



SAW Components

Data Sheet B5000

Data Sheet

An abstract, grayscale graphic featuring a stylized, three-dimensional representation of the EPCOS logo. The letters "EPCOS" are rendered in a bold, sans-serif font, appearing to be part of a larger, curved structure that resembles a globe or a stylized wave. The background is dark and textured, with light reflecting off the surfaces of the logo.



SAW Components

B5000

Low-Loss Filter

190,0 MHz

Data Sheet

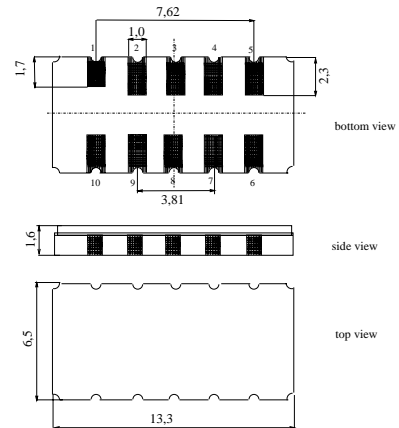
Ceramic package **DCC12A**

Features

- Low-loss IF filter for GSM base stations
- Ceramic SMD package
- Temperature stable

Terminals

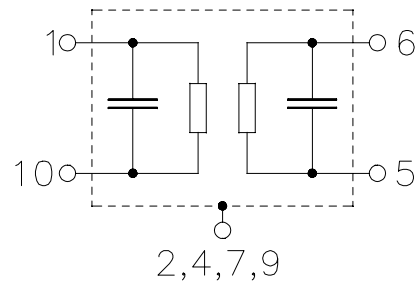
- Gold plated



Dimensions in mm, aprox. weight 0,4 g

Pin configuration

1	Input
10	Input ground
6	Output
5	Output ground
2, 4, 7, 9	Case ground
3, 8	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B5000	B39191-B5000-H510	C61157-A7-A94	F61074-V8163-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	-30 / +85	°C	
Storage temperature range	T_{stg}	-40 / +85	°C	
DC voltage	V_{DC}	0	V	
Source power	P_s	10	dBm	



SAW Components

B5000

Low-Loss Filter

190,0 MHz

Data Sheet

Characteristics

Operating temperature range:

$T = 0 - 70\text{ °C}$

Terminating source impedance:

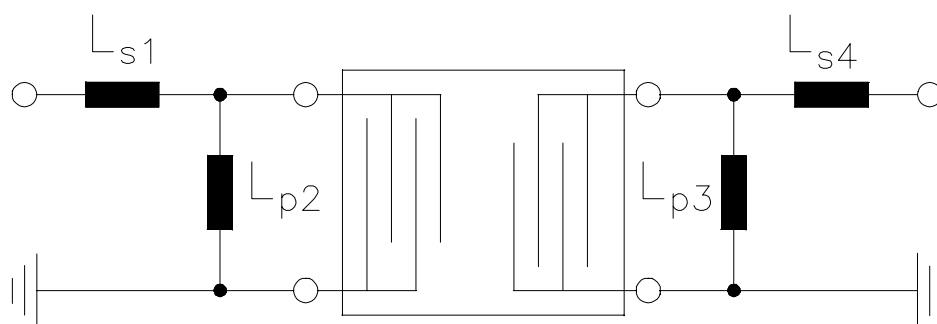
$Z_S = 50\ \Omega$ unbalanced and matching network

Terminating load impedance:

$Z_L = 50\ \Omega$ unbalanced and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	190,0	—	MHz
Insertion attenuation at f_N (including matching network)	α_N	—	3,5	6,0	dB
Passband width	$\alpha_{rel} \leq 3\text{ dB}$				
	$B_{3,0dB}$	—	0,29	—	MHz
Amplitude ripple	$f_N \pm 70\text{ kHz}$				
	$\Delta\alpha_{rel}$	—	$\pm 0,3$	$\pm 1,0$	dB
Group delay ripple (p-p)	$f_N \pm 70\text{ kHz}$				
	$\Delta\tau$	—	0,8	—	μs
Relative attenuation (relative to α_N)	α_{rel}				
$f_N \pm 330\text{ kHz} \dots f_N \pm 500\text{ kHz}$		27	40	—	dB
$f_N \pm 500\text{ kHz} \dots f_N \pm 50\text{ MHz}$		40	50	—	dB
Temperature coefficient of frequency ¹⁾	TC_f	—	- 0,036	—	ppm/K ²
Turnover temperature	T_0	—	35	—	°C

