IF Filters for Narrowband Cellular Phones

Series/Type: **B4869**

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39161B4869H310		2003-03-07	2003-07-31	2003-09-30

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

EPCOS

SAW Components

Data Sheet B4869

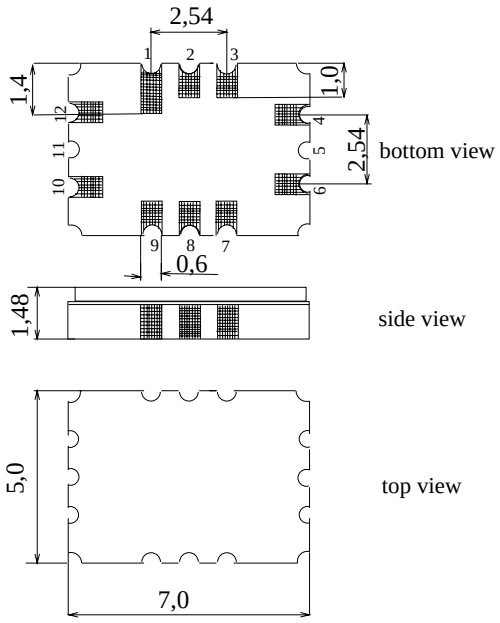
Features

- Low-loss IF filter for mobile telephone
- Channel selection in AMPS / TDMA systems
- Filter surface passivated
- Balanced or unbalanced operation possible
- Package for
  Surface **M**ounted **T**echnology (**SMT**)

Terminals

- Ni, gold plated

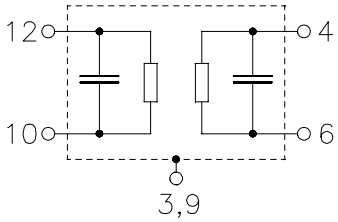
SMD ceramic package **QCC12C**



Dimensions in mm, approx. weight 0,2 g

Pin configuration

12	Input
6	Output
10	Balanced input or input ground
4	Balanced output or output ground
3,9	Case ground
1,2,7,8	Not connected



Type	Ordering code	Marking and Package according to	Packing according to
B4869	B39161-B4869-H310	C61157-A7-A52	F61074-V8038-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}	13	V	
Source power	P_s	10	dBm	

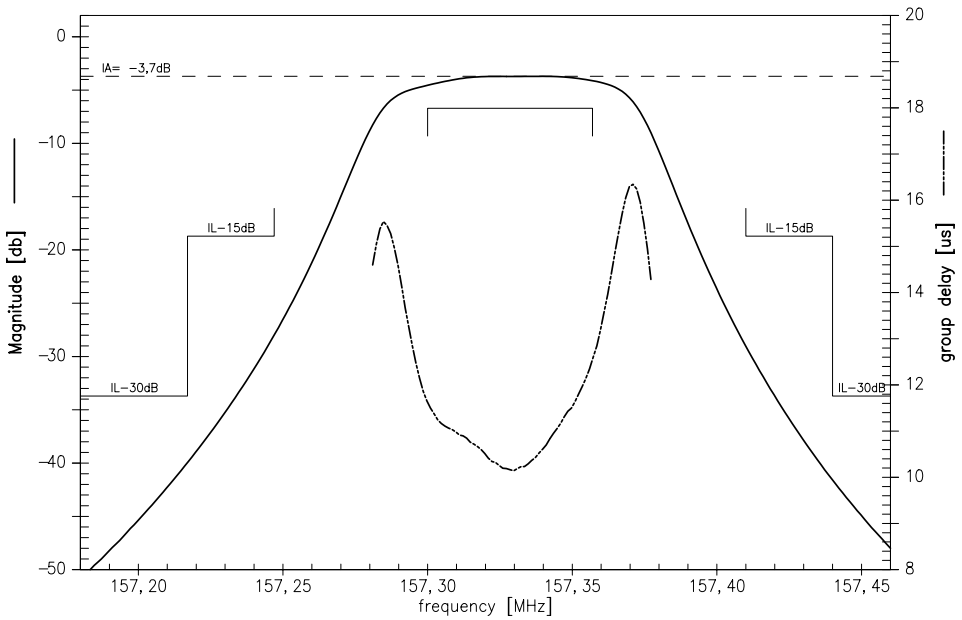
Characteristics

Operating temperature range: T = -30˚C ... 85˚C
Terminating source impedance: Z_S = 725 Ω || -1,1 pF
Terminating load impedance: Z_L = 725 Ω || -1,1 pF

