EPCOS

SAW Components

Data Sheet B3697

Data Sheet

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| SAW Components	B3697
Low-Loss Filter	**190,00 MHz**

Data Sheet

Ceramic package **QCC12**

Features

- IF filter for WCDMA
- Low insertion loss
- Ceramic SMD package

Terminals

- Gold plated
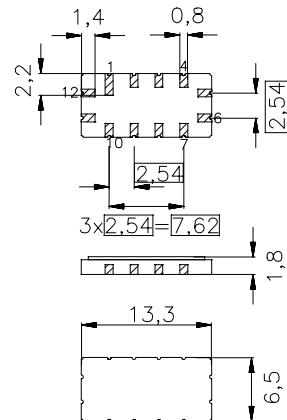
Dimensions in mm, appr. weight 0,44 g

Pin configuration

11	Input
1	Input ground
5	Output
7	Output ground
2, 3, 8, 9	Case ground
4, 6, 10, 12	To be grounded

2,3,8,9
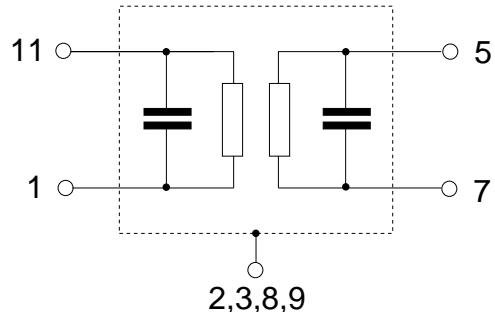
Type	Ordering code	Marking and Package according to	Packing according to
B3697	B39191-B3697-Z510	C61157-A7-A55	F61074-V8026-Z000

Electrostatic **S**ensitive **D**evice (**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	0	dBm	

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Characteristics

Operating temperature: T_A = -10 ... +85 °C
Terminating source impedance: Z_S = 50 Ω and matching network
Terminating load impedance: Z_L = 50 Ω and matching network

Group delay aperture: 50 kHz

			min.	typ.	max.	
Nominal frequency	f_N		—	190,00	—	MHz
Minimum insertion attenuation	α_{min}					
(including matching network) $f_N \pm 2{,}05$ MHz			—	10,7	12,0	dB
Passband width						
$\alpha_{rel} \leq 1$ dB	B_{1dB}		4,5	4,9	—	MHz
$\alpha_{rel} \leq 3$ dB	B_{3dB}		5,6	5,8	—	MHz
$\alpha_{rel} \leq 10$ dB	B_{10dB}		—	7,0	7,2	MHz
$\alpha_{rel} \leq 30$ dB	B_{30dB}		—	8,4	8,6	MHz
Amplitude ripple (p-p)	$\Delta\alpha$					
$f_N \pm 2{,}05$ MHz			—	0,45	1,0	dB
Phase ripple (p-p)	$\Delta\varphi$					
$f_N \pm 2{,}05$ MHz			—	3,5	4	°
Group delay ripple (p-p)	$\Delta\tau$					
$f_N \pm 2{,}05$ MHz			—	70	100	ns
Absolute group delay	τ					
mean value within $f_N \pm 2{,}05$ MHz at 25 °C[1]			952	957	962	ns

1) At other temperatures the variation from filter to filter is also restricted to +/- 5 ns.
   From -10 ... +85 °C the variation of mean value of group delay is restricted to +/- 20 ns.

Relative attenuation (relative to α_{min}) $\quad \alpha_{rel}$

$f_N + 5,0$ MHz ... $f_N + 6,5$ MHz	38	41	—	dB
$f_N - 5,0$ MHz ... $f_N - 6,5$ MHz	40	43	—	dB
$f_N \pm 6,5$ MHz ... $f_N \pm 14,0$ MHz	45	48	—	dB
$f_N \pm 14,0$ MHz ... $f_N \pm 60,0$ MHz	50	55	—	dB
$f_N \pm 10,0$ MHz	50	55	—	dB
$f_N + 20,0$ MHz	55	60	—	dB
$f_N - 20,0$ MHz	50	55	—	dB
165,7 MHz	55	58	—	dB
157,6 MHz	55	60	—	dB
Temperature coefficient of frequency $\quad TC_f$	—	-18	—	ppm/K

Matching network to 50 Ω (element values depend on pcb layout)
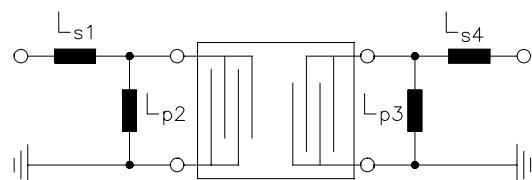
$L_{s1} = 47$ nH $\qquad$ $L_{p3} = 27$ nH

