



# SAW Components

Data Sheet B3866

Data Sheet

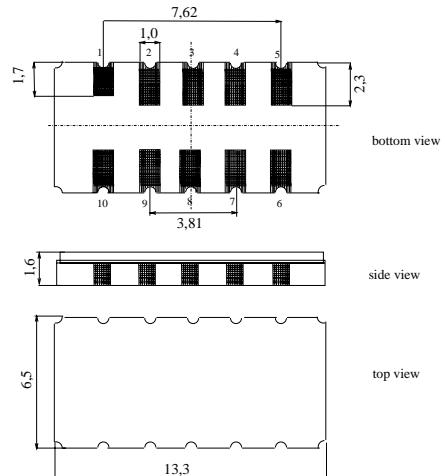


**SAW Components**
**B3866**
**Low-Loss Filter**
**201,0 MHz**
**Data Sheet**
**Ceramic package DCC12A**
**Features**

- Low-loss IF filter for GSM / EDGE base station
- Channel selection in PCS, DCS systems
- Temperature stable
- Balanced and unbalanced operation possible
- Ceramic SMD package

**Terminals**

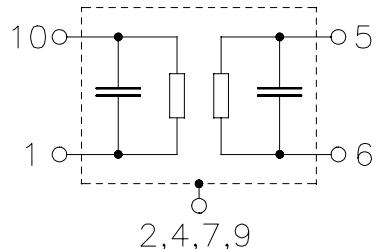
- Gold plated



Dimensions in mm, approx. weight 0,4 g

**Pin configuration**

1, 10	Balanced input
5, 6	Balanced output
3, 8	Ground
2, 4, 7, 9	Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B3866	B39201-B3866-H510	C61157-A7-A94	F61074-V8163-Z000

**Electrostatic Sensitive Device (ESD)**
**Maximum ratings**

Operable temperature range	$T_A$	-30 / +85	°C	
Storage temperature range	$T_{stg}$	-30 / +85	°C	
DC voltage	$V_{DC}$	5	V	between terminals 1 and 10
		0	V	else
Source power	$P_s$	10	dBm	

**SAW Components****B3866****Low-Loss Filter****201,0 MHz****Data Sheet****Characteristics**

Operating temperature range:

 $T_A = 0 - 70^\circ\text{C}$ 

Terminating source impedance:

 $Z_S = 80 \Omega \parallel 30 \text{ nH}$ 

Terminating load impedance:

 $Z_L = 90 \Omega \parallel 35 \text{ nH}$ 

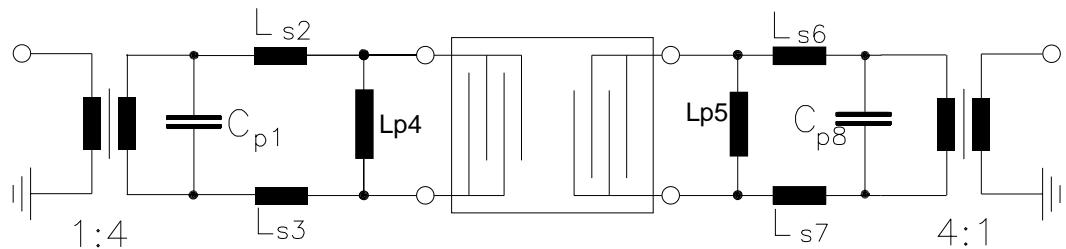
		<b>min.</b>	<b>typ.</b>	<b>max.</b>	
<b>Nominal frequency</b>	$f_N$	—	201,0	—	MHz
<b>Minimum insertion attenuation</b> (including matching network)	$\alpha_{\min}$	—	4,0	6,0	dB
<b>Passband width</b> $\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3,0\text{dB}}$	—	300	—	kHz
<b>Amplitude ripple in passband</b> $f_N \pm 80 \text{ kHz}$	$\Delta\alpha_{\text{rel}}$	—	$\pm 0,2$	$\pm 1,0$	dB
<b>Absolute group delay</b> (at $f_N$ )	$\tau$	—	2,2	—	$\mu\text{s}$
<b>Group delay ripple</b> (p-p) $f_N \pm 80 \text{ kHz}$	$\Delta\tau$	—	0,7	1,5	$\mu\text{s}$
<b>Relative attenuation</b> (relative to $\alpha_{\min}$ )	$\alpha_{\text{rel}}$				
$f_N \pm 200 \text{ kHz} \dots f_N \pm 300 \text{ kHz}$		3	8	—	dB
$f_N \pm 300 \text{ kHz} \dots f_N \pm 400 \text{ kHz}$		13	20	—	dB
$f_N \pm 400 \text{ kHz} \dots f_N \pm 700 \text{ kHz}$		20	30	—	dB
$f_N \pm 700 \text{ kHz} \dots f_N \pm 1600 \text{ kHz}$		27	40	—	dB
$f_N \pm 1600 \text{ kHz} \dots f_N \pm 3000 \text{ kHz}$		30	45	—	dB
$f_N \pm 3000 \text{ kHz} \dots f_N \pm 6000 \text{ kHz}$		33	55	—	dB
$f_N \pm 6000 \text{ kHz} \dots f_N \pm 35000 \text{ kHz}$		40	55	—	dB
<b>IM3 level</b> (Input level -17 dBm)					
$f_N \pm 800 \text{ kHz}$		—	—	-110	dBm
$f_N \pm 1600 \text{ kHz}$		—	—	-110	dBm
<b>Temperature coefficient of frequency<sup>1)</sup></b>	$TC_f$	—	-0,036	—	ppm/K <sup>2</sup>
<b>Turnover temperature</b>	$T_0$	—	35	—	$^\circ\text{C}$

