EPCOS

SAW Components

Data Sheet B4942

Data Sheet SMD

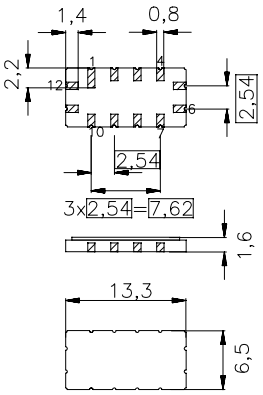
SMD Ceramic package **QCC12**

Features

- Low-loss IF filter for mobile telephone
- Channel selection in CDMA systems
- High rejection
- Balanced and unbalanced operation possible
- Filter surface passivated
- Package for **S**urface **M**ounted **T**echnology (**SMT**)

Terminals

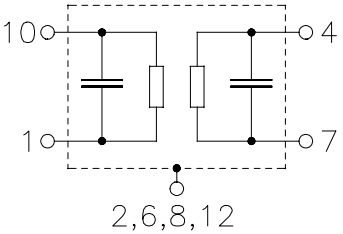
- Gold-plated Ni



Dimensions in mm, approx. weight 0,2 g

Pin configuration

1	Input
10	Input ground or balanced input
7	Output
4	Output ground or balanced output
2, 6, 8, 12	Case ground
3, 5, 9, 11	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B4942	B39850-B4942-Z510	C61157-A7-A55	F61074-V8026-Z000

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

Maximum ratings

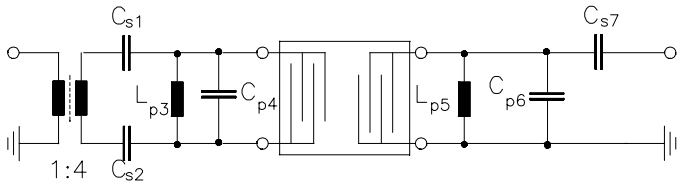
Operable temperature range	T	– 40/+ 85	˚C	
Storage temperature range	T_{stg}	– 40/+ 85	˚C	
DC voltage	V_{DC}	0	V	
Source power	P_s	10	dBm	

Characteristics

Operating temperature range: T = -30 to +85 °C
Terminating source impedance: Z_S = 1700 Ω || 140 nH
Terminating load impedance: Z_L = 1500 Ω || 142 nH

		min.	typ.	max.	
Nominal frequency	f_N	—	85,38	—	MHz
Minimum insertion attenuation (including loss in matching network without loss in balun)	α_{min}	—	9,5	11,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
f_N – 0,3 MHz ... f_N + 0,3 MHz		—	0,5	1,0	dB
Phase Linearity (rms)	$\Delta\tau$				
f_N – 0,63 MHz ... f_N + 0,63 MHz		—	1,8	3,0	°
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm 0{,}63$ MHz		—	4,0	5,0	dB
f_N – 1,7 MHz		42	48	—	
f_N – 0,9 MHz		40	45	—	
f_N + 0,9 MHz		38	45	—	
f_N + 1,7 MHz		42	48	—	
f_N – 25 MHz ... f_N – 1,7 MHz		40	45	—	dB
f_N – 1,7 MHz ... f_N – 0,9 MHz		37	40	—	dB
f_N + 0,9 MHz ... f_N + 1,7 MHz		36	39	—	dB
f_N + 1,7 MHz ... f_N + 25 MHz		40	45	—	dB

Test matching network to bal. 200 Ω / unbal. 50 Ω (element values depend on PCB layout):

