



## SAW multimedia filters

### Series/Type: X6865D

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39361X6865N201		2011-01-14	2011-09-30	2012-09-30

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SAW Components

X 6865 D

SAW bandpass filter

36.125 MHz

### Data sheet

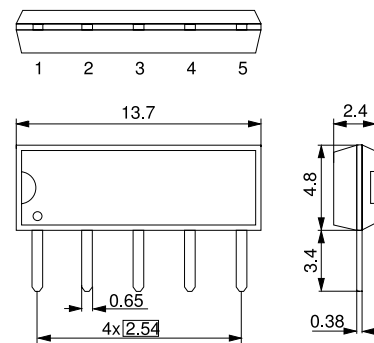
### Application

- Usable bandwidth 6.0 MHz



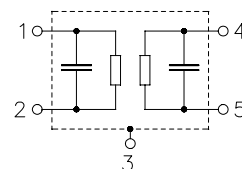
### Features

- Duroplast package **SIP5D**
- Approximate weight 0.5 g
- Standard IC package
- RoHS compatible
- Tinned CuFe alloy terminals



### Pin configuration

- 1 Input
- 2 Input - ground
- 3 Chip carrier - ground
- 4 Output
- 5 Output



Please read *cautions and warnings and important notes* at the end of this document.


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**X 6865 D**
**SAW bandpass filter**
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**Characteristics**

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. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	36.125	—	MHz
(center between 3 dB points)					
<b>Insertion attenuation</b>	$\alpha$				
Reference level for the following data	36.13 MHz	16.1	17.6	19.1	dB
<b>Pass bandwidth</b>					
$\alpha_{\text{rel}} \leq 3\text{ dB}$	$B_{3\text{dB}}$	5.8	6.0	6.2	MHz
$\alpha_{\text{rel}} \leq 30\text{ dB}$	$B_{30\text{dB}}$	7.4	7.6	7.8	MHz
<b>Relative attenuation</b>					
	$\alpha_{\text{rel}}$				
	33.59 MHz	-1.1	0.1	1.3	dB
	38.65 MHz	-0.8	0.4	1.6	dB
	33.12 MHz	1.3	2.5	3.7	dB
	39.12 MHz	1.9	3.1	4.3	dB
Lower sidelobe					
	25.00 ... 32.12 MHz	38.0	44.0	—	dB
Upper sidelobe					
	40.12 ... 41.42 MHz	36.0	40.0	—	dB
	41.42 ... 45.00 MHz	38.0	45.0	—	dB
<b>Reflected wave signal suppression</b>					
1.3 $\mu\text{s}$ ... 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>	$\Delta\tau$				
	33.12 ... 39.12 MHz	—	40	—	ns
<b>Impedance at 36.13 MHz</b>					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	2.2 $\parallel$ 15.3	—	k $\Omega$ $\parallel$ pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1.4 $\parallel$ 5.6	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K



