EPCOS

SAW Components

Data Sheet B4937

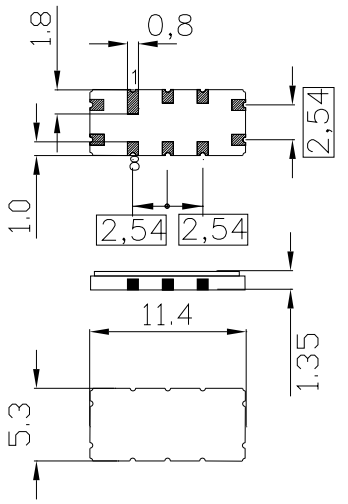
Ceramic package **QCC10C**

Features

- Low-loss IF filter for mobile telephone
- Channel selection in CDMA systems
- Very small size
- Low insertion attenuation
- Balanced and unbalanced operation possible
- Filter surface passivated
- Ceramic SMD package

Terminals

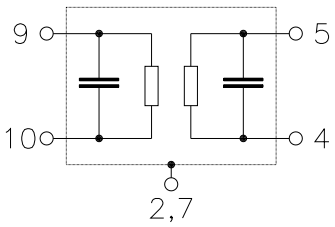
- Gold-plated Ni



Dimensions in mm, approx. weight 0,24 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B4937	B39111-B4937-U910	C61157-A7-A73	F6104-V8104-Z000

Electrostatic **S**ensitive **D**evice (**ESD**)

Maximum ratings

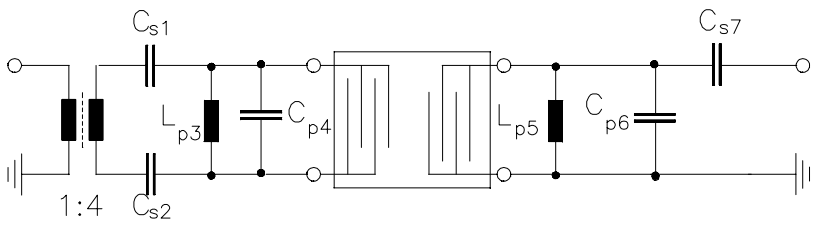
Operable temperature range	T	– 40/+ 85	˚C	
Storage temperature range	T_{stg}	– 40/+ 85	˚C	
DC voltage	V_{DC}	0	V	
Source power	P_s	10	dBm	

Characteristics

Operating temperature range: T = -35 to +85 °C
Terminating source impedance: Z_S = 1200 Ω || 120 nH
Terminating load impedance: Z_L = 1000 Ω || 110 nH

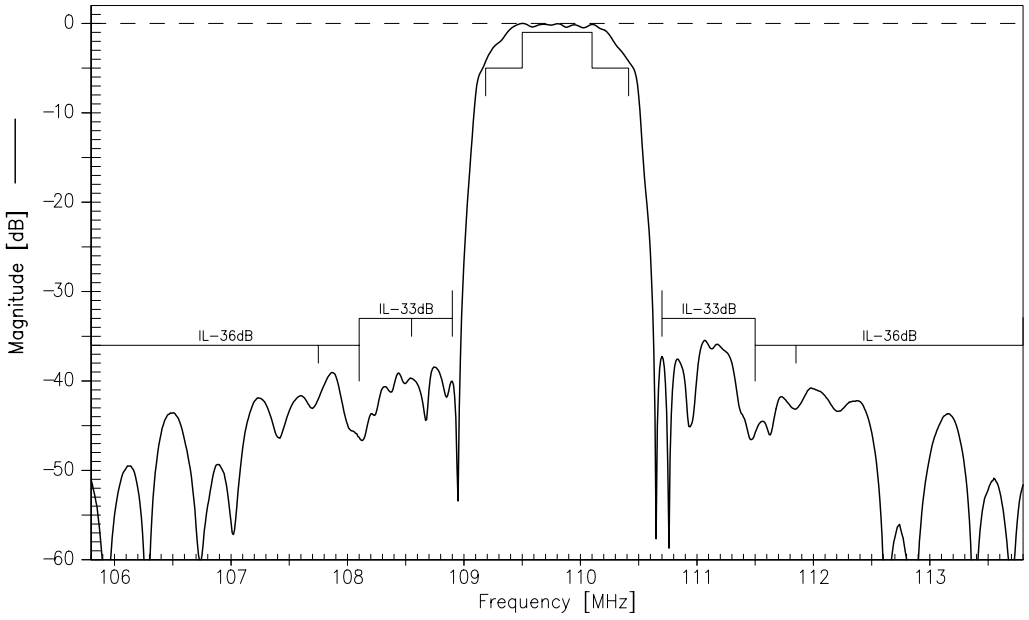
		min.	typ.	max.	
Nominal frequency	f_N	—	109,8	—	MHz
Minimum insertion attenuation					
(including losses in matching circuit)	α_{min}	—	8,5	10,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
f_N – 0,3 MHz ... f_N + 0,3 MHz		—	0,4	1,0	dB
Phase Linearity (rms)	$\Delta\tau$				
f_N – 0,614 MHz ... f_N + 0,614 MHz		—	1,5	3,0	°
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm$ 0,614 MHz		—	4,0	5,0	dB
f_N – 2,05 MHz		38	42	—	dB
f_N – 1,7 MHz		40	45	—	dB
f_N – 1,25 MHz		35	39	—	dB
f_N – 0,9 MHz		35	38	—	dB
f_N + 0,9 MHz		35	38	—	dB
f_N + 1,25 MHz		33	35	—	dB
f_N + 1,7 MHz		40	45	—	dB
f_N + 2,05 MHz		38	42	—	dB
f_N – 25 MHz ... f_N – 1,7 MHz		36	40	—	dB
f_N – 1,7 MHz ... f_N – 0,9 MHz		33	38	—	dB
f_N + 0,9 MHz ... f_N + 1,7 MHz		33	35	—	dB
f_N + 1,7 MHz ... f_N + 25 MHz		36	40	—	dB

