



SAW Components

Data Sheet B5000

Data Sheet

A large, stylized, 3D-rendered graphic of the word "EPCOS" in a light gray, sans-serif font. The letters are tilted and appear to be floating or emerging from a dark, textured background that resembles a globe or a complex circuit board. The overall effect is a sense of depth and modern technology.



SAW Components

B5000

Low-Loss Filter

190,0 MHz

Data Sheet

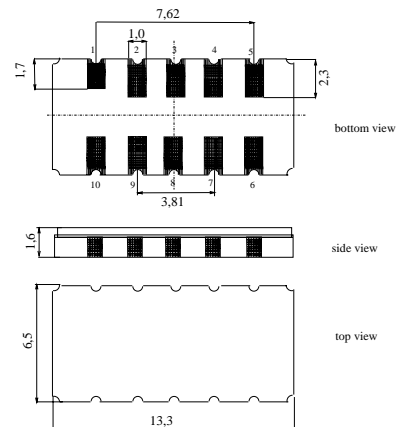
Ceramic package **DCC12A**

Features

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

Terminals

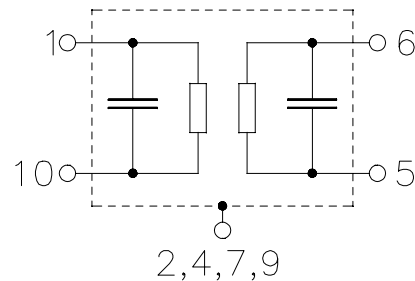
- Gold plated



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	



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Characteristics

Operating temperature range:

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

Terminating source impedance:

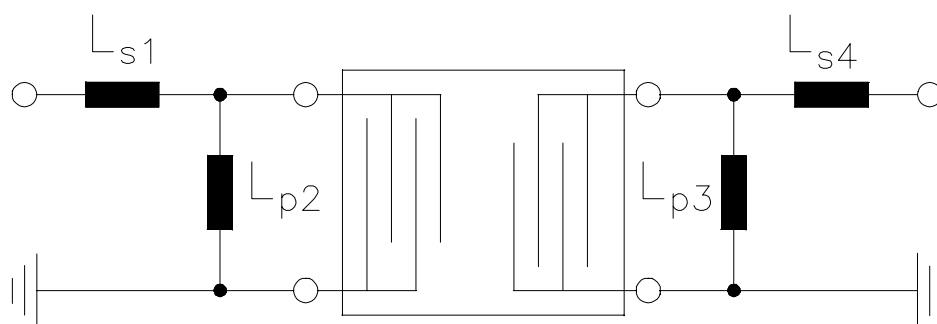
$Z_S = 50\text{ }\Omega$ unbalanced and matching network

Terminating load impedance:

$Z_L = 50\text{ }\Omega$ 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	$\alpha_{\text{rel}} \leq 3\text{ dB}$	$B_{3,0\text{dB}}$	—	0,29	— MHz
Amplitude ripple	$f_N \pm 70\text{ kHz}$	$\Delta\alpha_{\text{rel}}$	—	$\pm 0,3$	$\pm 1,0$ 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	—	$^{\circ}\text{C}$

