SAW Components

Data Sheet B4926

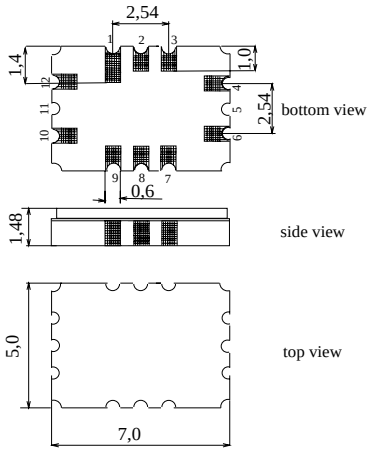
Ceramic package **QCC12C**

Features

- Low-loss IF filter for mobile telephone
- Channel selection in GSM systems
- Hermetically sealed ceramic SMD package
- Balanced and unbalanced operation possible
- No coupling coil required

Terminals

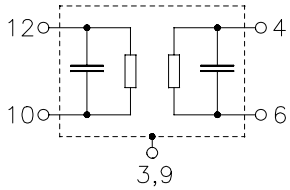
- Gold-plated Ni



Dimensions in mm, approx. weight 0,25 g

Pin configuration

10	Input
12	Input ground or balanced input
4	Output
6	Output ground or balanced output
3, 9	Case ground
1, 2, 7, 8	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B4926	B39131-B4926-H310	C61157-A7-A95	F61074-V8710-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}	5	V	
Source power	P_s	10	dBm	
ESD	V_{ESD}	50	V	Human Body Model

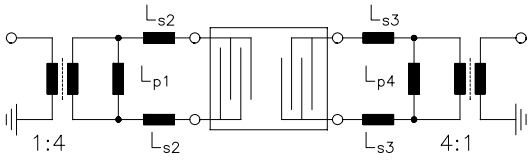
Characteristics

Operating temperature range: T = -30 ˚C ... +80 ˚C
Terminating source impedance: Z_S = 1000 Ω || 135 nH
Terminating load impedance: Z_L = 1300 Ω || 170 nH

		min.	typ.	max.	
Nominal frequency	f_N	—	133,20	—	MHz
Minimum insertion attenuation (excluding losses in matching circuit)	α_{min}		4,5	6,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
f_N - 100,0 kHz ... f_N + 100,0 kHz		—	0,4	1,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
f_N - 100,0 kHz ... f_N + 100,0 kHz		—	0,3	1,0	µs
Relative attenuation (relative to α_{min})	α_{rel}				
f_N - 30,00 MHz ... f_N - 7,00 MHz		40	48	—	dB
f_N - 7,00 MHz ... f_N - 3,00 MHz		35	42	—	dB
f_N - 3,00 MHz ... f_N - 0,80 MHz		29	32	—	dB
f_N - 0,80 MHz ... f_N - 0,60 MHz		20	29	—	dB
f_N - 0,60 MHz ... f_N - 0,40 MHz		15	19	—	dB
f_N - 0,40 MHz ... f_N - 0,25 MHz		3	6,5	—	dB
f_N + 0,25 MHz ... f_N + 0,40 MHz		3	6,5	—	dB
f_N + 0,40 MHz ... f_N + 0,60 MHz		15	17	—	dB
f_N + 0,60 MHz ... f_N + 0,80 MHz		20	27	—	dB
f_N + 0,80 MHz ... f_N + 3,00 MHz		29	31	—	dB
f_N + 3,00 MHz ... f_N + 7,00 MHz		35	39	—	dB
f_N + 7,00 MHz ... f_N + 30,00 MHz		40	46	—	dB
Impedance within pass band					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1000 ‖10,3.	—	Ω || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	1300 ‖ 8,2	—	Ω || pF
Temperature coefficient of frequency 1)	TC_f	—	– 0,042	—	ppm/K²
Frequency inversion point	T_0	—	25	—	˚C