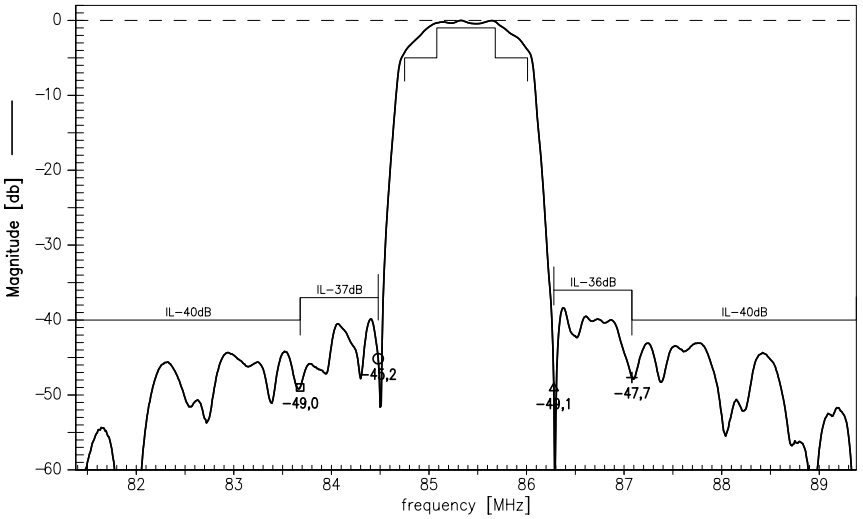


C_{s1} = 8,2 pF
C_{s2} = 8,2 pF
L_{p3} = 120 nH
C_{p4} = 1,2 pF
L_{p5} = 100 nH
C_{p6} = 2,2 pF
C_{s7} = 6,8 pF

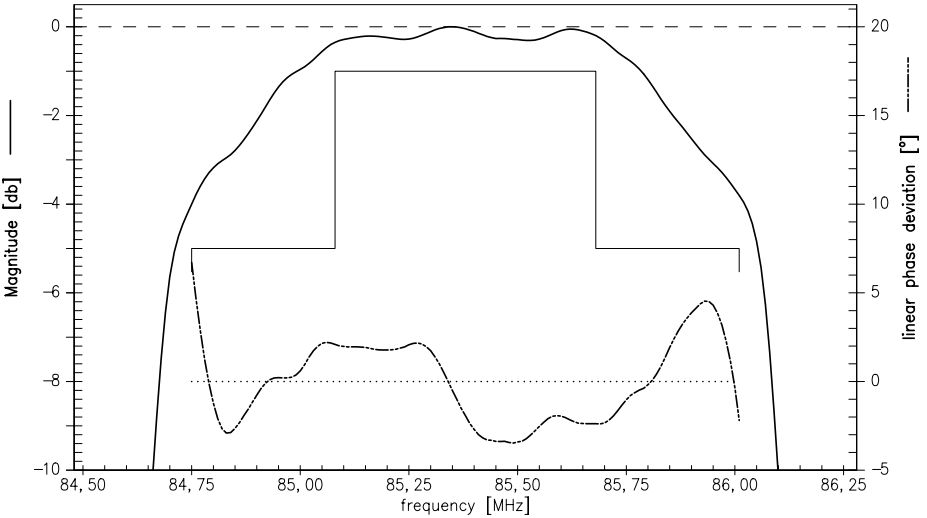
Note:

The matching environment is realized using M/A-COM 1:4 baluns with an insertion loss of 0,6 dB.

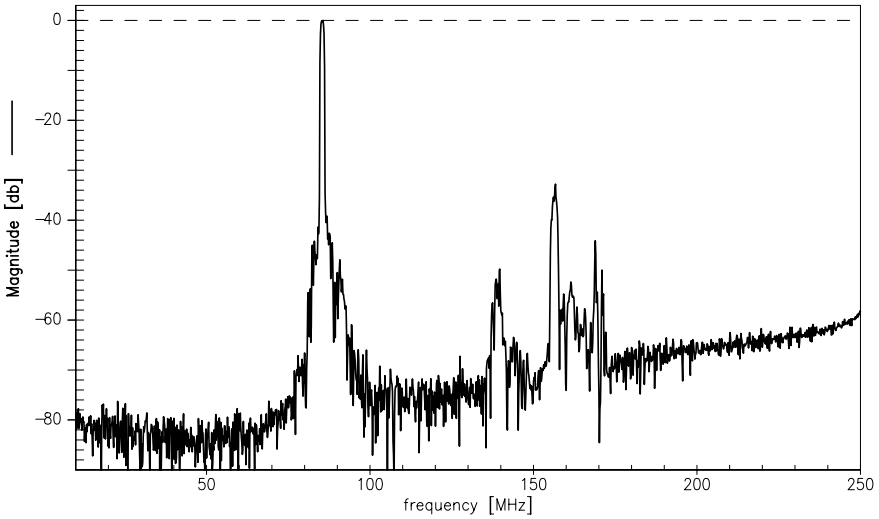
Transfer function (balanced - unbalanced):



Transfer function (passband):



Transfer function (wideband):



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