



# SAW multimedia filters

## Series/Type: X6964D

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39438X6964N201		2011-01-14	2011-09-30	2012-09-30

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).

© EPCOS AG 2015. Reproduction, publication and dissemination of this publication, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.

EPCOS AG is a TDK Group Company.

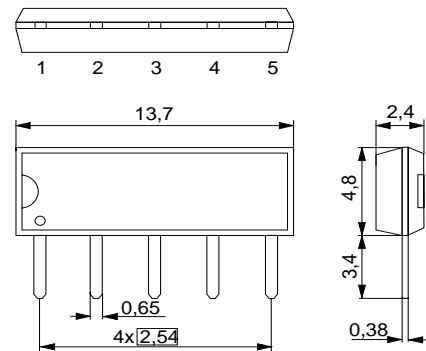
**SAW Components**
**X 6964 D**
**Bandpass Filter**
**43,75 MHz**
**Data Sheet**

 Duroplast package **SIP5D**
**Features**

- IF filter for digital cable TV
- Standard IC package

**Terminals**

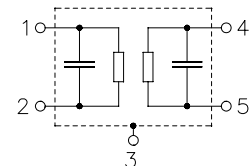
- Tinned CuFe alloy



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 6964 D	B39438-X6964-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

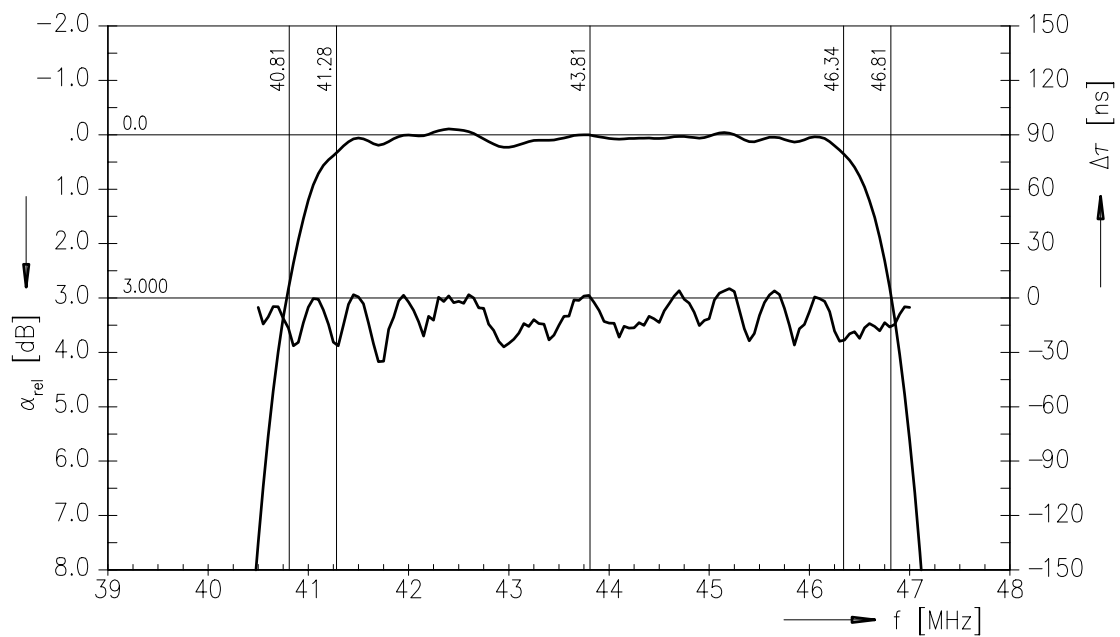
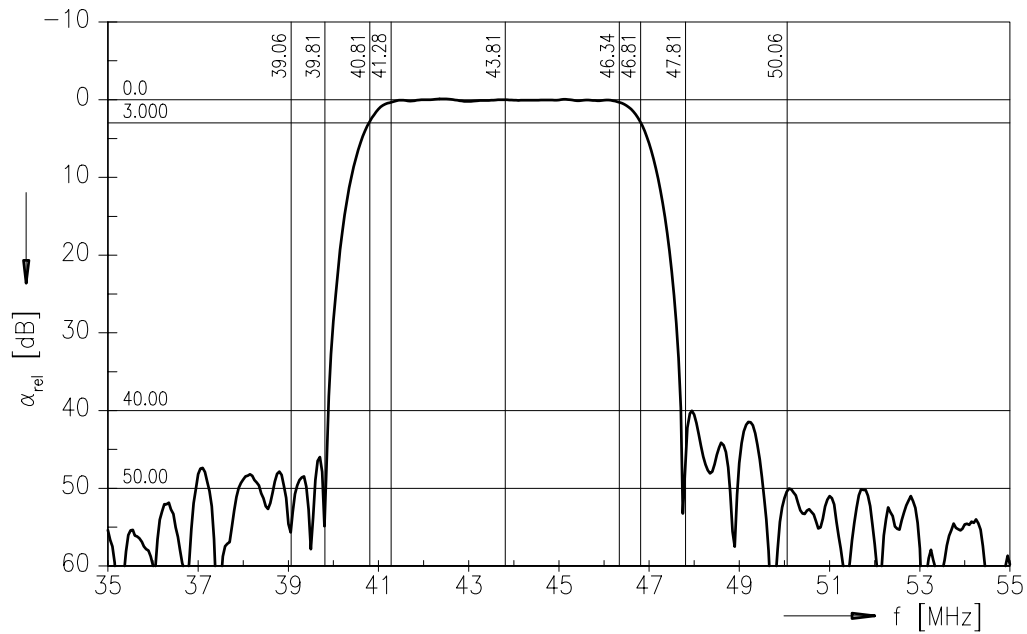
**SAW Components**
**X 6964 D**
**Bandpass Filter**
**43,75 MHz**
**Data Sheet**
**Characteristics**