Test Matching Network to bal. 200Ω / unbal. 50Ω (element values depend on PCB layout)

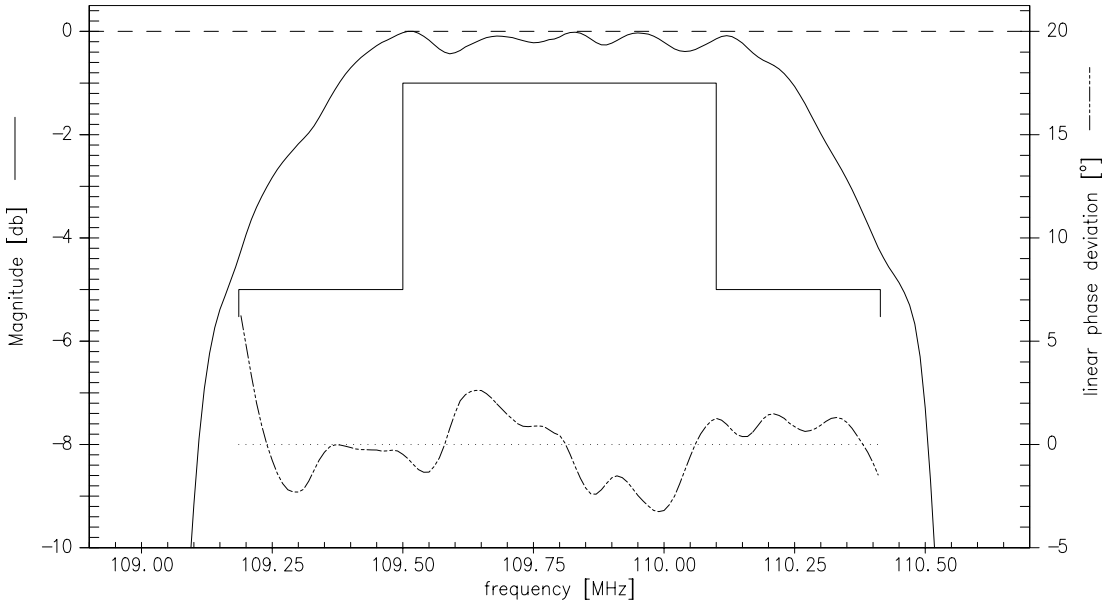


C_{s1} = 6,8 pF
C_{s2} = 6,8 pF
L_{p3} = 82 nH
C_{p4} = 2,7 pF
L_{p5} = 68 nH
C_{p6} = 1,2 pF
C_{s7} = 6,8 pF

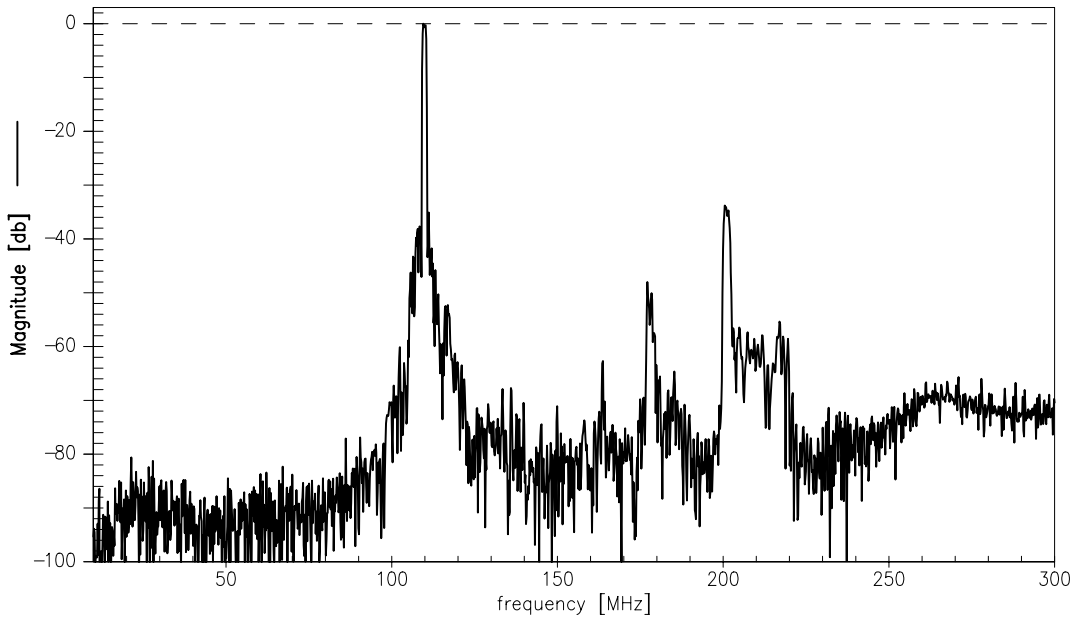
Transfer function (balanced - unbalanced):



Transfer function (passband):



Transfer function (wideband):



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