EPCOS

SAW Components

Data Sheet B4943

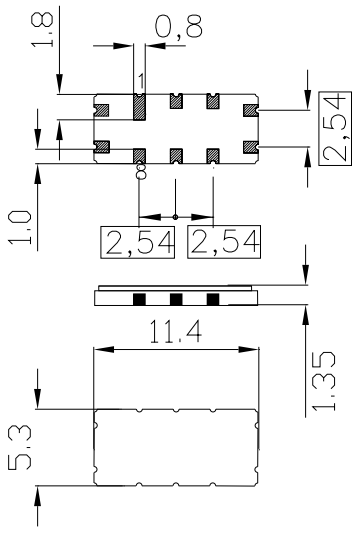
SMD ceramic package **QCC10C**

Features

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

Terminals

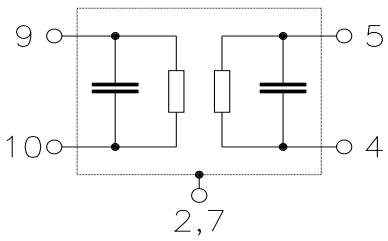
- Ni, gold plated



Dimensions in mm, approx. weight 0,24 g

Pin configuration

10	Input
9	Balanced input or input ground
5	Output
4	Balanced output or output ground
2, 7	Case ground
1, 3, 6, 8	Not connected



Type	Ordering code	Marking and Package according to	Packing according to
B4943	B39850-B4943-U910	C61157-A7-A73	F61074-V8105-Z000

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

Maximum ratings

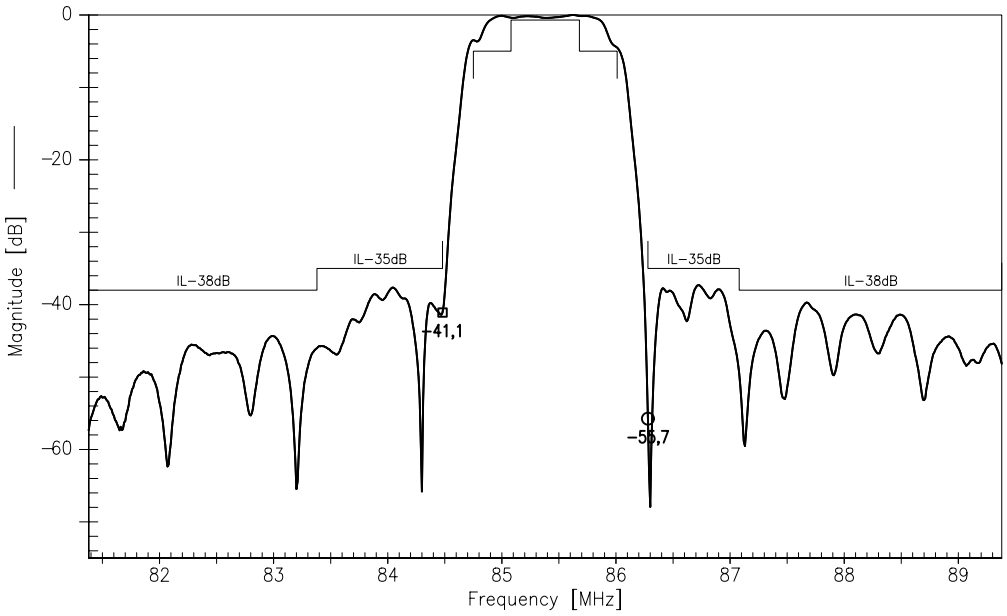
Operable temperature range	T	– 40/+ 85	˚C
Storage temperature range	T_{stg}	– 40/+ 85	˚C
DC voltage	V_{DC}	13	V
Source power	P_s	10	dBm

Characteristics

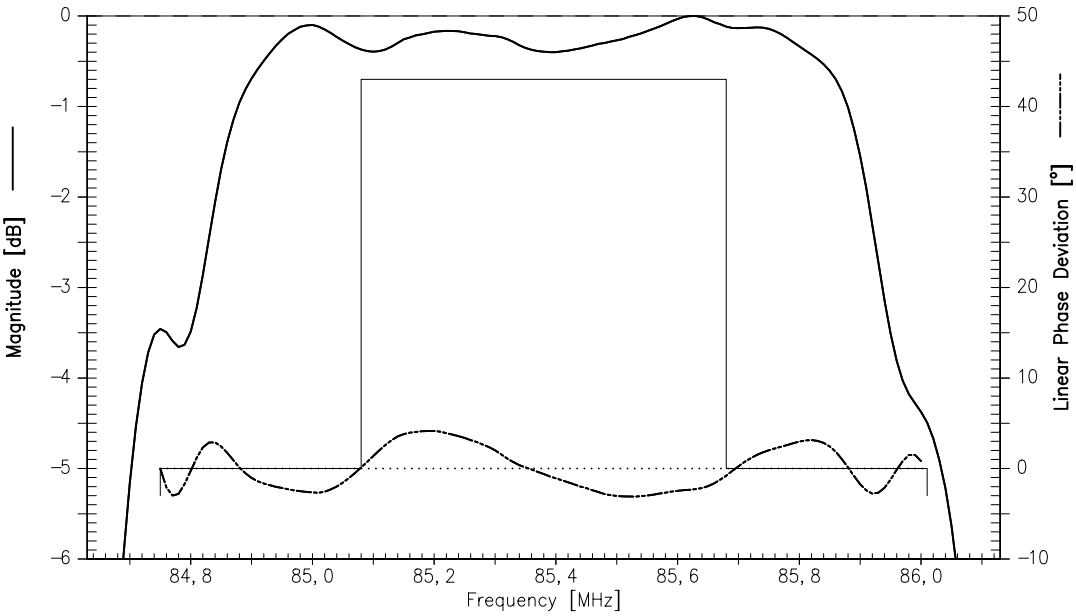
Operating temperature range: T = –35˚C .. +85 ˚C
Terminating source impedance: Z_S = 1975 Ω || 340 nH
Terminating load impedance: Z_L = 1600 Ω || 350 nH

