



SAW Components

Data Sheet B4812





SAW Components

B4812

Low-Loss Filter

246,01 MHz

Data Sheet



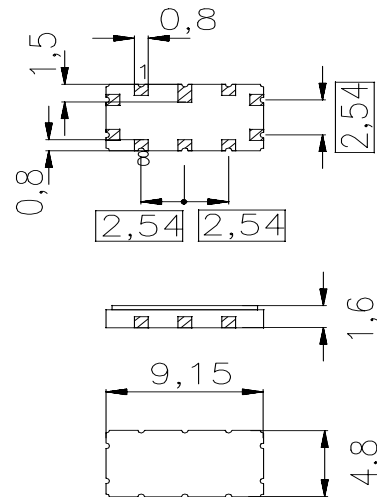
Ceramic package QCC10B

Features

- Low-loss IF filter for mobile telephone
- Channel selection in GSM systems
- Hermetically sealed ceramic SMD package
- Balanced and unbalanced operation possible

Terminals

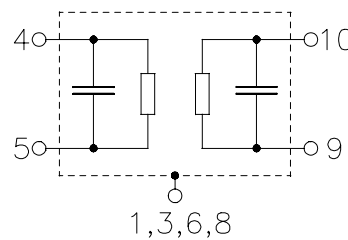
- Gold-plated Ni



Dimensions in mm, approx. weight 0,23 g

Pin configuration

- | | |
|------------|----------------------------------|
| 4 | Input |
| 5 | Input ground or balanced input |
| 9 | Output |
| 10 | Output ground or balanced output |
| 1, 3, 6, 8 | Case – ground |
| 2, 7 | Ground |



Type	Ordering code	Marking and Package according to	Packing according to
B4812	B39251-B4812-Z710	C61157-A7-A49	F61074-V8127-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 25/+ 85	°C	
Storage temperature range	T_{stg}	- 25/+ 85	°C	
DC voltage	V_{DC}	0	V	
Source power	P_s	10	dBm	



SAW Components

B4812

Low-Loss Filter

246,01 MHz

Data Sheet



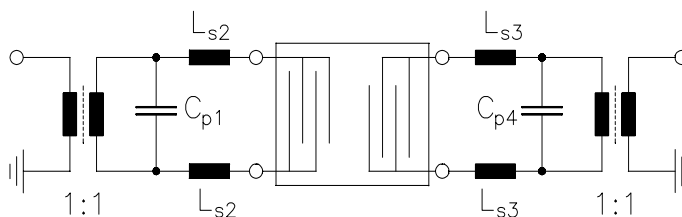
Characteristics

Reference temperature: $T = 25\text{ }^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 700\text{ Ohm} \parallel -2,6\text{ pF}$
 Terminating load impedance: $Z_L = 700\text{ Ohm} \parallel -2,6\text{ pF}$

		min.	typ.	max.	
Nominal frequency	f_N	—	246,01	—	MHz
Minimum insertion attenuation (including loss in matching coils)	α_{\min}	2,0	3,2	5,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_N - 67,5\text{ kHz} \dots f_N + 67,5\text{ kHz}$		—	0,6	2,0	dB
$f_N - 80,0\text{ kHz} \dots f_N + 80,0\text{ kHz}$		—	0,7	3,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N - 50,0\text{ kHz} \dots f_N + 50,0\text{ kHz}$		—	0,5	1,5	μs
$f_N - 80,0\text{ kHz} \dots f_N + 80,0\text{ kHz}$		—	1,2	3,0	μs
Relative attenuation (relative to α_{\min})	α_{rel}				
$f_N - 25,00\text{ MHz} \dots f_N - 3,00\text{ MHz}$		50	60	—	dB
$f_N - 3,00\text{ MHz} \dots f_N - 1,60\text{ MHz}$		48	60	—	dB
$f_N - 1,60\text{ MHz} \dots f_N - 0,60\text{ MHz}$		38	50	—	dB
$f_N - 0,60\text{ MHz} \dots f_N - 0,40\text{ MHz}$		28	40	—	dB
$f_N - 0,40\text{ MHz} \dots f_N - 0,20\text{ MHz}$		8	14	—	dB
$f_N + 0,20\text{ MHz} \dots f_N + 0,40\text{ MHz}$		8	14	—	dB
$f_N + 0,40\text{ MHz} \dots f_N + 0,60\text{ MHz}$		28	40	—	dB
$f_N + 0,60\text{ MHz} \dots f_N + 1,60\text{ MHz}$		38	50	—	dB
$f_N + 1,60\text{ MHz} \dots f_N + 3,00\text{ MHz}$		48	60	—	dB
$f_N + 3,00\text{ MHz} \dots f_N + 25,00\text{ MHz}$		50	60	—	dB
Impedance at f_N					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	700 \parallel 2,6	—	$\Omega \parallel \text{pF}$
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	700 \parallel 2,6	—	$\Omega \parallel \text{pF}$
Temperature coefficient of frequency ¹⁾	TC_f	—	-0,036	—	ppm/K ²
Frequency inversion point	T_0	—	25	—	$^{\circ}\text{C}$

