



## Bandpass Filters for Digital Terrestrial TV Applications

**Series/Type:**        **X6874D**

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39361X6874D100	X6874N	2004-07-23	2004-09-30	

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at [www.epcos.com/sales](http://www.epcos.com/sales).



# *SAW Components*

*Data Sheet X 6874 D*





SAW Components

X 6874 D

Bandpass Filter

36,125 MHz

Data Sheet

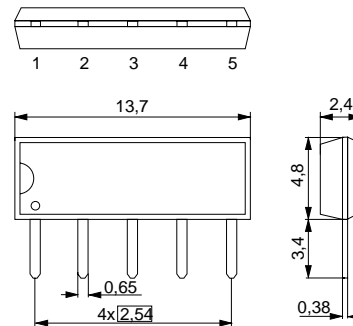
Duroplast package SIP5D

**Features**

- IF filter for digital cable TV
- Standard IC package

**Terminals**

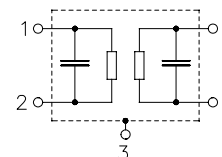
- Tinned CuFe alloy



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 6874 D	B39361-X6874-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


**SAW Components**
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**Bandpass Filter**
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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>Center frequency</b> (center between 10 dB points)	$f_C$	36,07	36,125	36,18	MHz
<b>Insertion attenuation</b> Reference level for the following data	$\alpha$ 36,13 MHz	20,2	21,7	23,2	dB
<b>Pass bandwidth</b>					
$\alpha_{rel} \leq 1\text{dB}$	$B_{1\text{dB}}$	—	7,5	—	MHz
$\alpha_{rel} \leq 3\text{dB}$	$B_{3\text{dB}}$	—	8,0	—	MHz
$\alpha_{rel} \leq 30\text{dB}$	$B_{30\text{dB}}$	—	9,5	—	MHz
<b>Relative attenuation</b>	$\alpha_{rel}$				
	32,32 MHz	—	1,2	—	dB
	39,93 MHz	0,4	1,4	2,4	dB
	32,13 MHz	2,0	3,2	4,4	dB
	40,13 MHz	2,0	3,2	4,4	dB
	31,25 MHz	34,0	47,0	—	dB
	47,25 MHz	42,0	55,0	—	dB
Lower sidelobe	25,00 ... 29,50 MHz	38,0	45,0	—	dB
	29,50 ... 31,25 MHz	34,0	41,0	—	dB
Upper sidelobe	41,00 ... 44,00 MHz	33,0	40,0	—	dB
	44,00 ... 50,00 MHz	38,0	47,0	—	dB
<b>Reflected wave signal suppression</b> 1,1 $\mu\text{s}$ ... 6,0 $\mu\text{s}$ after main pulse (test pulse 250 ns, carrier frequency 36,13 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 36,13 MHz)		50,0	56,0	—	dB
<b>Group delay ripple (p-p)</b>	$\Delta\tau$ 32,13 ... 40,13 MHz	—	40	—	ns
<b>Impedance at 36,13 MHz</b>					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	3,6    13,0	—	k $\Omega$    pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	2,9    3,9	—	k $\Omega$    pF
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K



SAW Components

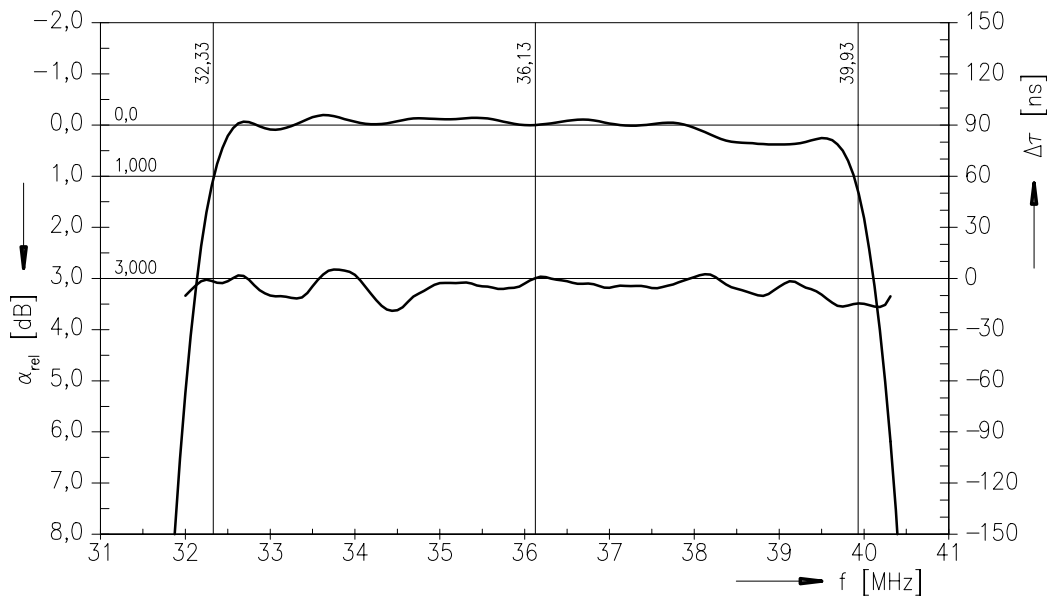
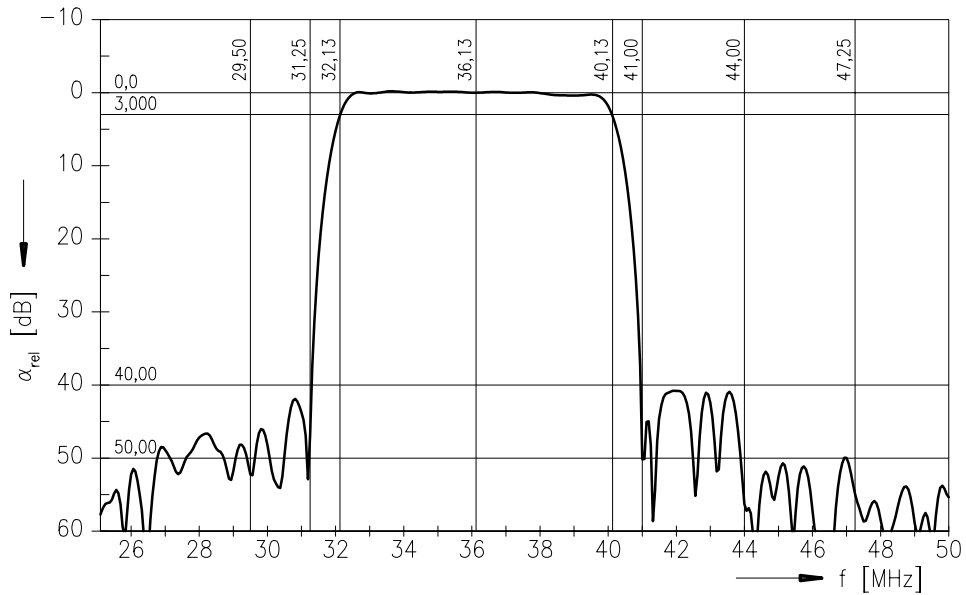
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Bandpass Filter