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

**SAW Components****B5000****Low-Loss Filter****190,0 MHz****Data Sheet****Matching network to 50 Ω :**

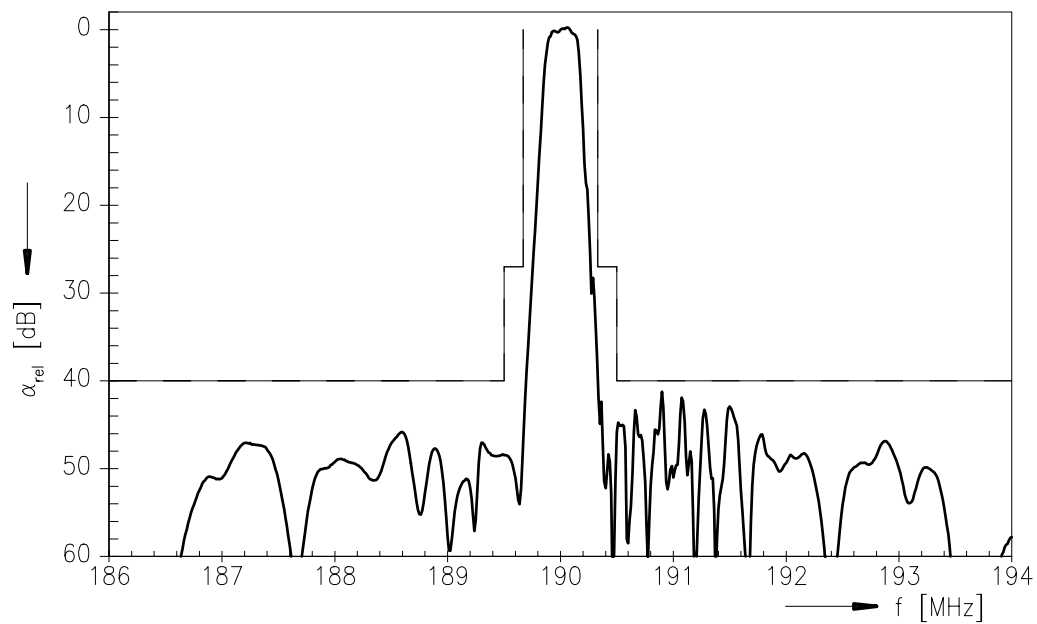
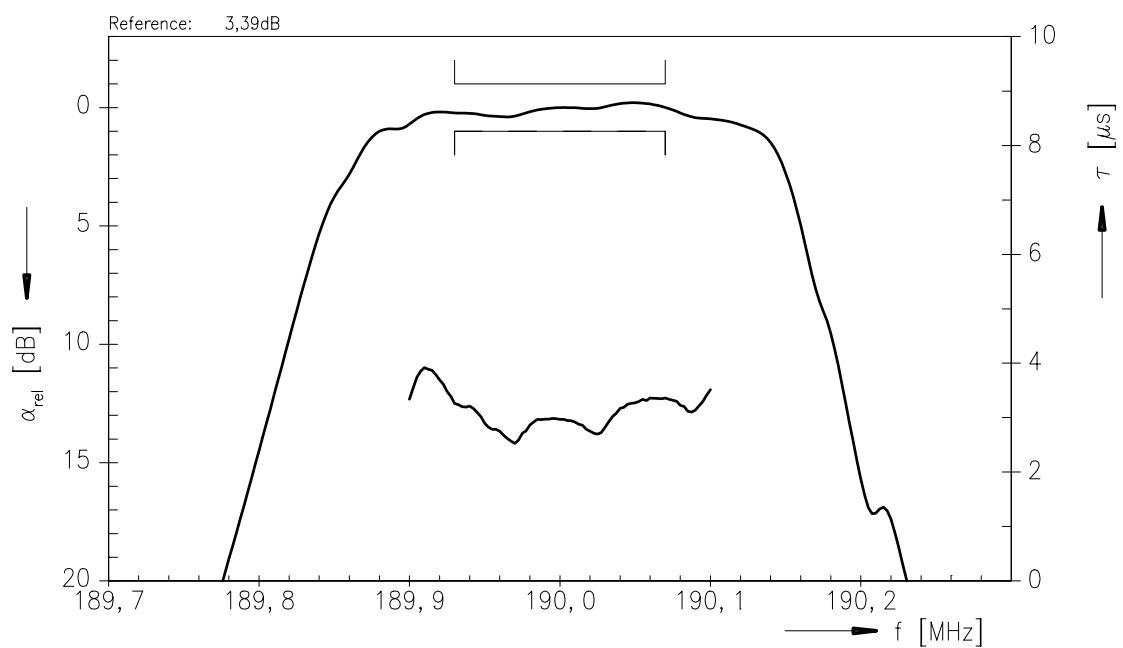
$$L_{s1} = 8,2 \text{ nH}$$

$$L_{p2} = 22 \text{ nH}$$

$$L_{p3} = 27 \text{ nH}$$

$$L_{s4} = 8,2 \text{ nH}$$

Element values depend upon PCB layout.

**SAW Components****B5000****Low-Loss Filter****190,0 MHz****Data Sheet****Transfer function****Transfer function (pass band)**



SAW Components	B5000
Low-Loss Filter	190,0 MHz

Data Sheet

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

© EPCOS AG 2003. 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.