EPCOS

SAW Components

Preliminary Data B4932

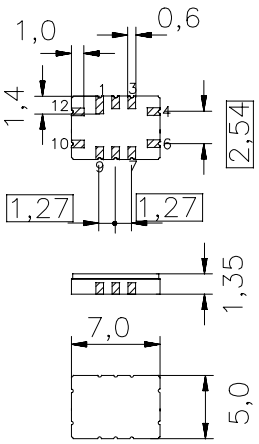
Features

- IF filter for mobile telephone
- Channel selection in CDMA systems
- Low insertion attenuation
- High rejection
- single-ended/single-ended, balanced/single-ended[1)] and balanced/balanced operation possible
- Package for **S**urface **M**ounted **T**echnology (**SMT**)

Terminals

- Ni, gold plated

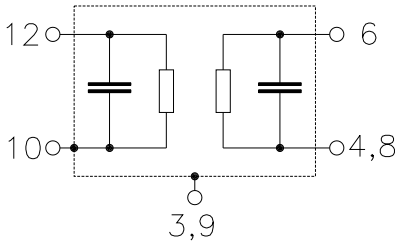
Ceramic package **QCC12B**



Dimensions in mm,approx. weight 0,2 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B4932	B39211-B4932-Z910	C61157-A7-A38	F61064-V8026-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

Preliminary Data

SMD

Characteristics

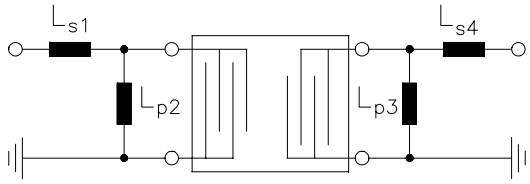
Operating temperature range: T = -30˚C ... 85˚C
Terminating source impedance: Z_S = 420 Ω || 44 nH
Terminating load impedance: Z_L = 580 Ω || 54 nH

		min.	typ.	max.	
Nominal frequency	f_N	—	210,38	—	MHz
Insertion attenuation at f_N including loss in matching network	α_{fN}	—	6,7	8,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
f_N – 0,30 MHz ... f_N + 0,30 MHz		—	0,6	1,2	dB
Phase linearity (rms deviation)	$\Delta\phi$				
f_N – 0,63 MHz ... f_N + 0,63 MHz		—	2,3	3,5	°
Relative attenuation (relative to α_{fN})	α_{rel}				
f_N – ±0,63 MHz		—	3	5	dB
f_N – 150,0 MHz ... f_N – 40,0 MHz		60	67	—	dB
f_N – 40,0 MHz ... f_N – 20,0 MHz		50	56	—	dB
f_N – 20,0 MHz ... f_N – 1,25 MHz		40	42	—	dB
f_N – 1,25 MHz		—	44	—	dB
f_N + 1,25 MHz		—	44	—	dB
f_N + 1,25 MHz ... f_N + 20,0 MHz		40	44	—	dB
f_N + 20,0 MHz ... f_N + 40,0 MHz		50	56	—	dB
f_N + 40,0 MHz ... f_N + 300,0 MHz		60	65	—	dB
Reflected wave signal suppression		30	36	—	dB

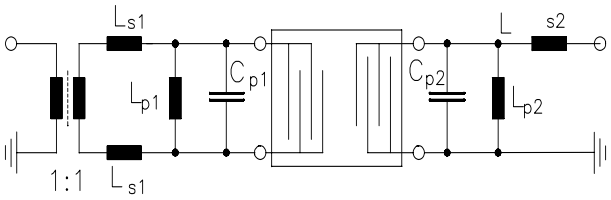
[1] For single-ended/balanced operation input and output have to be exchanged, i.e. input at pin 6, input ground 8 and 4, balanced output between pins 10 and 12 (the filter is reciprocal)

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

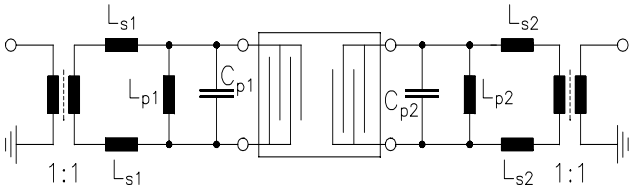
Test matching networks to 50 Ω (element values depend on pcb layout)



