EPCOS

SAW Components

Data Sheet B5000

Data Sheet

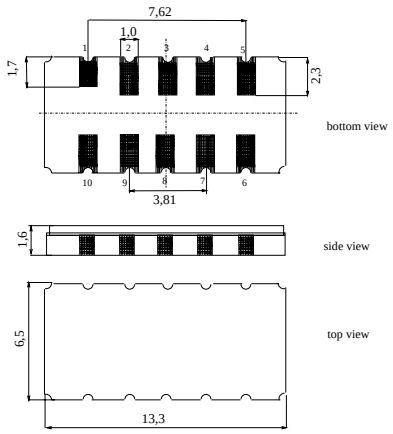
Ceramic package **DCC12A**

Features

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

Terminals

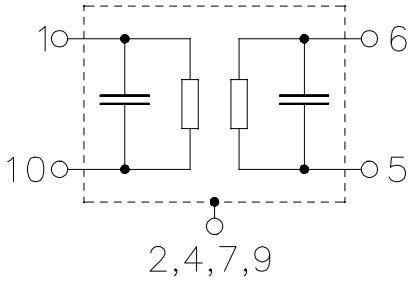
- Gold plated



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 **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	

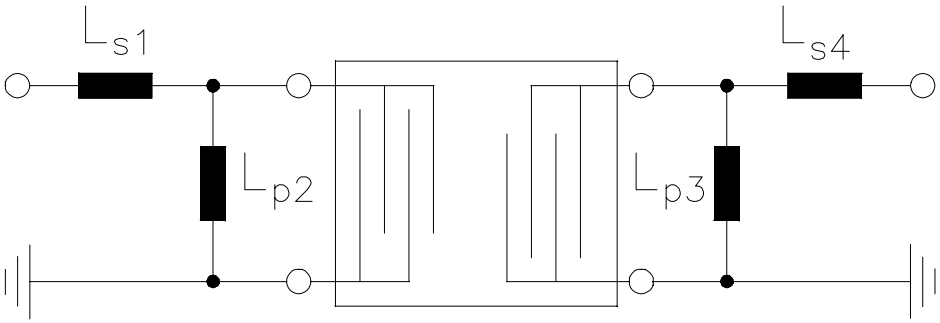
Characteristics

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	$\Delta\alpha_{rel}$				
$f_N \pm 70$ kHz		—	±0,3	±1,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N \pm 70$ kHz		—	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: $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

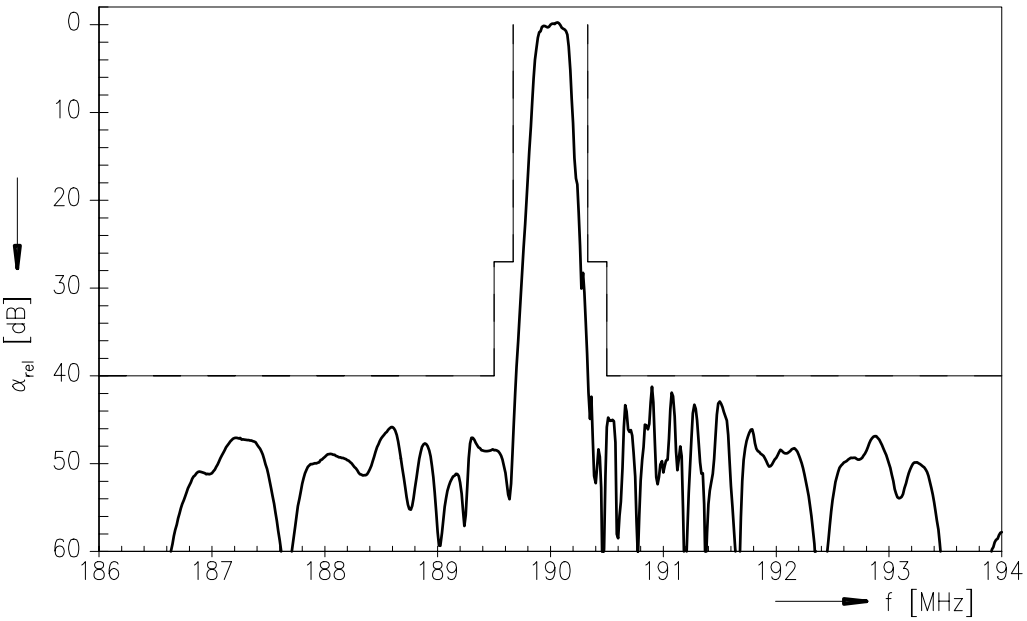
Matching network to 50 Ω:



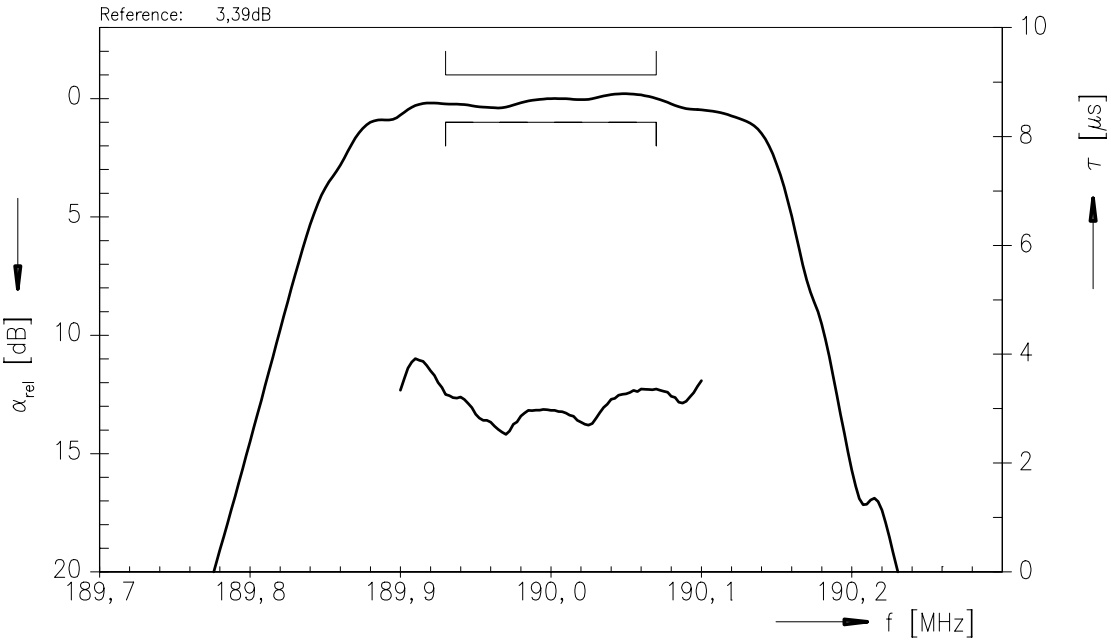
L_{s1} = 8,2 nH
L_{p2} = 22 nH
L_{p3} = 27 nH
L_{s4} = 8,2 nH

Element values depend upon PCB layout.

Transfer function



Transfer function (pass band)



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