1) Temperature dependance of  $f_c$ :  $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

**Matching network to 200  $\Omega$** 

4:1 transformers are only required for measurement in a 50  $\Omega$  environment  
 (element values depend on PCB layout)

$$\begin{array}{ll}
 C_{p1} = 6,8 \text{ pF} & L_{p5} = 33 \text{ nH} \\
 L_{s2} = 27 \text{ nH} & L_{s6} = 27 \text{ nH} \\
 L_{s3} = 27 \text{ nH} & L_{s7} = 27 \text{ nH} \\
 L_{p4} = 33 \text{ nH} & C_{p8} = 5,6 \text{ pF}
 \end{array}$$



**SAW Components**

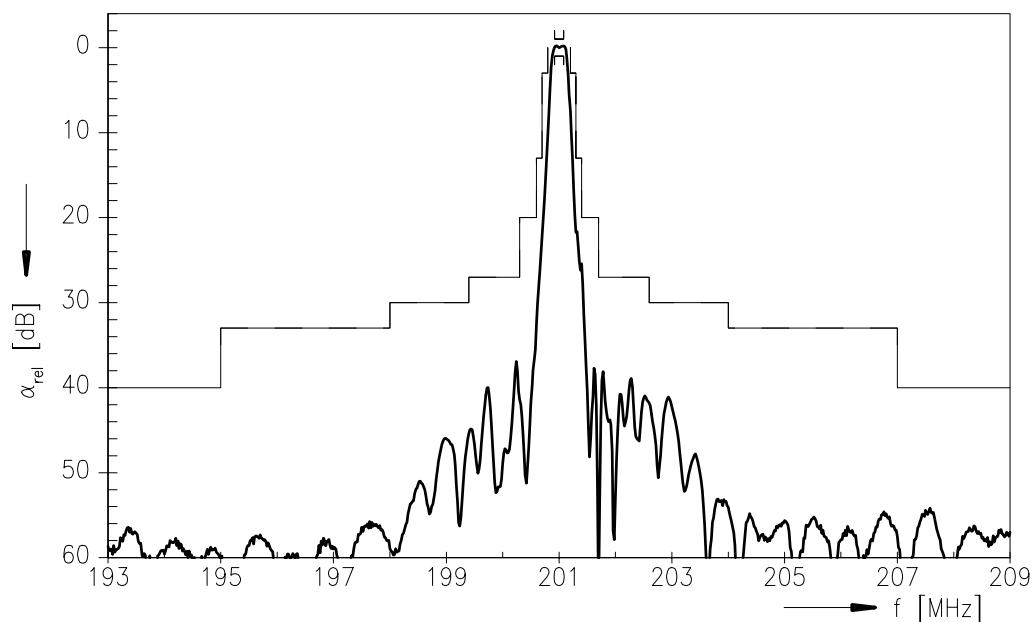
**B3866**

**Low-Loss Filter**

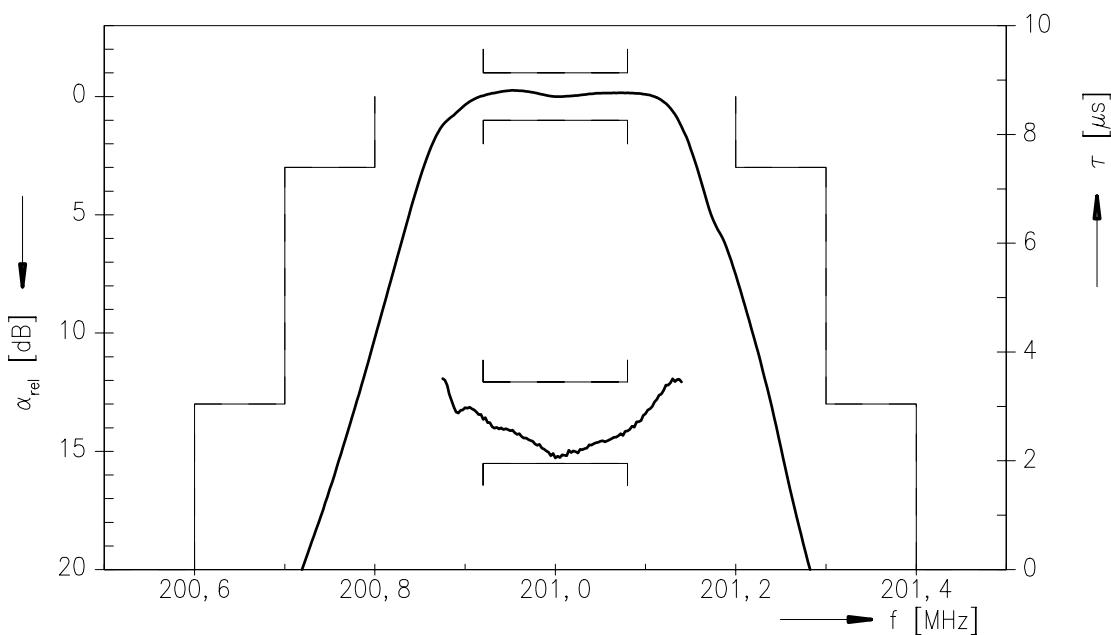
**201,0 MHz**

**Data Sheet**

**Transfer function**



**Transfer function (pass band)**





**SAW Components**

**B3866**

**Low-Loss Filter**

**201,0 MHz**

**Data Sheet**

**Published by EPCOS AG**

**Surface Acoustic Wave Components Division, SAW MC IS**

**P.O. Box 80 17 09, 81617 Munich, GERMANY**

© EPCOS AG 2002. 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.