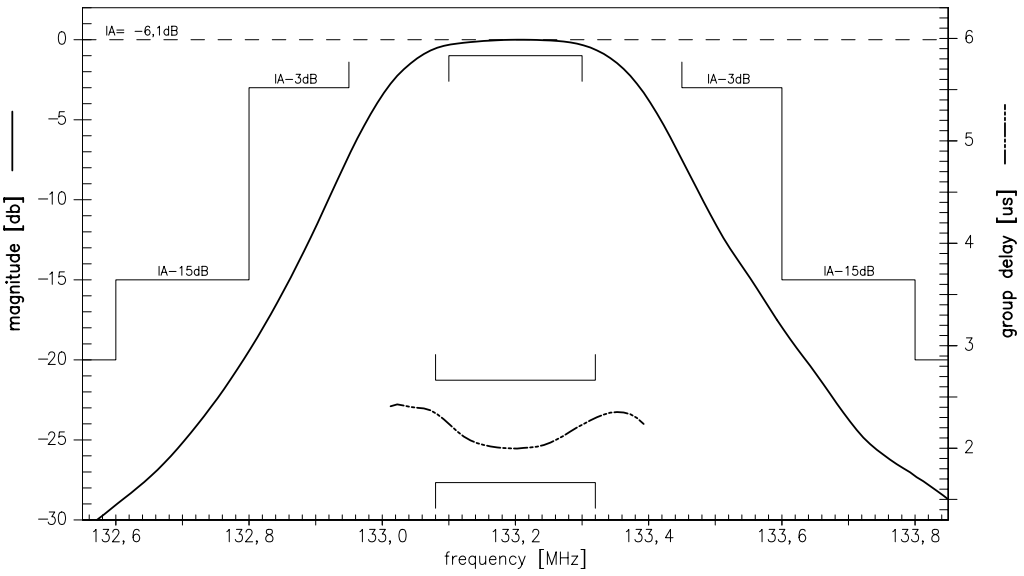
1) Temperature dependence of f_c: $f_c(T) = f_c(T_0)(1 + TC_f(T - T_0)^2$

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

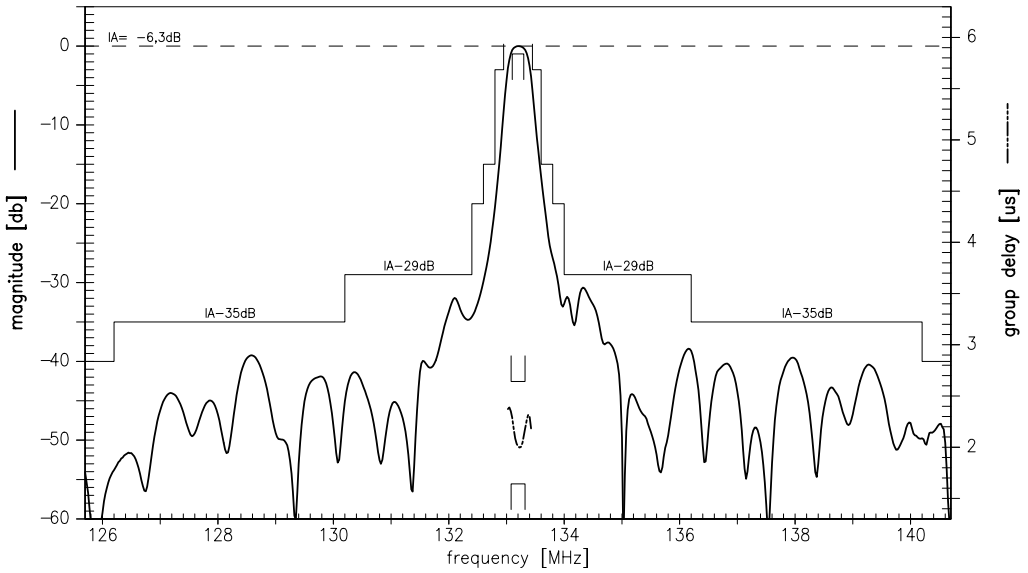


L_{p1} = 82 nH
L_{s2} = 27 nH
L_{s3} = 43 nH
L_{p4} = 82 nH

Transfer function (pass band)**:**



Transfer function (wide band)**:**



Published by EPCOS AG
Surface Acoustic Wave Components Division, SAW MC WT
P.O. Box 80 17 09, D-81617 München

The information contained in this brochure describes the type of component and shall not be considered as guaranteed characteristics. 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.