SAW Components

Data Sheet B4959

EPCOS

SAW Components	B4959
Low-Loss Filter for Mobile Communication	**128,1 MHz**

Data Sheet   SMD

SMD ceramic package **QCC12C**

bottom view

side view

top view

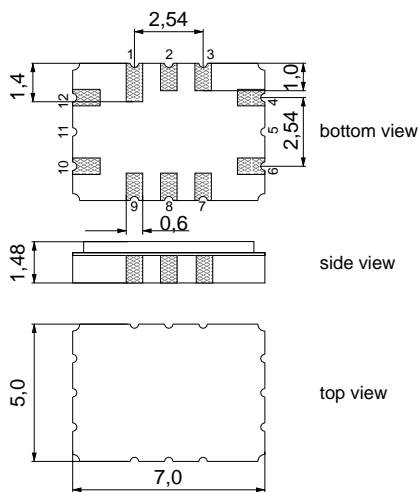Dimensions in mm, approx. weight 0,155 g

Features

- ■ IF filter for mobile telephone
- ■ Channel selection in CDMA systems
- ■ Balanced or unbalanced
- ■ High rejection, very small size
- ■ Low amplitude ripple
- ■ Package for **S**urface **M**ounted **T**echnology (**SMT**)
- ■ Filter surface passivated

Terminals

- ■ Ni, gold plated

Pin configuration

6	Input
4	Balanced input or ground
12	Balanced output
10	Balanced output
1, 2, 3, 7, 8, 9	To be grounded
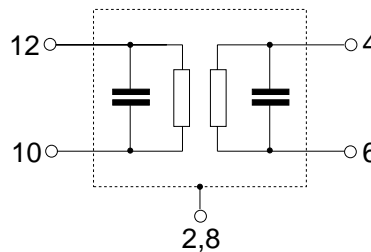
Type	Ordering code	Marking and Package according to	Packing according to
B4959	B39131-B4959-H310	C61157-A7-A95	F61074-V8170-Z000

Electrostatic **S**ensitive **D**evice (**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	

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Data Sheet ⩶MD⩶

Characteristics

Specified temperature range: T = $-30°C .. +85 °C$
Terminating source impedance: Z_S = $1270 \ \Omega \parallel 185$ nH
Terminating load impedance: Z_L = $1840 \ \Omega \parallel 180$ 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	$\Delta\alpha$				
$\quad f_N - 0,30$ MHz $\quad ... \quad f_N + 0,30$ MHz		—	0,5	1,0	dB
Phase linearity (rms deviation)					
$\quad f_N - 0,615$MHz $\quad ... \quad f_N + 0,615$ MHz		—	2,0	3,5	°
Relative attenuation (relative to α_{min})	α_{rel}				
$\quad f_N \pm 0,615$MHz		—	3,8	4,5	dB
$\quad f_N - 0,9$ MHz		37	50	—	dB
$\quad f_N + 0,9$ MHz		37	41	—	dB
$\quad f_N - 1,25$ MHz		37	45	—	dB
$\quad f_N + 1,25$ MHz		37	50	—	dB
$\quad f_N - 1,7$ MHz		37	46	—	dB
$\quad f_N + 1,7$ MHz		37	47	—	dB
$\quad f_N - 2,05$ MHz		40	48	—	dB
$\quad f_N + 2,05$ MHz		40	52	—	dB
$\quad\quad 10,0$ MHz $\quad ... \quad f_N - 2,05$ MHz		40	43	—	dB
$\quad f_N - 2,05$ MHz $\quad ... \quad f_N - 0,9$ MHz		37	42	—	dB
$\quad f_N + 0,9$ MHz $\quad ... \quad f_N + 2,05$ MHz		37	40	—	dB
$\quad f_N + 2,05$ MHz $\quad ... \quad 200$ MHz		40	43	—	dB
$\quad 172,485$ MHz $\quad ... \quad 173,715$ MHz		60	70	—	dB
$\quad 207,485$ MHz $\quad ... \quad 208,715$ MHz		45	47	—	dB

