EPCOS

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The following products presented in this data sheet are being withdrawn.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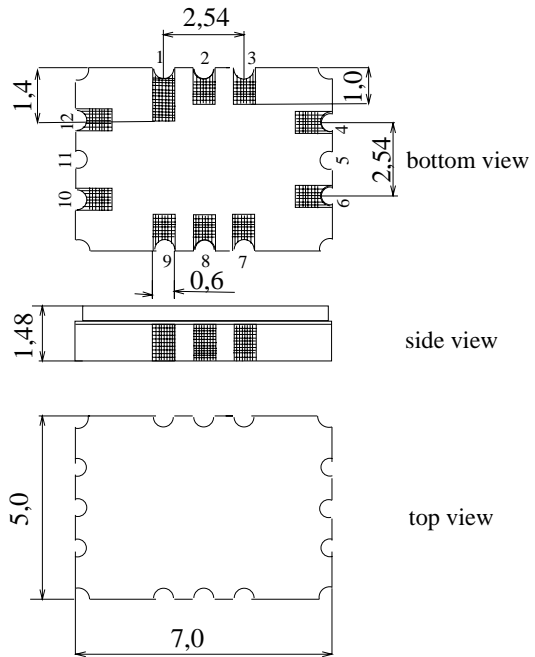
SAW Components

Data Sheet B4869

SAW Components	**B4869**
Low Loss Filter for Mobile Communication	**157,32 MHz**

Data Sheet

SMD ceramic package **QCC12C**

bottom view

side view

top view

Dimensions in mm, approx. weight 0,2 g

Features

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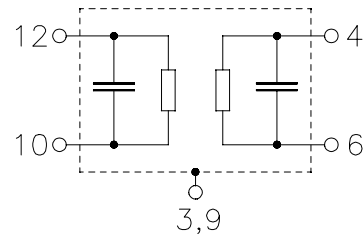 **S**urface **M**ounted **T**echnology (**SMT**)

Terminals

■ Ni, gold plated

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	$= 725 \ \Omega \parallel -1{,}1 \ pF$
Terminating load impedance:	Z_L	$= 725 \ \Omega \parallel -1{,}1 \ pF$

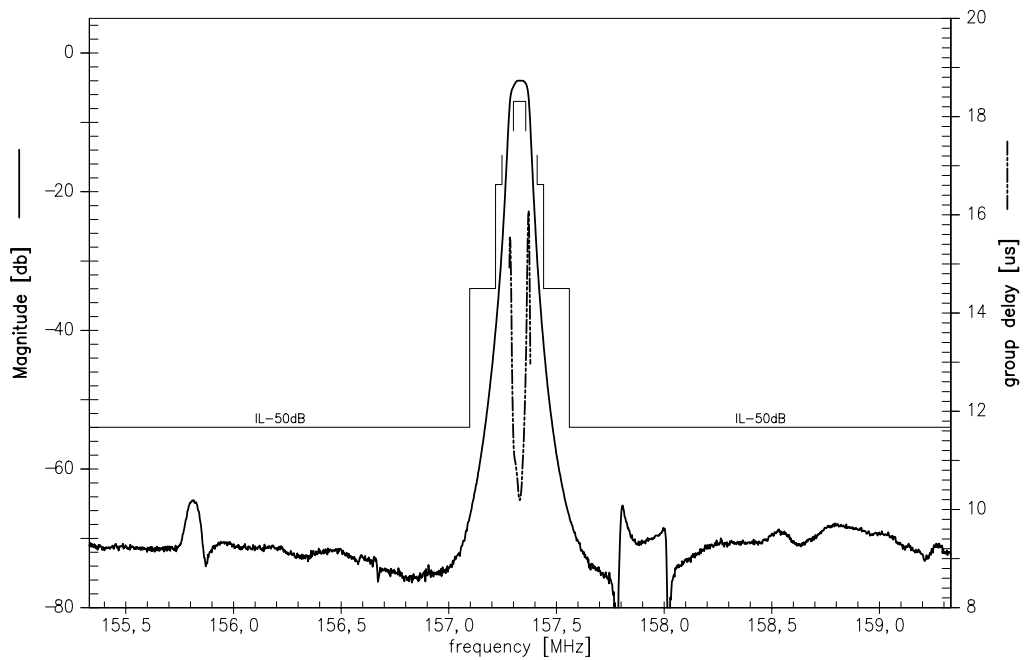|		min.	typ.	max.	
Nominal frequency	f_N	—	157,32	—	MHz
3 dB bandwidth (from f_N)		± 20	—	—	kHz
Minimum insertion attenuation (including losses in the matching network)	α_{min}	—	3,9	5,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N -$ 15,0 kHz ... $f_N +$ 15,0 kHz		—	2,0	6,0	µs
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N -$ 20,0 kHz ... $f_N +$ 20,0 kHz		—	0,5	3,0	dB
$f_N \pm$ 90,0 kHz ... $f_N \pm$ 120,0 kHz		15	23	—	dB
$f_N \pm$ 120,0 kHz ... $f_N \pm$ 3,5 MHz		30	35	—	dB
$f_N \pm$ 3,5 MHz ... $f_N \pm$ 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	—	$\Omega \parallel pF$
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	725 || 1,1	—	$\Omega \parallel pF$
Temperature coefficient of frequency [1]	TC_f	—	- 0,036	—	ppm/K^2
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)
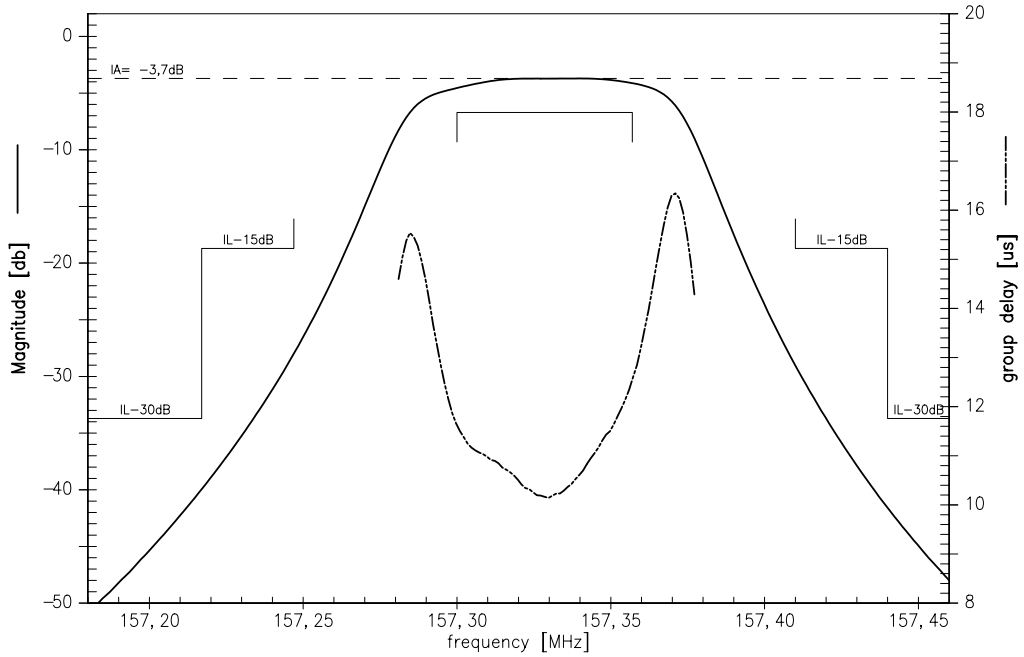
Transfer function wide band (measured unbalanced / unbalanced)

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.