L_{s1} = 100nH
L_{p2} = 47nH
L_{p3} = 56nH
L_{s4} = 120nH

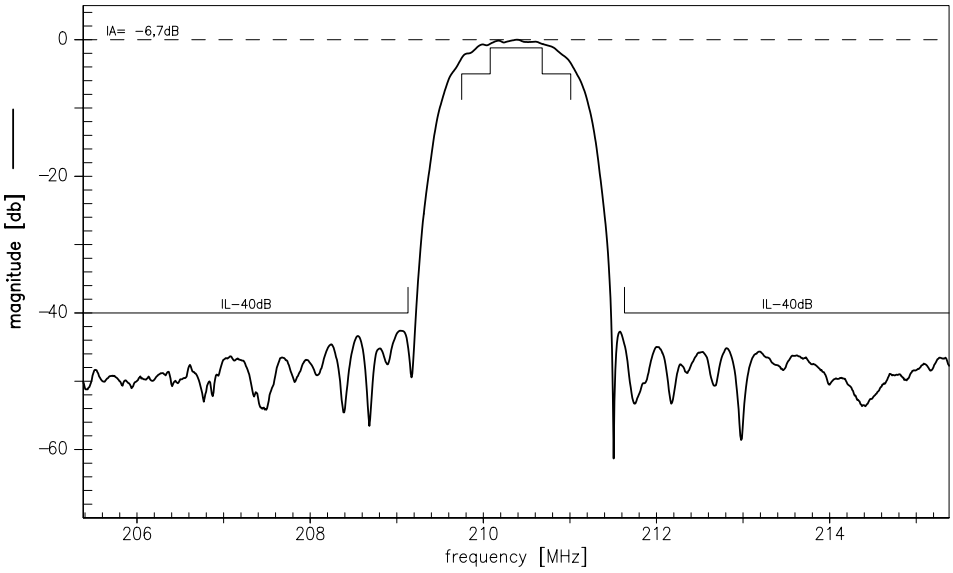


L_{s1} = 27nH
L_{p1} = 68nH
C_{p1} = 0pF
C_{p2} = 1,5pF
L_{p2} = 56nH
L_{s2} = 120nH

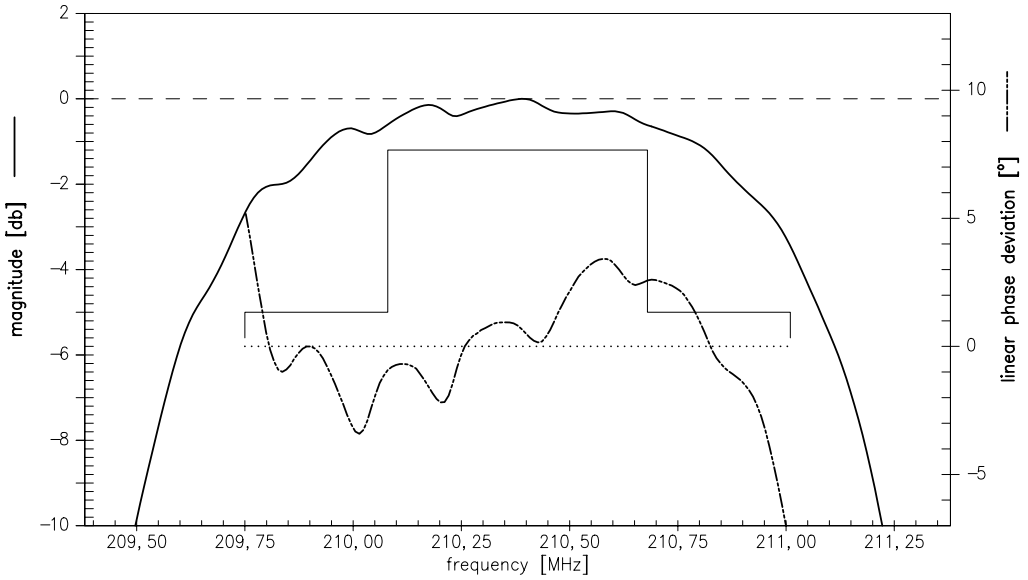


L_{s1} = 27nH
L_{p1} = 68nH
C_{p1} = 0pF
C_{p2} = 1,2pF
L_{p2} = 68nH
L_{s2} = 39nH

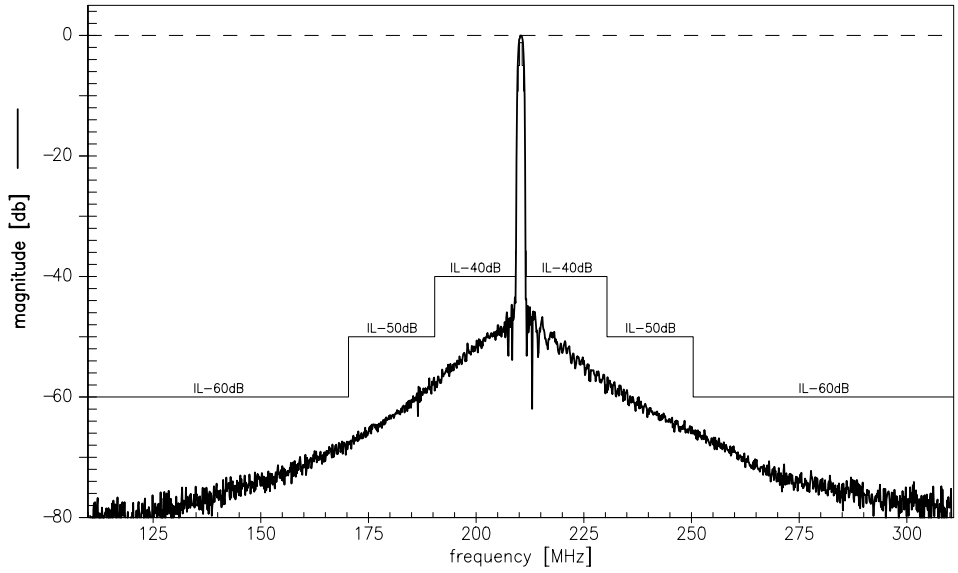
Transfer function (single-ended/single-ended):



Transfer function (passband)



Transfer function (wideband)



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