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

		<b>min.</b>	<b>typ.</b>	<b>max.</b>	
<b>Center frequency</b> (center between 10 dB points)	$f_C$	(43,68)	(43,75)	(43,82)	MHz
<b>Insertion attenuation</b> Reference level for the following data	$\alpha$ 43,81 (43,75) MHz	13,3	14,8	16,3	dB
<b>Pass bandwidth</b> $\alpha_{\text{rel}} \leq 3\text{dB}$	$B_{3\text{dB}}$	—	6,0	—	MHz
$\alpha_{\text{rel}} \leq 30\text{dB}$	$B_{30\text{dB}}$	—	7,6	—	MHz
<b>Relative attenuation</b>	$\alpha_{\text{rel}}$				
	41,28 (41,22) MHz	—	0,3	—	dB
	46,34 (46,28) MHz	-0,8	0,2	1,2	dB
	40,81 (40,75) MHz	1,5	2,7	3,9	dB
	46,81 (46,75) MHz	1,5	2,7	3,9	dB
	39,81 (39,75) MHz	38,0	53,0	—	dB
	47,81 (47,75) MHz	37,0	48,0	—	dB
<b>Lower sidelobe</b>					
	35,06 ... 39,06 (35,00 ... 39,00) MHz	42,0	48,0	—	dB
	39,06 ... 39,81 (39,00 ... 39,75) MHz	37,0	46,0	—	dB
<b>Upper sidelobe</b>					
	47,81 ... 50,06 (47,75 ... 50,00) MHz	36,0	41,0	—	dB
	50,06 ... 55,06 (50,00 ... 55,00) MHz	42,0	48,0	—	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 43,81 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 43,81 MHz)		50,0	56,0	—	dB
<b>Group delay ripple (p-p)</b>	$\Delta\tau$	—	40	—	ns
<b>Impedance at 43,81 MHz</b>					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	1,1 $\parallel$ 16,4	—	$\text{k}\Omega \parallel \text{pF}$
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1,1 $\parallel$ 5,0	—	$\text{k}\Omega \parallel \text{pF}$
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K

