



SAW Components

Data Sheet B4937





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Low-Loss Filter for Mobile Communication

109,8 MHz

Data Sheet



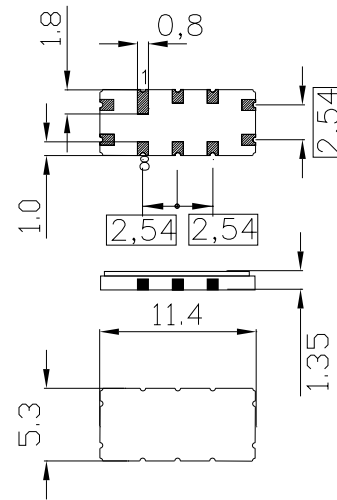
Ceramic package QCC10C

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

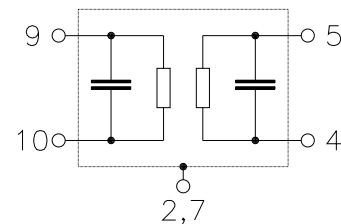
- Gold-plated Ni



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 Sensitive Device (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	

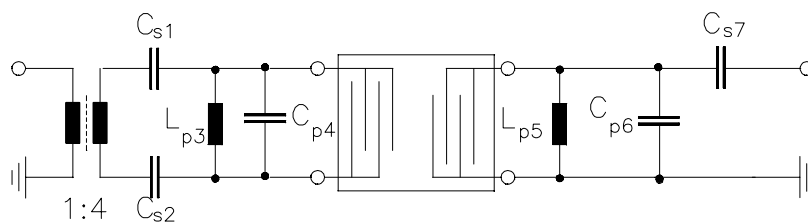


Characteristics

Operating temperature range: $T = -35$ to $+85$ °C
 Terminating source impedance: $Z_S = 1200 \Omega \parallel 120$ nH
 Terminating load impedance: $Z_L = 1000 \Omega \parallel 110$ 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) $f_N - 0,3$ MHz ... $f_N + 0,3$ MHz	$\Delta\alpha$	—	0,4	1,0	dB
Phase Linearity (rms) $f_N - 0,614$ MHz ... $f_N + 0,614$ MHz	$\Delta\tau$	—	1,5	3,0	°
Relative attenuation (relative to α_{min}) $f_N \pm 0,614$ MHz	α_{rel}	—	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

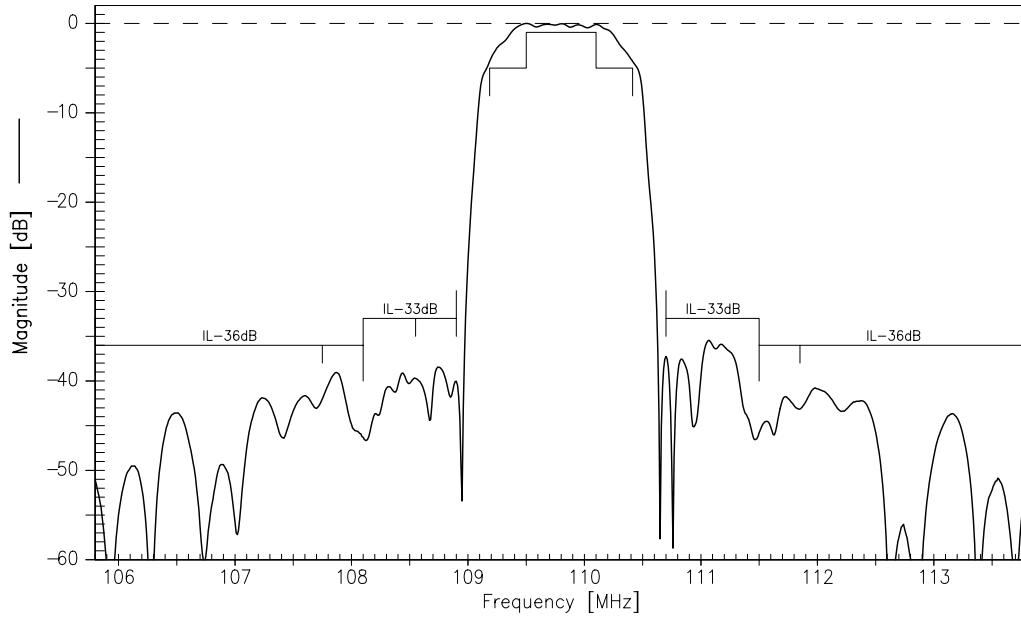
Test Matching Network to bal. 200Ω / unbal. 50Ω (element values depend on PCB layout)