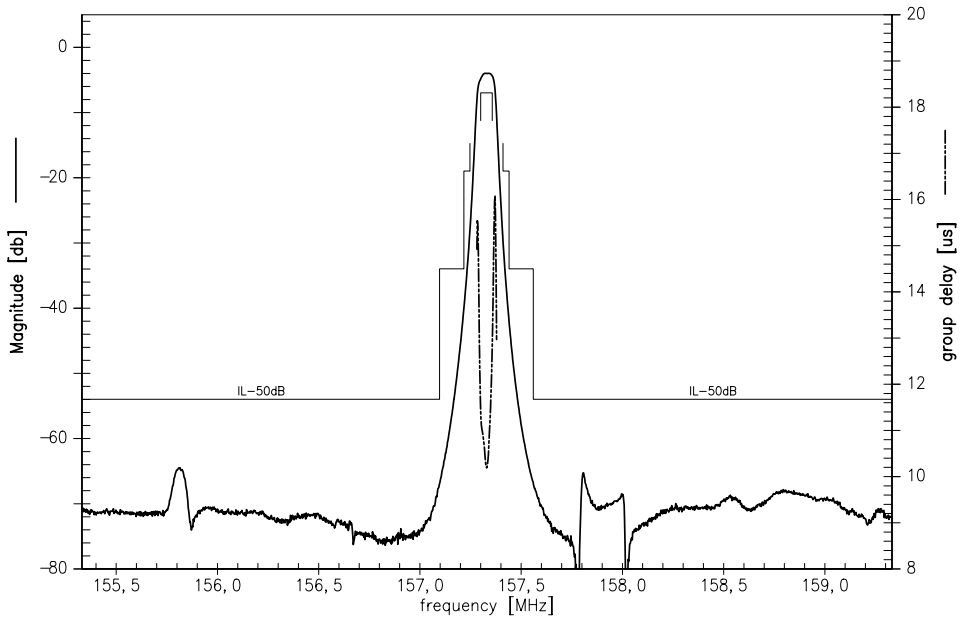
		min.	typ.	max.	
Nominal frequency	f_N	—	157,32	—	MHz
3 dB bandwidth (from f_N)		± 20	—	—	kHz
Minimum insertion attenuation (including losses in the matching network)	α_{min}	—	3,9	5,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
f_N – 15,0 kHz ... f_N + 15,0 kHz		—	2,0	6,0	µs
Relative attenuation (relative to α_{min})	α_{rel}				
f_N – 20,0 kHz ... f_N + 20,0 kHz		—	0,5	3,0	dB
f_N ± 90,0 kHz ... f_N ± 120,0 kHz		15	23	—	dB
f_N ± 120,0 kHz ... f_N ± 3,5 MHz		30	35	—	dB
f_N ± 3,5 MHz ... f_N ± 15 MHz		50	66	—	dB
0,1 MHz ... f_N – 15 MHz		65	90	—	dB
f_N + 15 MHz ... 300 MHz		65	85	—	dB
300 MHz ... 500 MHz		55	85	—	dB
500 MHz ... 1400 MHz		45	48	—	dB
1400 MHz ... 2500 MHz		15	20	—	dB
Impedance within the passband					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	725 || 1,1	—	Ω || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	725 || 1,1	—	Ω || pF
Temperature coefficient of frequency [1]	TC_f	—	- 0,036	—	ppm/K²
Turnover temperature	T_0	—	26	—	˚C

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

Transfer function passband (measured unbalanced / unbalanced)



Transfer function wide band (measured unbalanced / unbalanced)



Published by EPCOS AG
Surface Acoustic Wave Components Division, SAW MC WT
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This brochure replaces the previous edition.

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