		min.	typ.	max.	
Nominal frequency	f_N	—	85,38	—	MHz
Minimum insertion attenuation (including loss in matching network without loss in balun)	α_{min}	—	10,0	11,5	dB
Amplitude ripple	$\Delta\alpha$				
f_N – 0,3 MHz ... f_N + 0,3 MHz		—	0,5	0,8	dB
Phase linearity (rms deviation)					
f_N – 0,63 MHz ... f_N + 0,63 MHz		—	2,5	3,5	°
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm 0{,}63$ MHz		—	4,0	5,0	dB
f_N – 0,9 MHz		35	41	—	dB
f_N + 0,9 MHz		35	55	—	dB
f_N – 1,7 MHz		35	39	—	dB
f_N + 1,7 MHz		38	44	—	dB
f_N – 9,0 MHz ... f_N – 2,0 MHz		38	—	—	dB
f_N – 2,0 MHz ... f_N – 0,9 MHz		35	—	—	dB
f_N + 0,9 MHz ... f_N + 1,7 MHz		35	—	—	dB
f_N + 1,7 MHz ... f_N + 9,0 MHz		38	—	—	dB

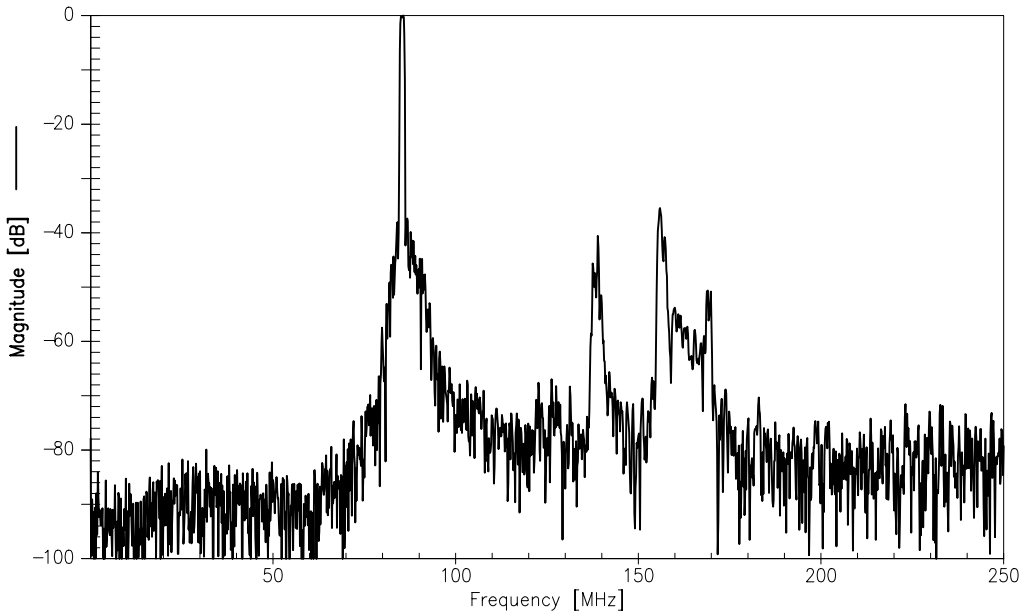
Normalized transfer function (balanced/balanced)



Normalized transfer function (passband, balanced/balanced):

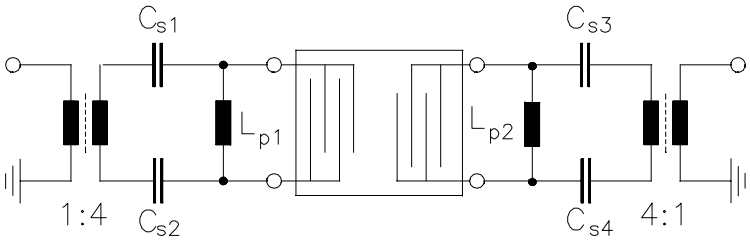


Normalized transfer function (wideband, balanced/balanced)



Test matching network to 200Ω / 200Ω

(Element values depend on pcb layout)



C_{s1}= 3,9 pF || 2,2 pF
C_{s2}= 6,8 pF
L_{p1} = 220 nH || 1 pF
L_{p2} = 220 nH || 1,5 pF
C_{s3} = 5,6 pF
C_{s4} = 6,8 pF

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