



SAW filters for mobile communications

Series/Type: B4959

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39131B4959H310		2010-03-26	2010-06-30	2010-09-30

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

B4959

Low-Loss Filter for Mobile Communication

128,1 MHz

Data Sheet



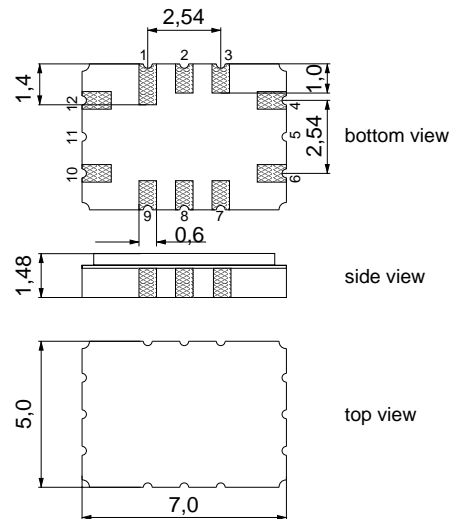
Features

- IF filter for mobile telephone
- Channel selection in CDMA systems
- Balanced or unbalanced
- High rejection, very small size
- Low amplitude ripple
- Package for **Surface Mounted Technology (SMT)**
- Filter surface passivated

Terminals

- Ni, gold plated

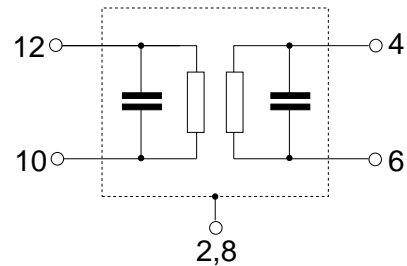
SMD ceramic package QCC12C



Dimensions in mm, approx. weight 0,155 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B4959	B39131-B4959-H310	C61157-A7-A95	F61074-V8170-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 40/+ 85	°C	
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	5	V	
Source power	P_s	10	dBm	



SAW Components

B4959

Low-Loss Filter for Mobile Communication

128,1 MHz

Data Sheet



Characteristics

Specified temperature range: $T = -30^{\circ}\text{C} \dots +85^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 1270\ \Omega \parallel 185\ \text{nH}$
 Terminating load impedance: $Z_L = 1840\ \Omega \parallel 180\ \text{nH}$

		min.	typ.	max.	
Nominal frequency	f_N	—	128,1	—	MHz
Minimum insertion attenuation (with losses of matching network, without loss of balun)	α_{\min}	—	10,4	12,0	dB
Amplitude ripple	$\Delta\alpha$				
$f_N - 0,30\ \text{MHz} \dots f_N + 0,30\ \text{MHz}$		—	0,5	1,0	dB
Phase linearity (rms deviation)					
$f_N - 0,615\ \text{MHz} \dots f_N + 0,615\ \text{MHz}$		—	2,0	3,5	°
Relative attenuation (relative to α_{\min})	α_{rel}				
$f_N \pm 0,615\ \text{MHz}$		—	3,8	4,5	dB
$f_N - 0,9\ \text{MHz}$		37	50	—	dB
$f_N + 0,9\ \text{MHz}$		37	41	—	dB
$f_N - 1,25\ \text{MHz}$		37	45	—	dB
$f_N + 1,25\ \text{MHz}$		37	50	—	dB
$f_N - 1,7\ \text{MHz}$		37	46	—	dB
$f_N + 1,7\ \text{MHz}$		37	47	—	dB
$f_N - 2,05\ \text{MHz}$		40	48	—	dB
$f_N + 2,05\ \text{MHz}$		40	52	—	dB
$10,0\ \text{MHz} \dots f_N - 2,05\ \text{MHz}$		40	43	—	dB
$f_N - 2,05\ \text{MHz} \dots f_N - 0,9\ \text{MHz}$		37	42	—	dB
$f_N + 0,9\ \text{MHz} \dots f_N + 2,05\ \text{MHz}$		37	40	—	dB
$f_N + 2,05\ \text{MHz} \dots 200\ \text{MHz}$		40	43	—	dB
$172,485\ \text{MHz} \dots 173,715\ \text{MHz}$		60	70	—	dB
$207,485\ \text{MHz} \dots 208,715\ \text{MHz}$		45	47	—	dB