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

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

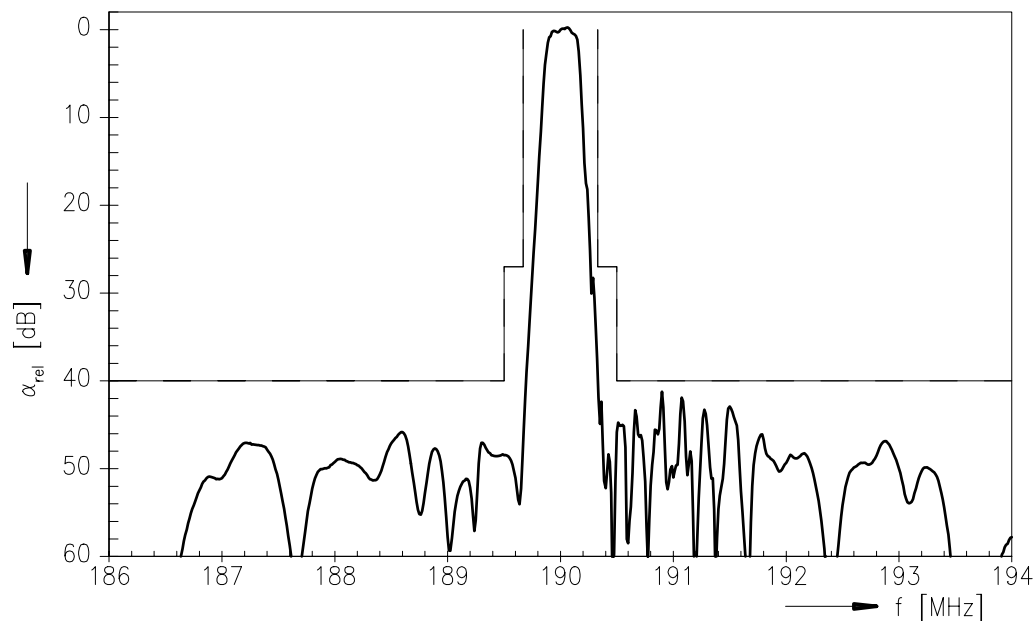
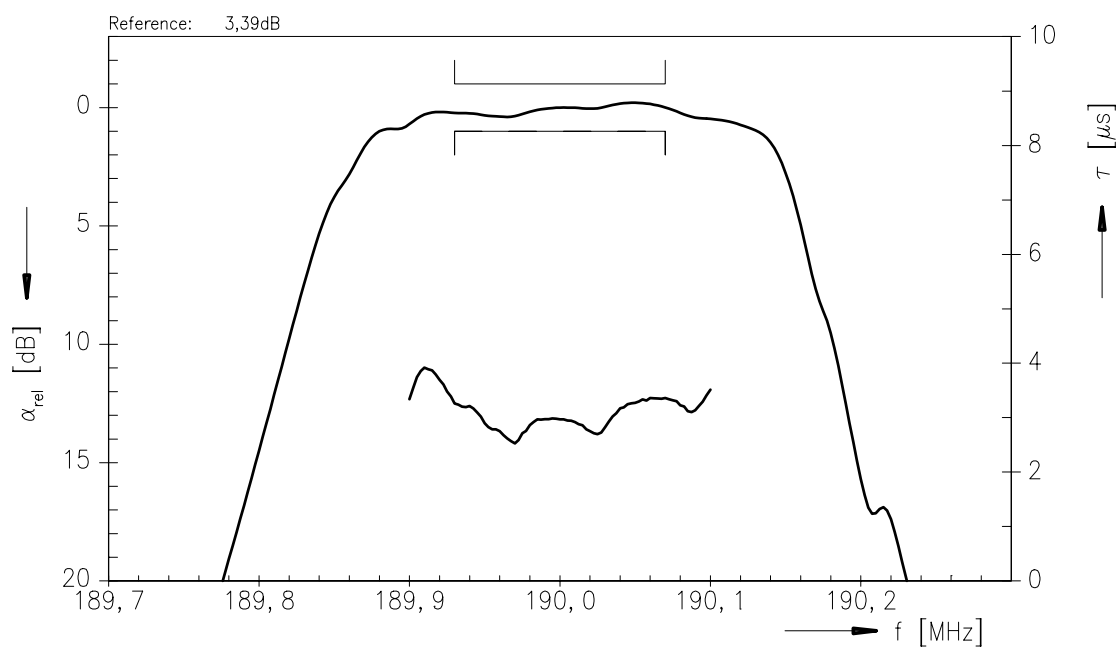
$$L_{s1} = 8,2 \text{ nH}$$

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

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

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

Element values depend upon PCB layout.

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



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Low-Loss Filter	190,0 MHz

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