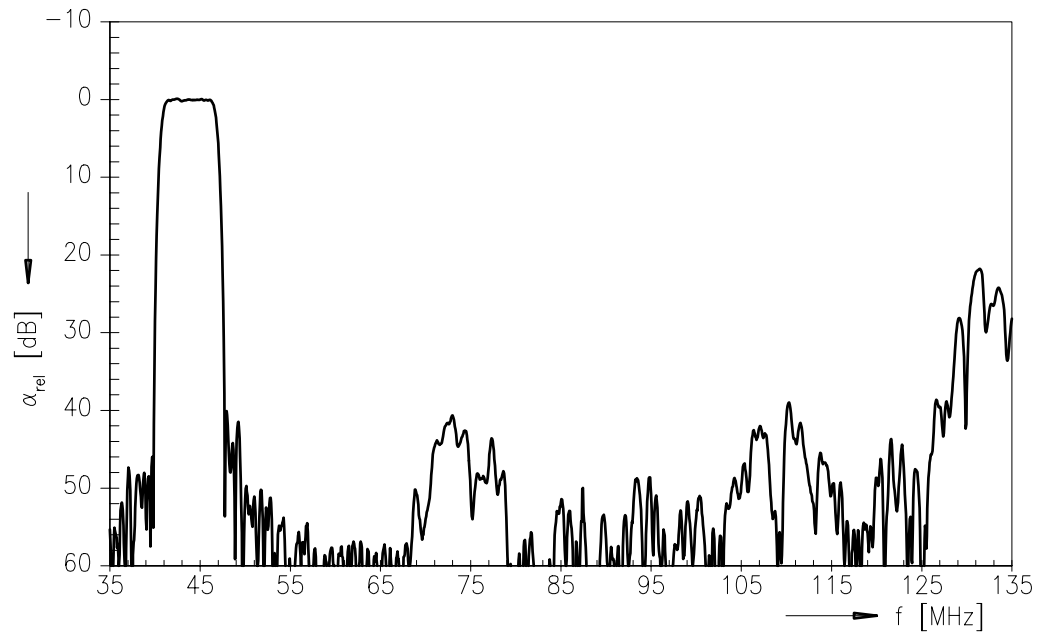
Data Sheet

Frequency response

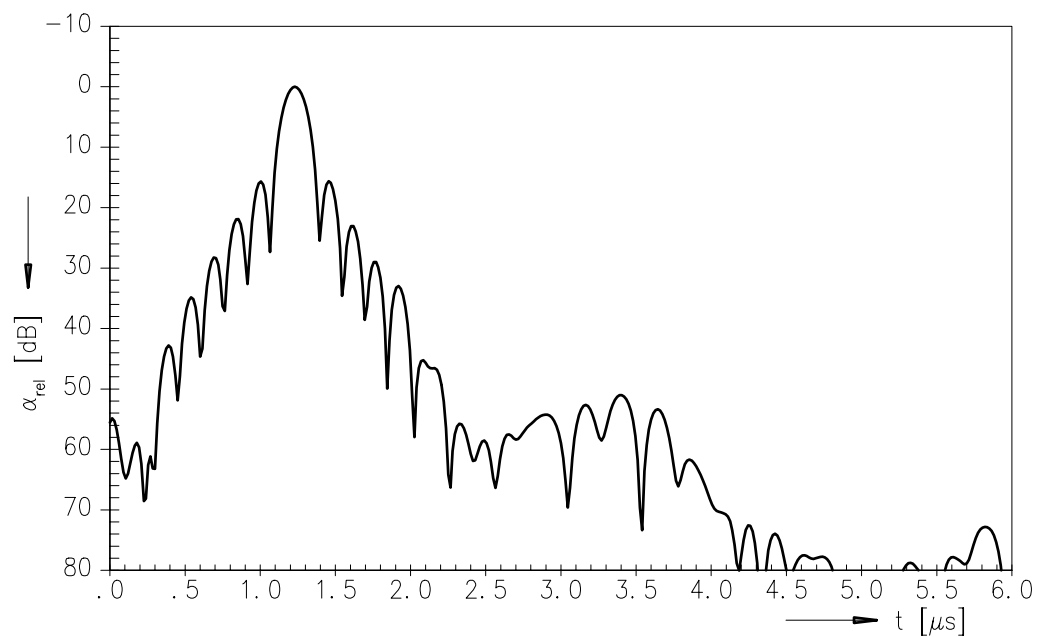


Data Sheet

Frequency response



Time domain response



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

© EPCOS AG 2004. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.