



SAW Components

Data Sheet B5006





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B5006

Low-Loss Filter

190,0 MHz

Data Sheet

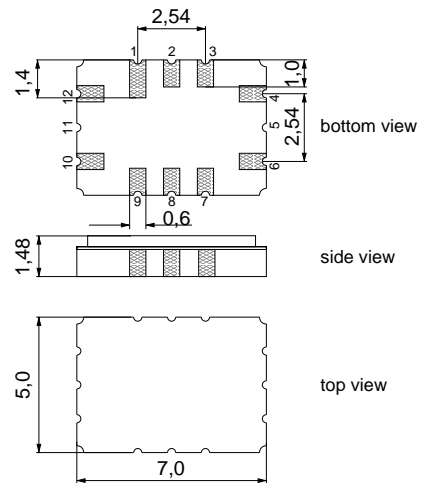
Ceramic package QCC12C

Features

- Low-loss IF filter for W-CDMA base station
- High near-by selectivity
- Temperature stable
- Balanced or unbalanced operation possible
- Ceramic SMD package

Terminals

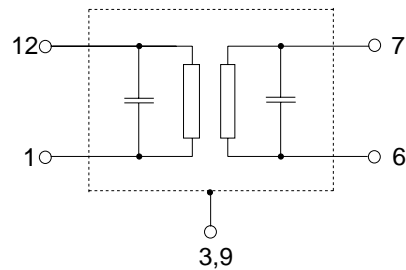
- Gold plated



Dimensions in mm, approx. weight 0,2 g

Pin configuration

- | | |
|-------------|----------------------------------|
| 12 | Input |
| 1 | Input ground or balanced input |
| 6 | Output |
| 7 | Output ground or balanced output |
| 2, 4, 8, 10 | To be grounded |
| 3, 9 | Case ground |



Type	Ordering code	Marking and Package according to	Packing according to
B5006	B39191-B5006-H310	C61157-A7-A95	F61074-V8170-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T_A	-40 / +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: $T_A = -10 \dots +85 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$ and matching network
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$ and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	190,0	—	MHz
Minimum insertion attenuation	α_{\min}	—	10,9	12,0	dB
Passband width					
	$\alpha_{\text{rel}} \leq 1 \text{ dB}$		3,84	4,1	MHz
	$\alpha_{\text{rel}} \leq 30 \text{ dB}$		—	6,4	MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
	$f_N \pm 1,92 \text{ MHz}$	—	0,5	1,0	dB
Phase ripple (rms)	$\Delta\phi$				
	$f_N \pm 1,92 \text{ MHz}$	—	0,8	—	$^\circ$ rms
Error vector magnitude	<i>EVM</i>				
	$f_N \pm 1,92 \text{ MHz}$	—	2,0	—	%
Adjacent channel suppression	<i>ACS</i>				
	$f_N \pm 3,08 \text{ MHz} \dots f_N \pm 6,92 \text{ MHz}$	—	35	—	dB
Relative attenuation (relative to α_{\min})	α_{rel}				
	$f_N \pm 5 \text{ MHz} \dots f_N \pm 100 \text{ MHz}$	40	48	—	dB
Temperature coefficient of frequency¹⁾	TC_f	—	-0,036	—	ppm/K ²
Turnover temperature	T_0	—	20	—	$^\circ\text{C}$

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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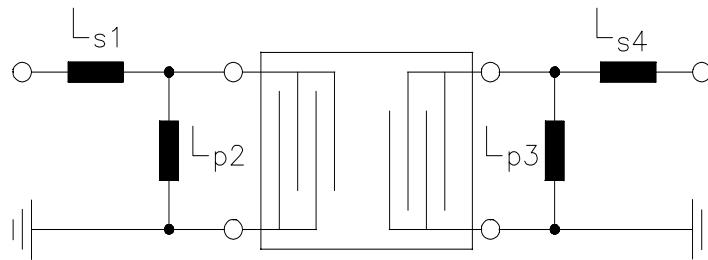
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Matching network to 50 Ω