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

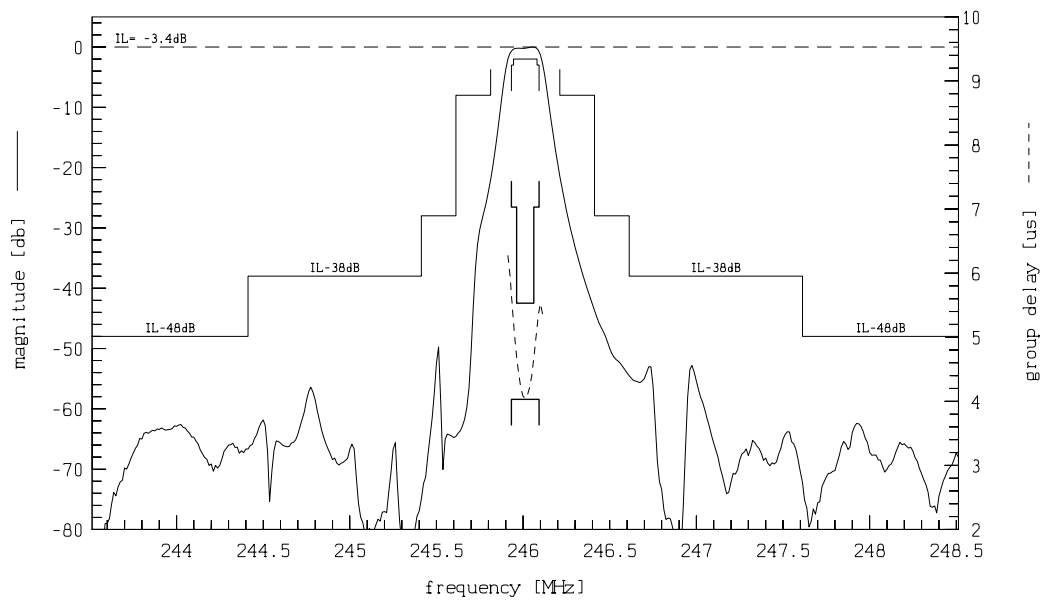
Test matching network to 50 Ω (element values depend on PCB layout):



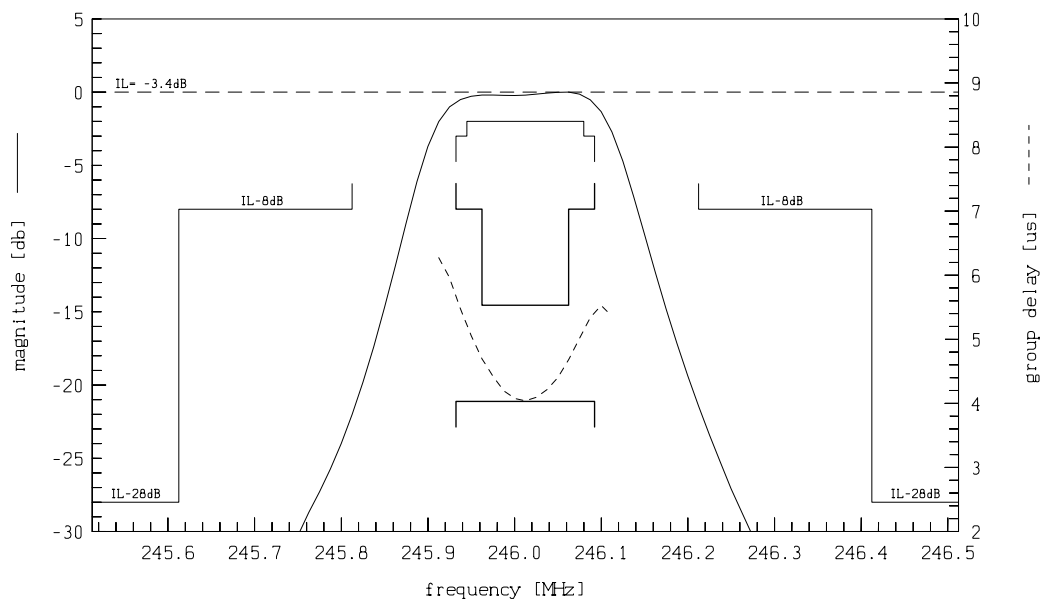
$C_{p1} = 1,8\text{ pF}$
 $L_{s2} = 56\text{ nH}$
 $L_{s3} = 56\text{ nH}$
 $C_{p4} = 1,8\text{ pF}$



Transfer function:



Transfer function (pass band):





SAW Components

B4812

Low-Loss Filter

246,01 MHz

Data Sheet



Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC WT

P.O. Box 80 17 09, 81617 Munich, GERMANY

© EPCOS AG 2003. 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.