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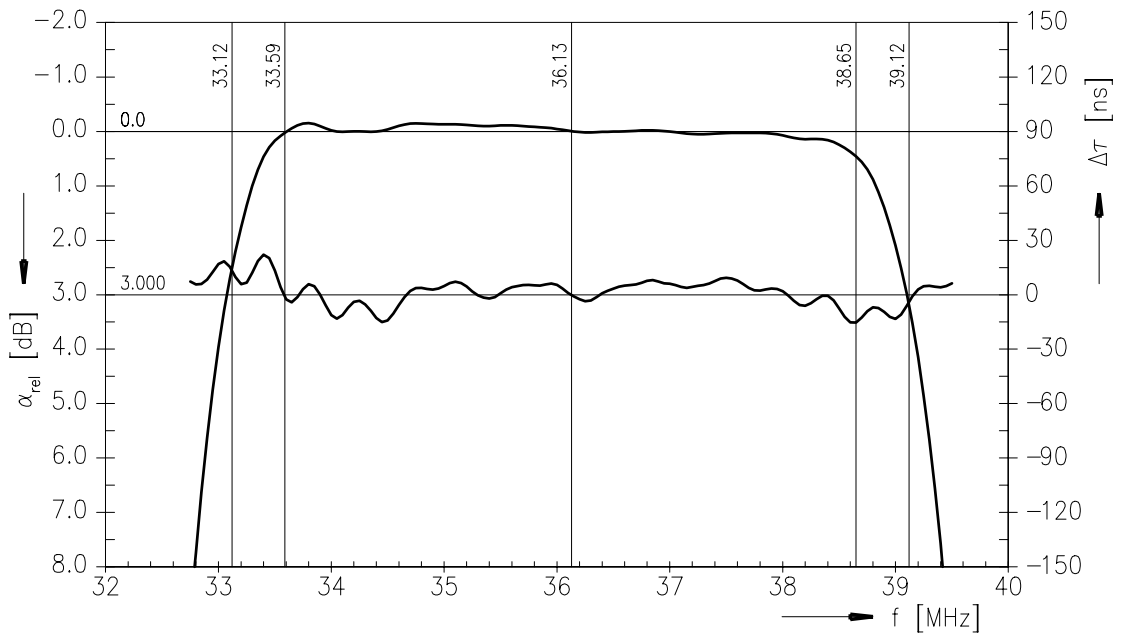
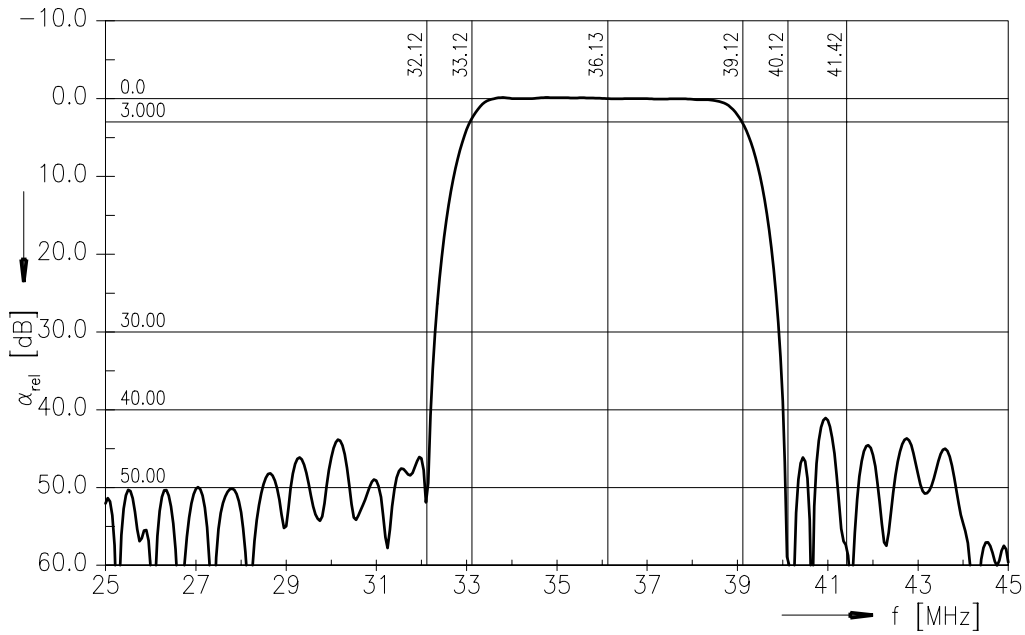
**Maximum ratings**

Operable temperature range	T	-25 / +65	°C	
Storage temperature range	T <sub>stg</sub>	-40 / +85	°C	
DC voltage	V <sub>DC</sub>	5	V	between any terminals
AC voltage	V <sub>pp</sub>	10	V	between any terminals