Normalized transfer function (measurement):
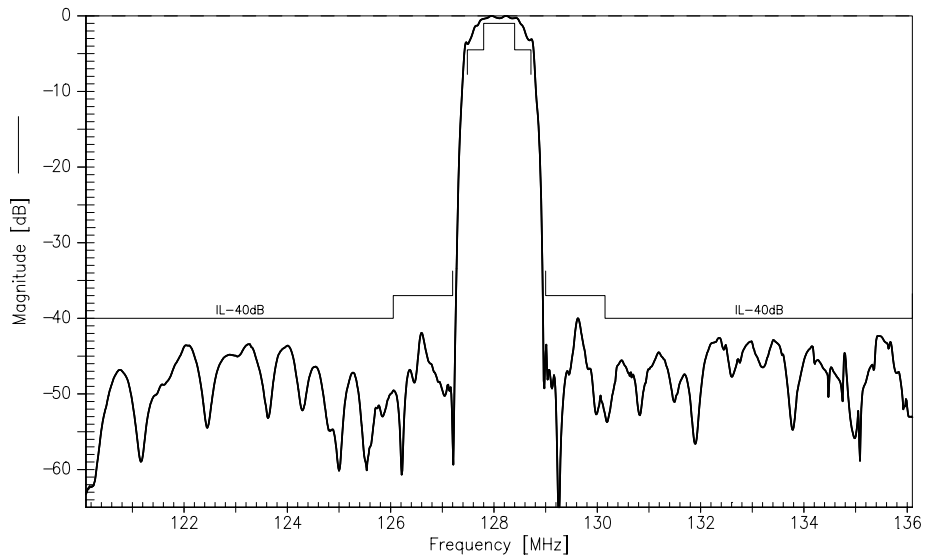
Normalized transfer function (measurement, passband):
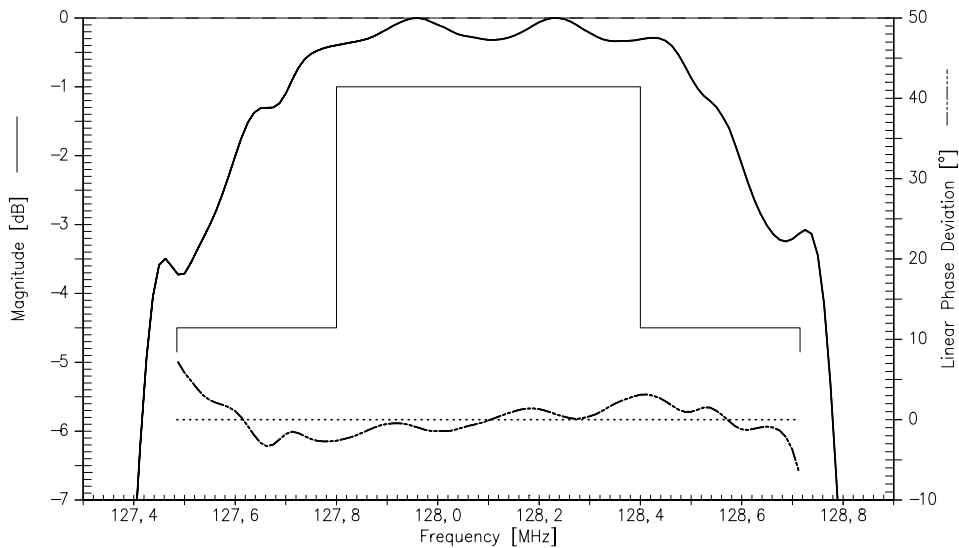
Test matching network

(Element values depend on pcb layout)

$C_{s1} =$ 5,6 pF

$C_{p2} =$ not used

$L_{p3} =$ 120 nH
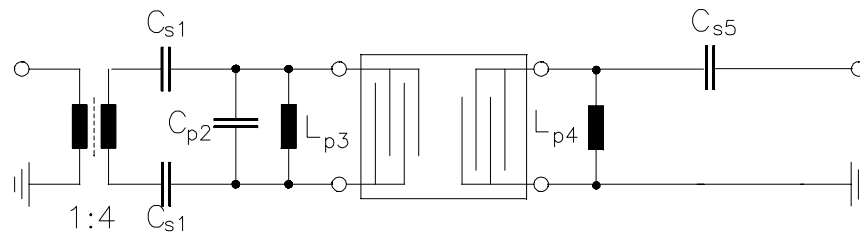
$L_{p4} =$ 100 nH

$C_{s5} =$ 2,7 pF || 1,5 pF

all coils: Coilcraft 0603

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This brochure replaces the previous edition.

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