$L_{p2} = 39$ nH $\qquad$ $L_{s4} = 0$ nH

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Transfer function
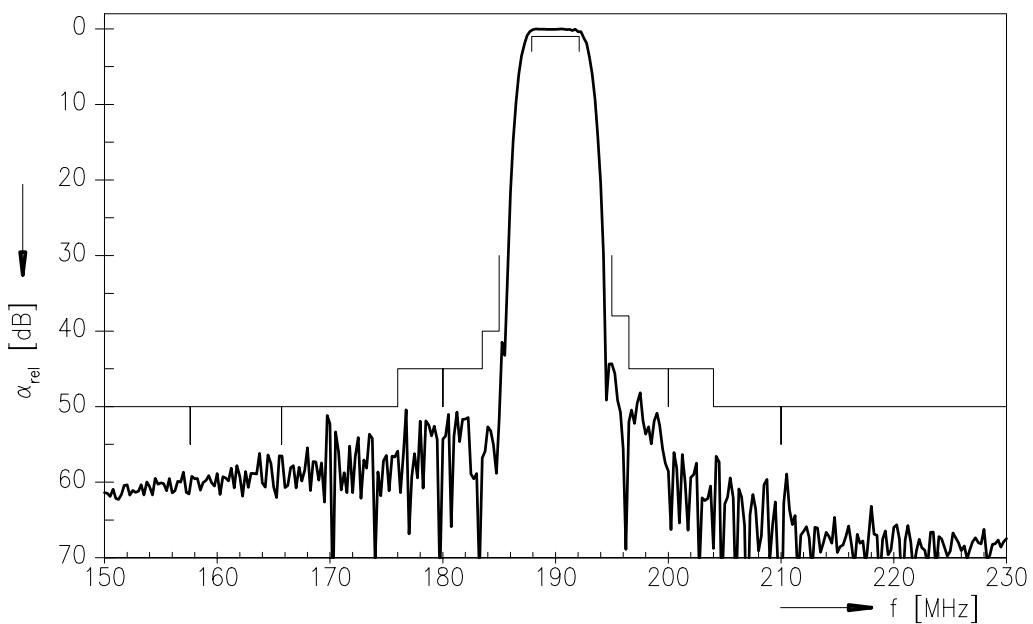
Transfer function (pass band)
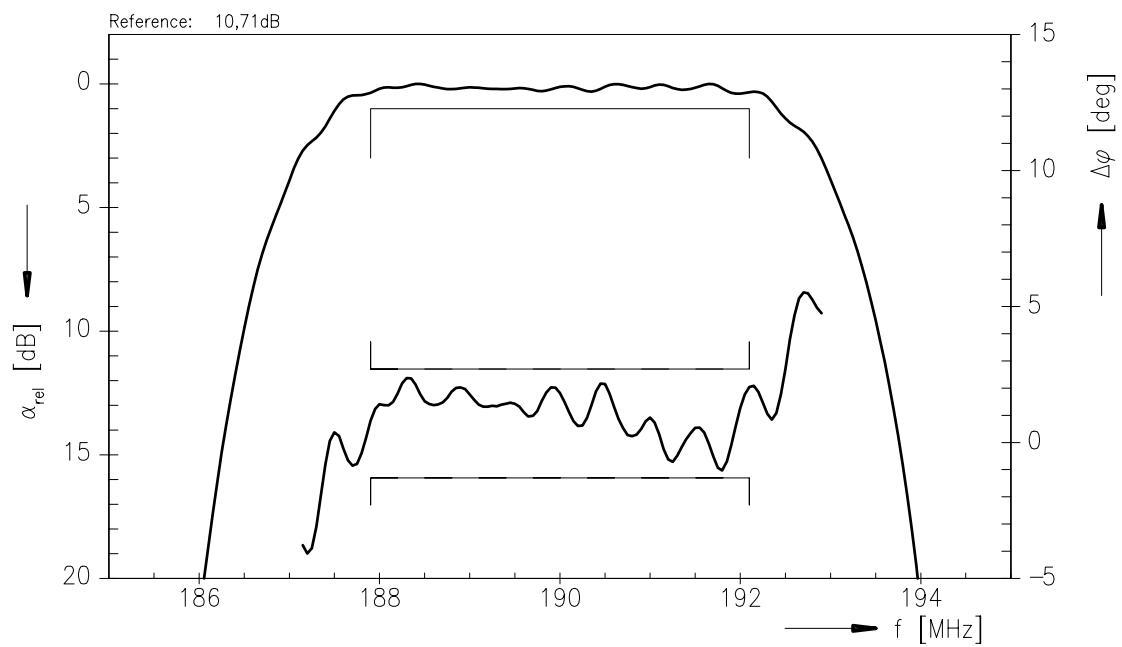
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