Data sheet

Frequency response

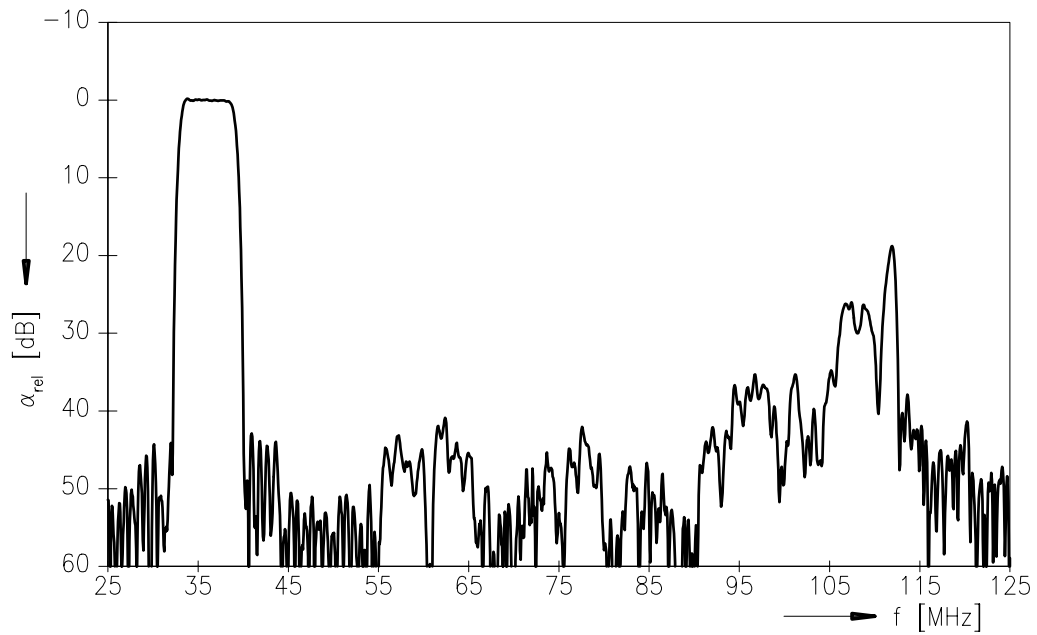


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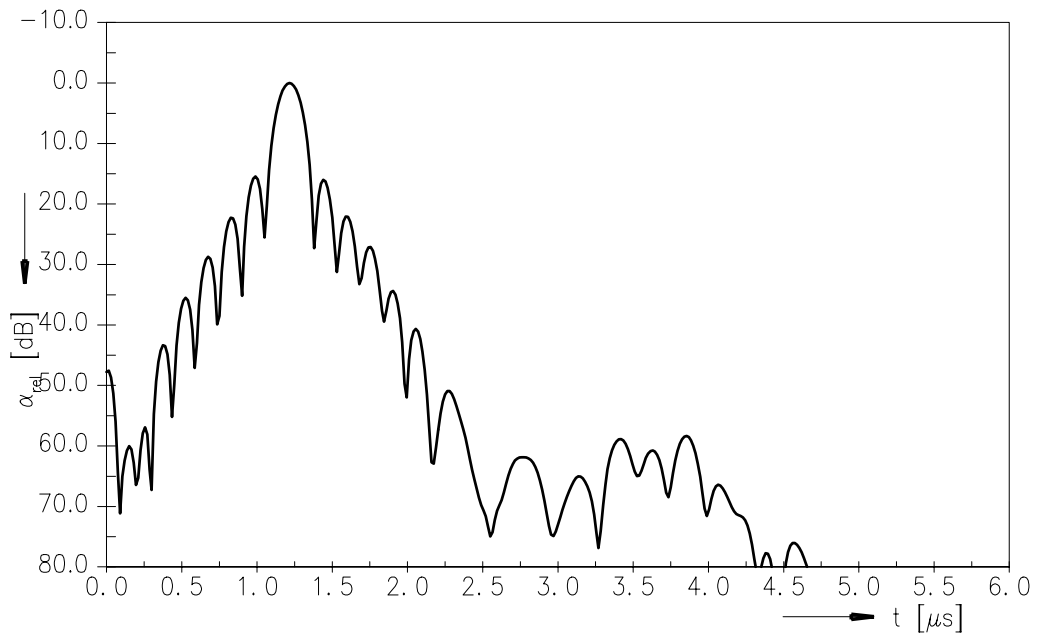


Data sheet

Frequency response



Time domain response





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Data sheet

## References

<b>Type</b>	X 6865 D
<b>Ordering code</b>	B39361-X6865-N201
<b>Marking and package</b>	C61157-A1-A21
<b>Packaging</b>	F61074-V8049-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	X6865N_NB.s4p
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."

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**Published by EPCOS AG  
Surface Acoustic Wave Components Division  
P.O. Box 80 17 09, 81617 Munich, GERMANY**

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