(element values depend on PCB layout)



$$L_{s1} = 47 \text{ nH} + 220 \text{ nH}$$

$$L_{p2} = 150 \text{ nH}$$

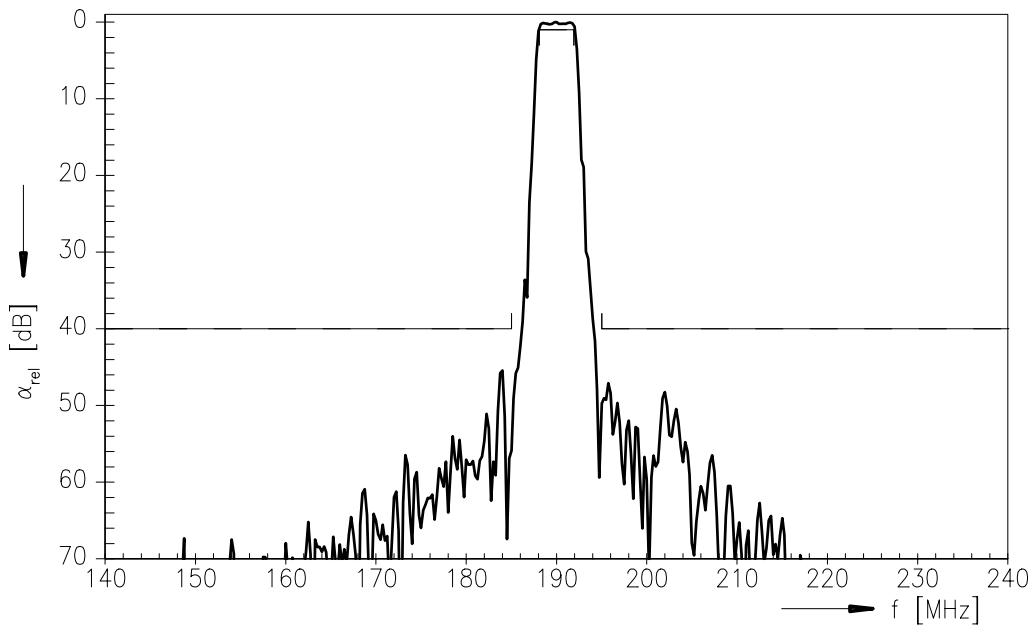
$$L_{p3} = 150 \text{ nH}$$

$$L_{s4} = 330 \text{ nH} + 68 \text{ nH}$$

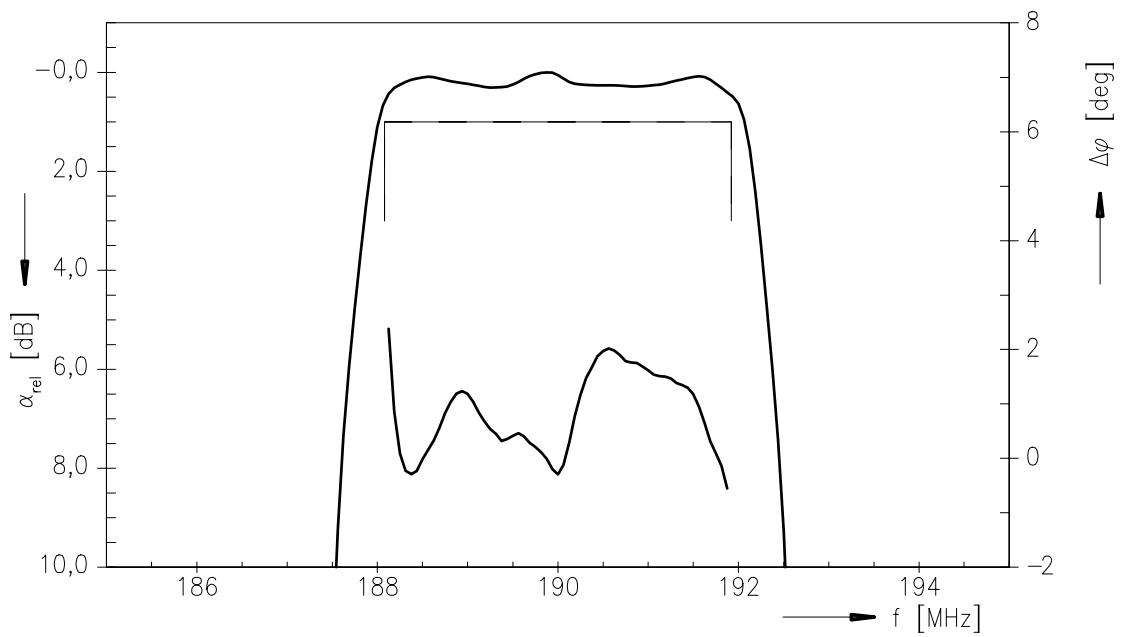


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Transfer function



Transfer function (pass band)





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