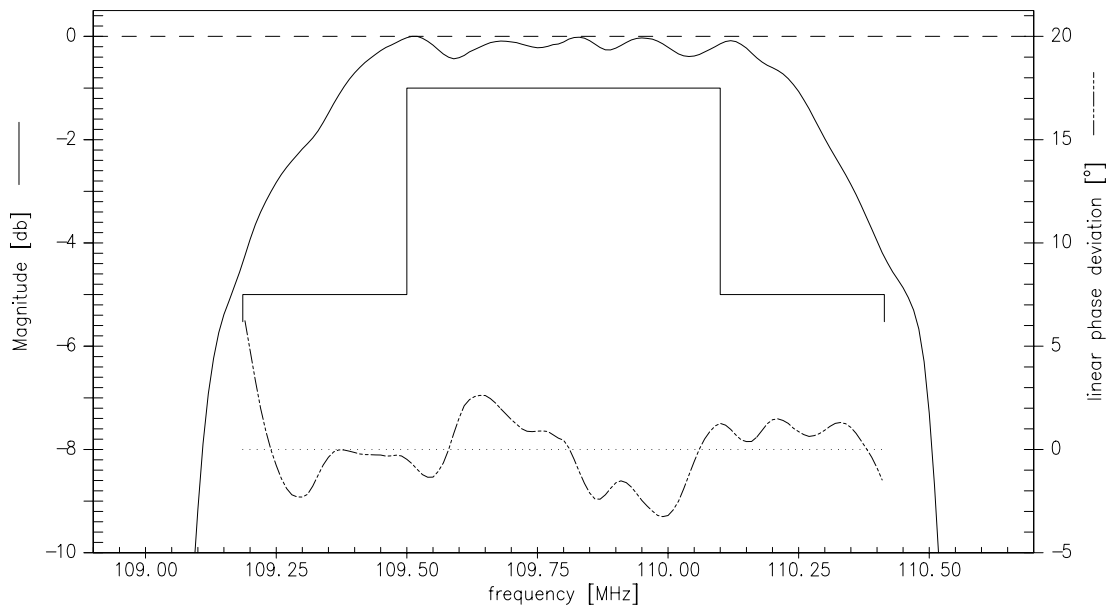
- $C_{s1} = 6,8$ pF
- $C_{s2} = 6,8$ pF
- $L_{p3} = 82$ nH
- $C_{p4} = 2,7$ pF
- $L_{p5} = 68$ nH
- $C_{p6} = 1,2$ pF
- $C_{s7} = 6,8$ pF



Transfer function (balanced - unbalanced):



Transfer function (passband):





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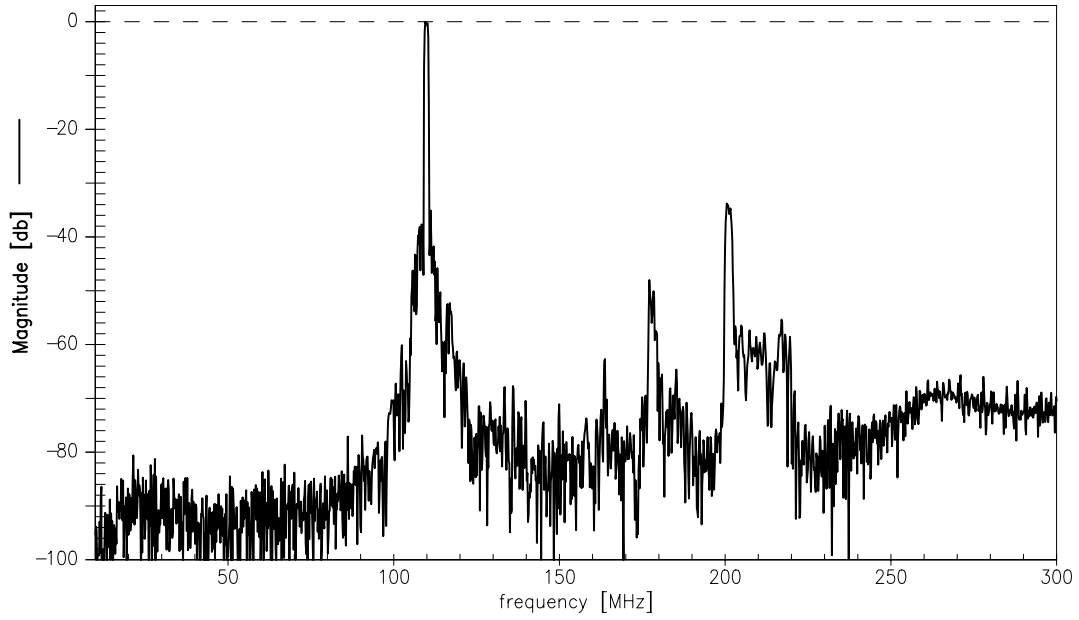
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Transfer function (wideband):





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Data Sheet	The SMD logo is a stylized, bold, sans-serif font with a horizontal line through the middle of the letters.

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