SAW Components

B4959

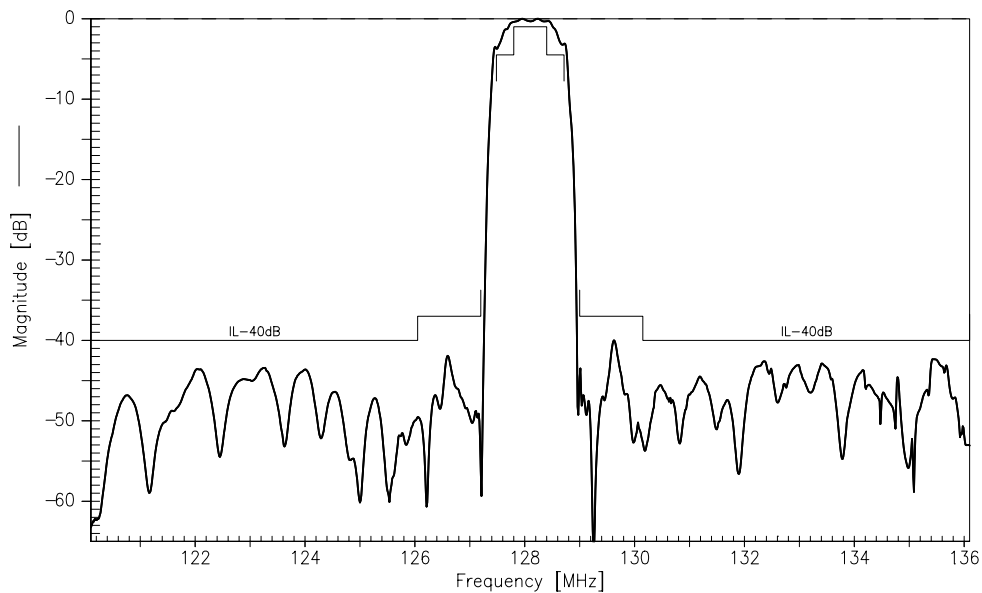
Low-Loss Filter for Mobile Communication

128,1 MHz

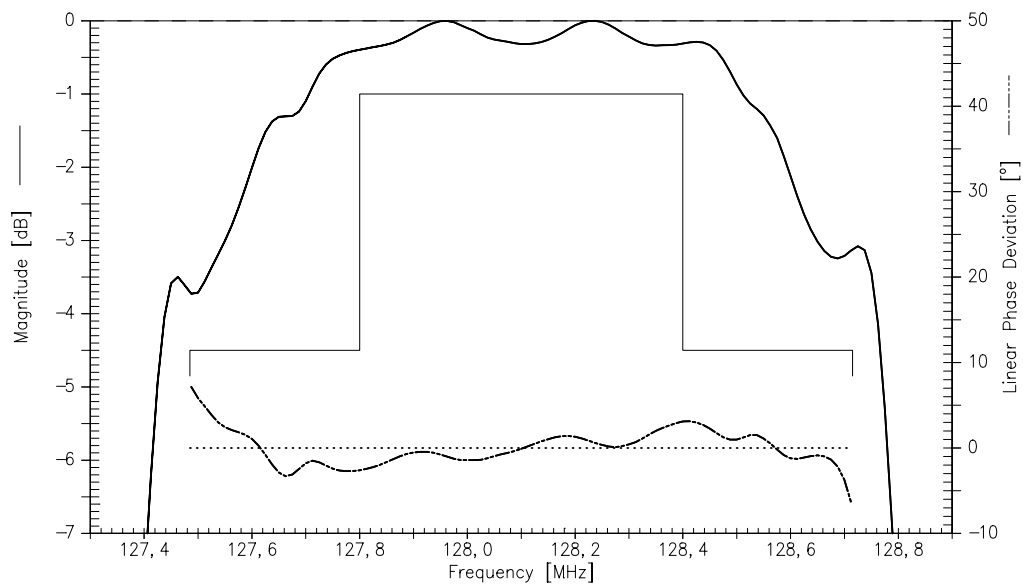
Data Sheet



Normalized transfer function (measurement):

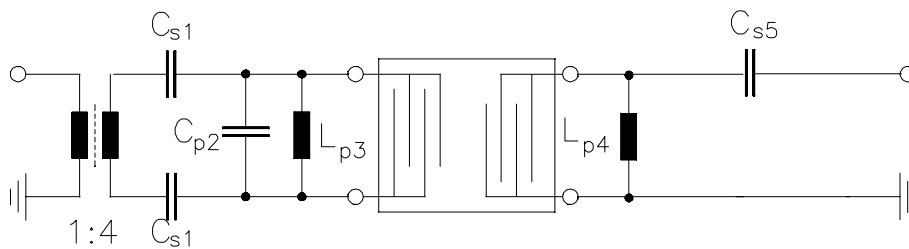


Normalized transfer function (measurement, passband):



**SAW Components****B4959****Low-Loss Filter for Mobile Communication****128,1 MHz****Data Sheet****Test matching network**

(Element values depend on pcb layout)



$$C_{s1} = 5,6 \text{ pF}$$

all coils: Coilcraft 0603

$$C_{p2} = \text{not used}$$

$$L_{p3} = 120 \text{ nH}$$

$$L_{p4} = 100 \text{ nH}$$

$$C_{s5} = 2,7 \text{ pF} \parallel 1,5 \text{ pF}$$

Published by EPCOS AG**Surface Acoustic Wave Components Division, SAW MC****P.O. Box 80 17 09, 81617 Munich, GERMANY**

© EPCOS AG 2004. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

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.