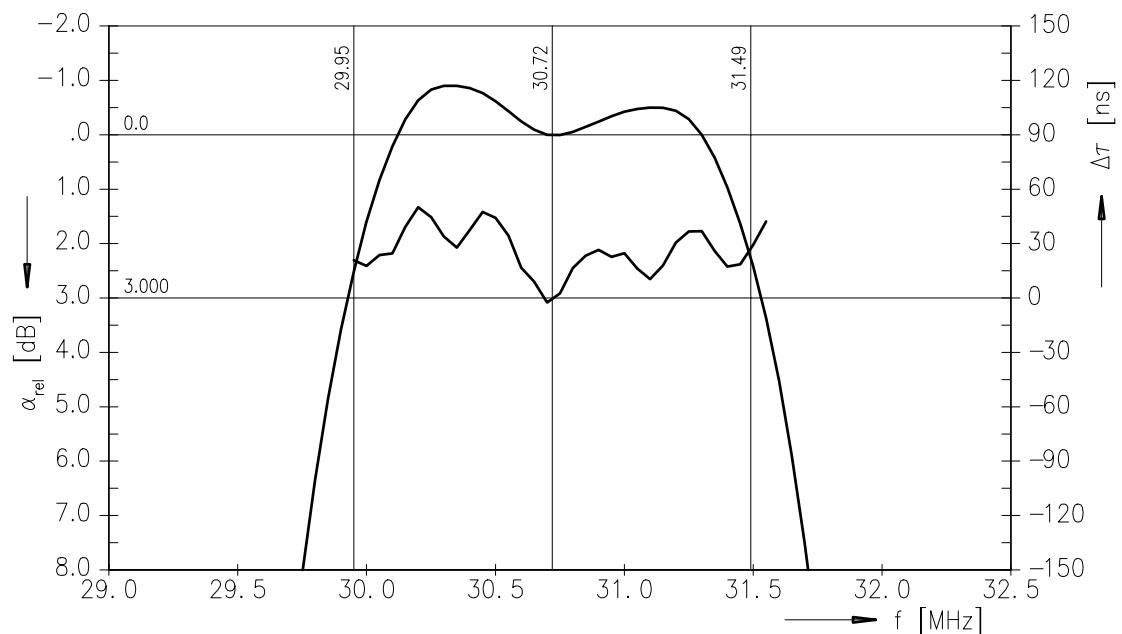
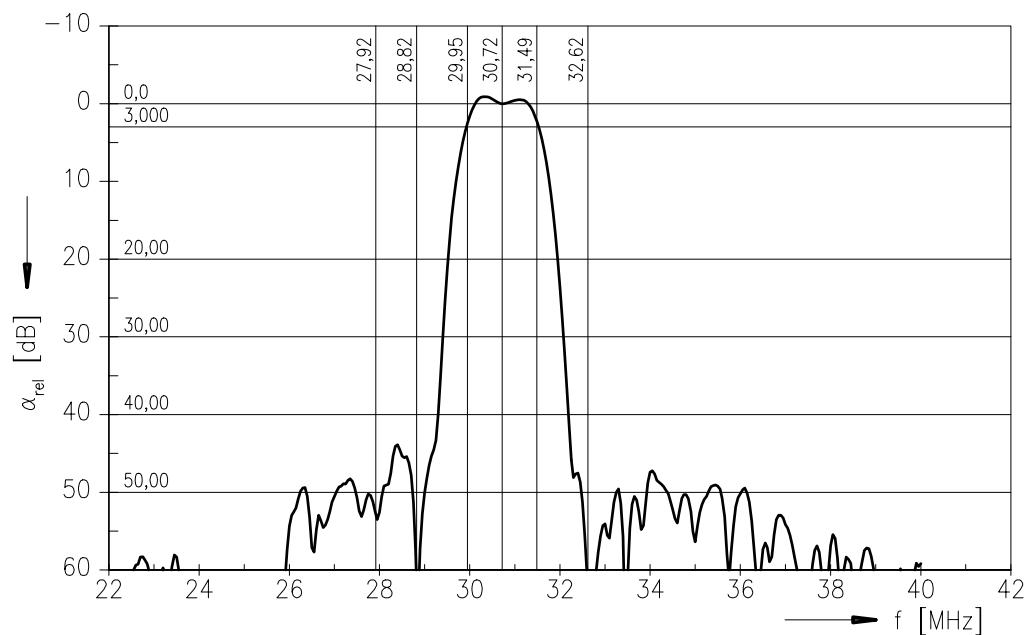
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Frequency response





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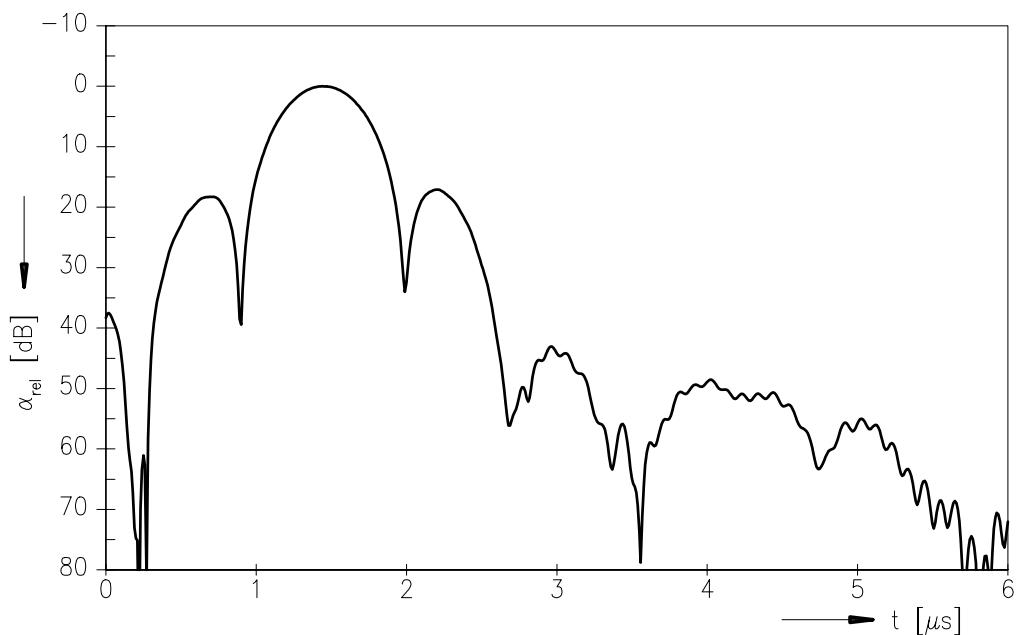
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Time domain response





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