



SAW Components

Data Sheet B5000





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B5000

Low-Loss Filter

190,0 MHz

Data Sheet

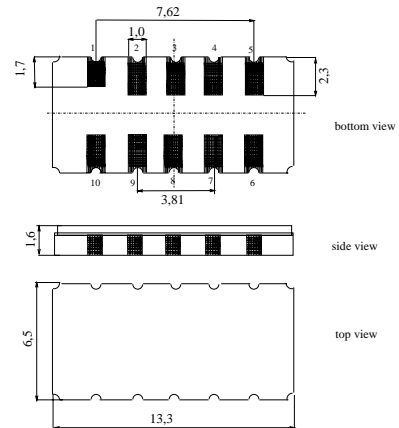
Ceramic package DCC12A

Features

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

Terminals

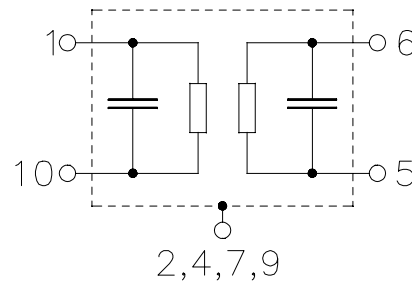
- Gold plated



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:

 $Z_S = 50\ \Omega$ 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	—	$^{\circ}\text{C}$

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



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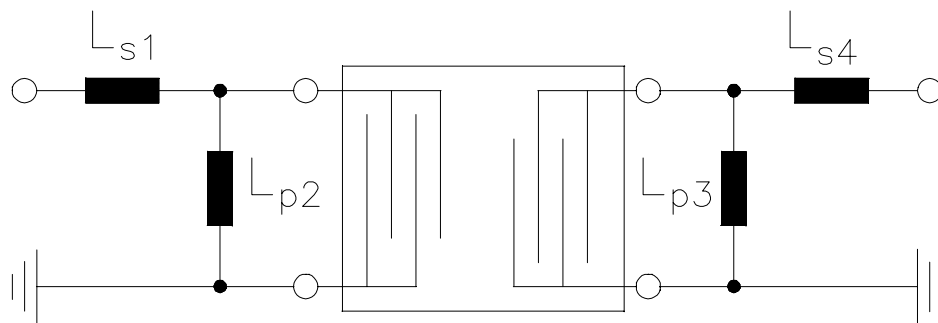
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Matching network to 50 Ω :



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

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

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

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

Element values depend upon PCB layout.



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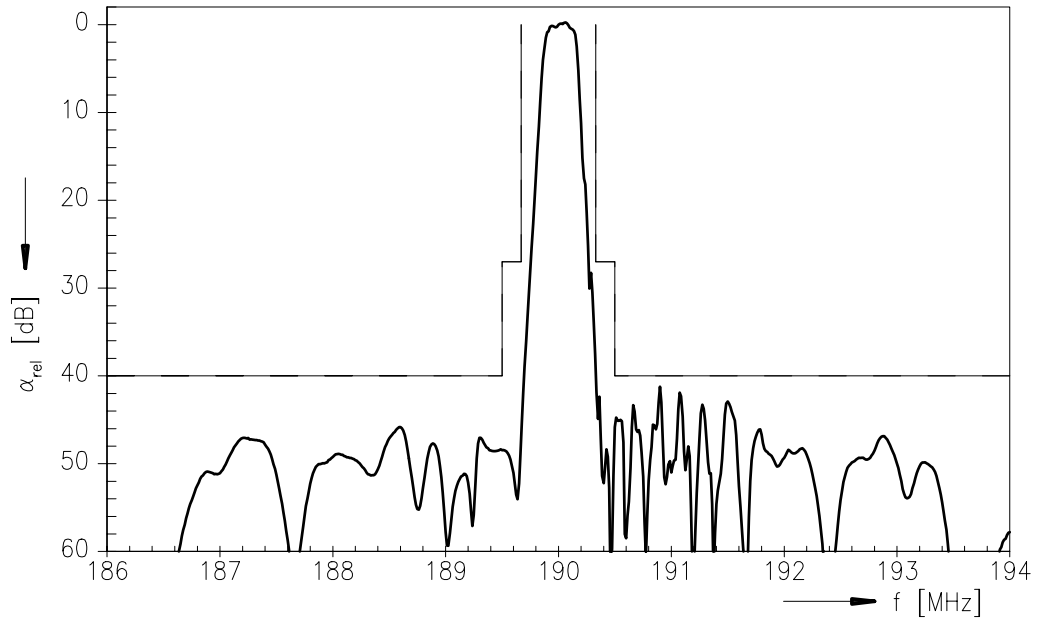
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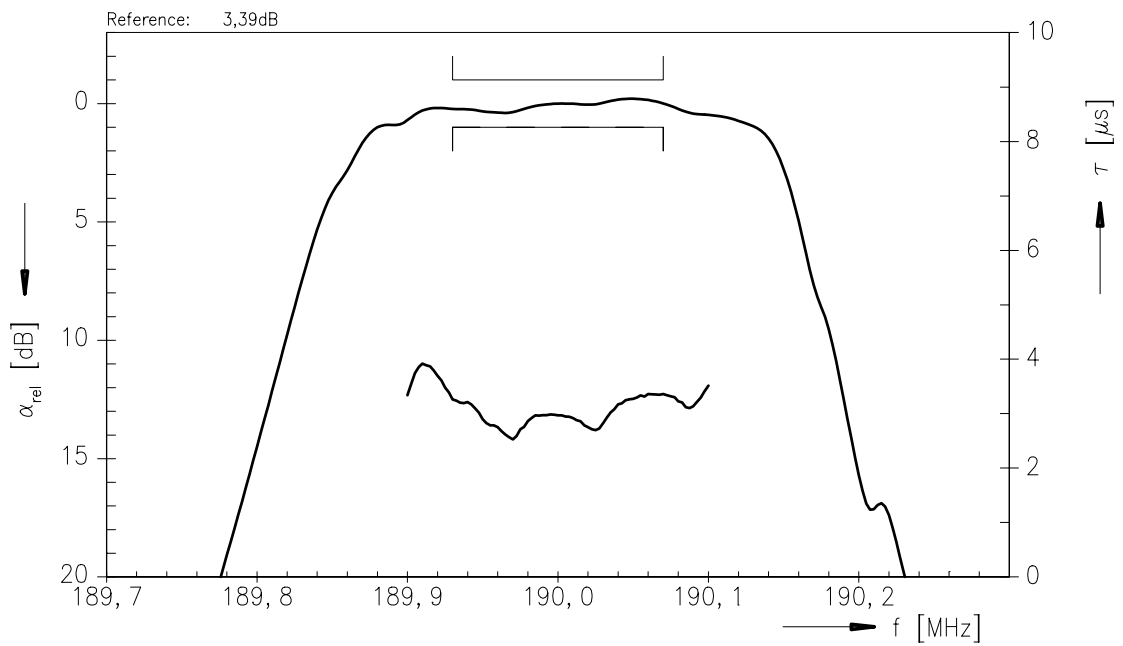
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Transfer function



Transfer function (pass band)





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