36,125 MHz

Data Sheet

Frequency response





SAW Components

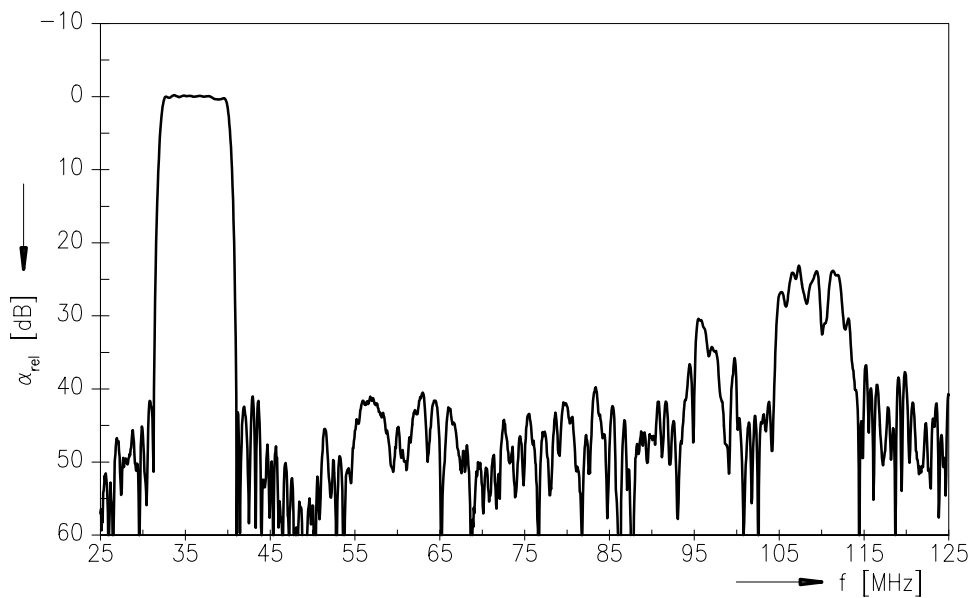
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Bandpass Filter

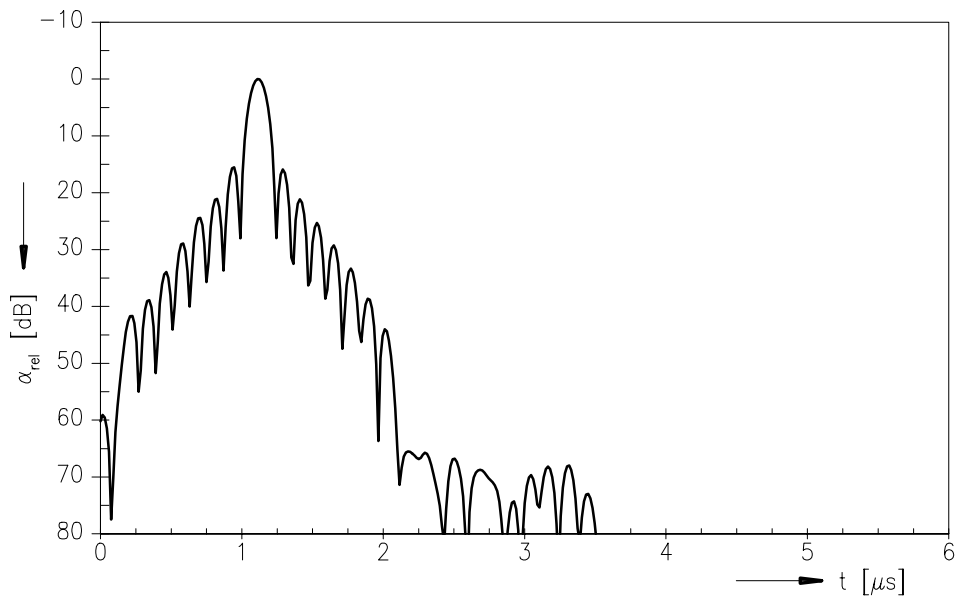
36,125 MHz

Data Sheet

Frequency response



Time domain response





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