EPCOS

SAW Components

Data Sheet B5000

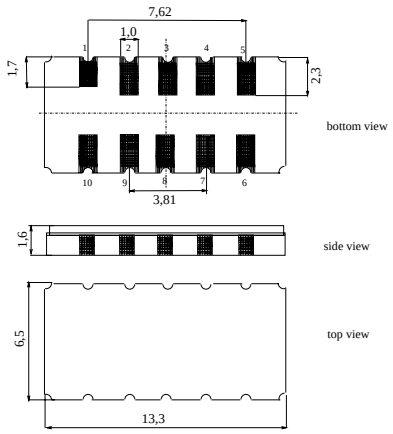
Ceramic package **DCC12A**

Features

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

Terminals

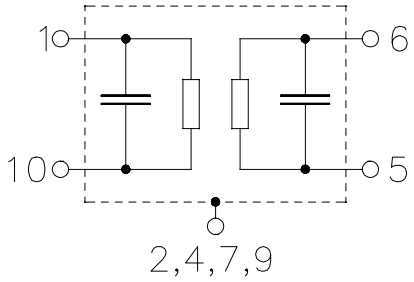
- Gold plated



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 **S**ensitive **D**evice (**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	

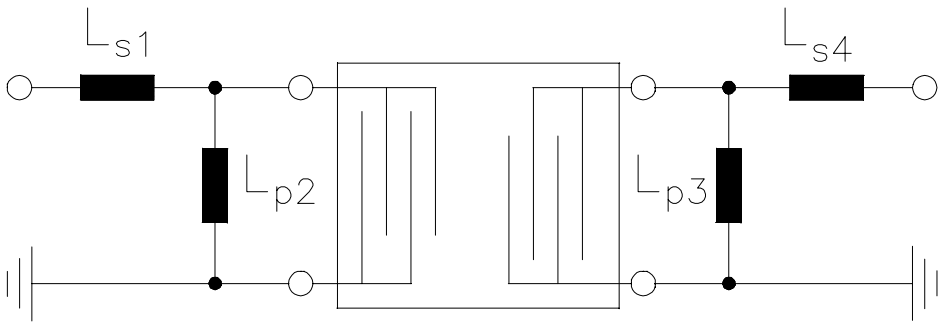
Characteristics

Operating temperature range: T = 0 - 70 ˚C
Terminating source impedance: Z_S = 50 Ω unbalanced and matching network
Terminating load impedance: Z_L = 50 Ω 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 $\alpha_{rel} \leq 3$ dB	$B_{3,0dB}$	—	0,29	—	MHz
Amplitude ripple $f_N \pm 70$ kHz	$\Delta\alpha_{rel}$	—	±0,3	±1,0	dB
Group delay ripple (p-p) $f_N \pm 70$ kHz	$\Delta\tau$	—	0,8	—	µs
Relative attenuation (relative to α_N)	α_{rel}				
$f_N \pm 330$ kHz ... $f_N \pm 500$ kHz		27	40	—	dB
$f_N \pm 500$ kHz ... $f_N \pm$ 50 MHz		40	50	—	dB
Temperature coefficient of frequency [1]	TC_f	—	– 0,036	—	ppm/K²
Turnover temperature	T_0	—	35	—	˚C

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

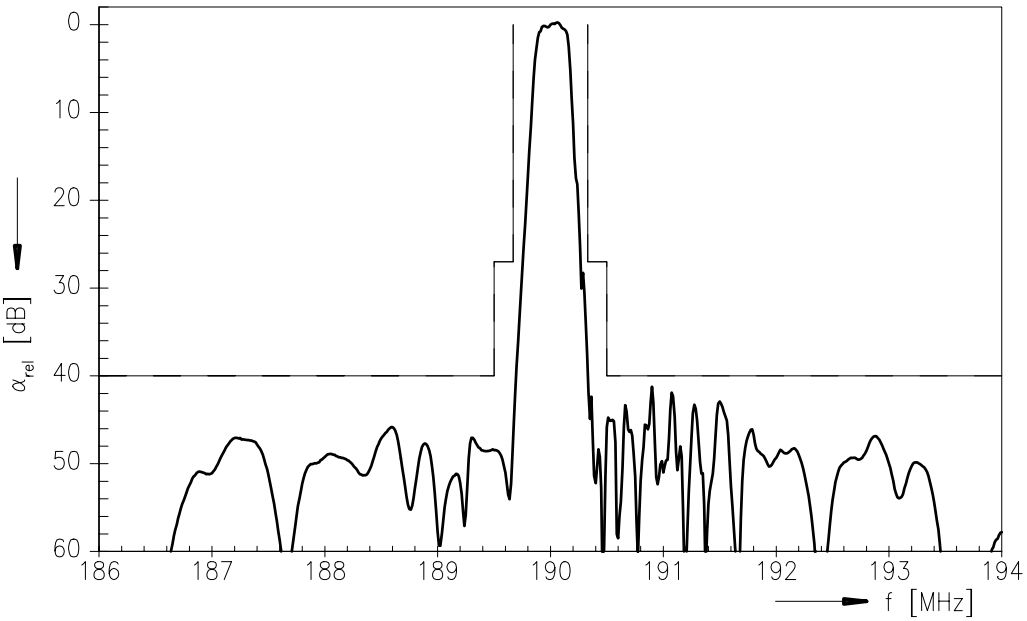
Matching network to 50 Ω:



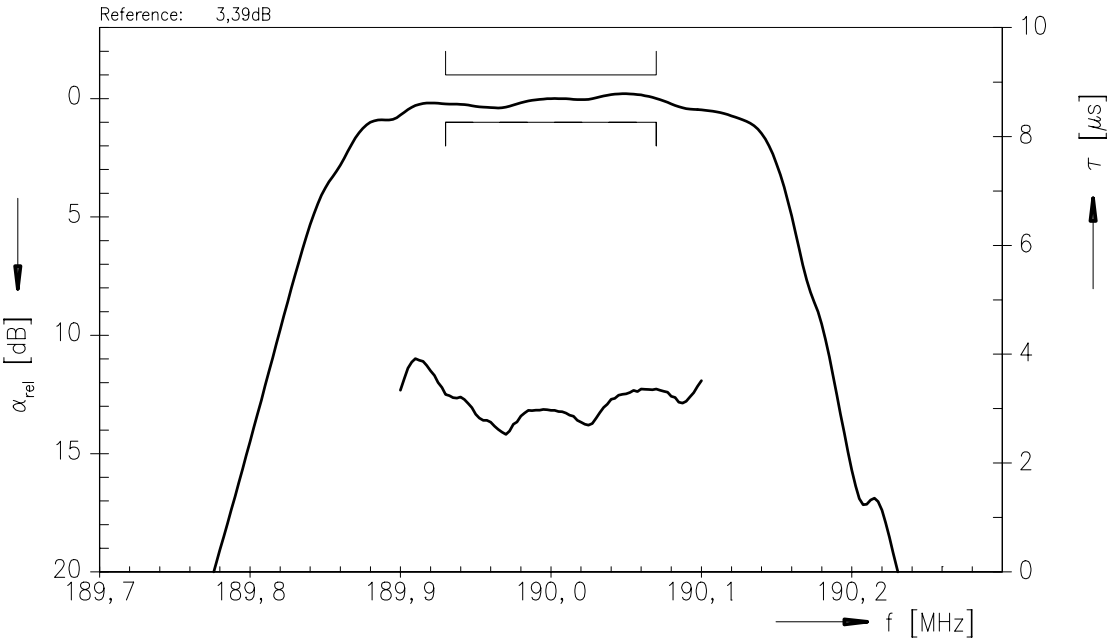
L_{s1} = 8,2 nH
L_{p2} = 22 nH
L_{p3} = 27 nH
L_{s4} = 8,2 nH

Element values depend upon PCB layout.

Transfer function



Transfer function (pass band)



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

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