EPCOS

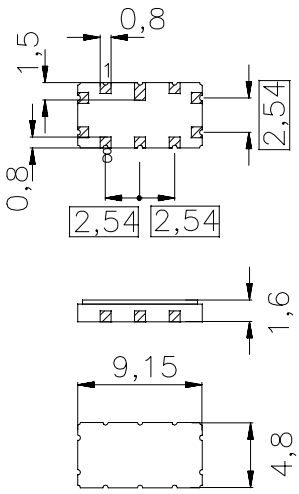
SAW Components

Data Sheet B4956

Ceramic package **QCC10B**

Features

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



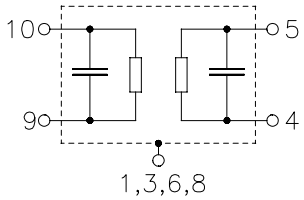
Dimensions in mm, approx. weight 0,23 g

Terminals

- Gold plated

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B4956	B39850-B4956-Z710	C61157-A7-A49	F61074-V8172-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}	3	V	
ESD voltage	V^*_{ESD}	100	V	Machine Model, 10 pulses
Source power	P_S	10	dBm	

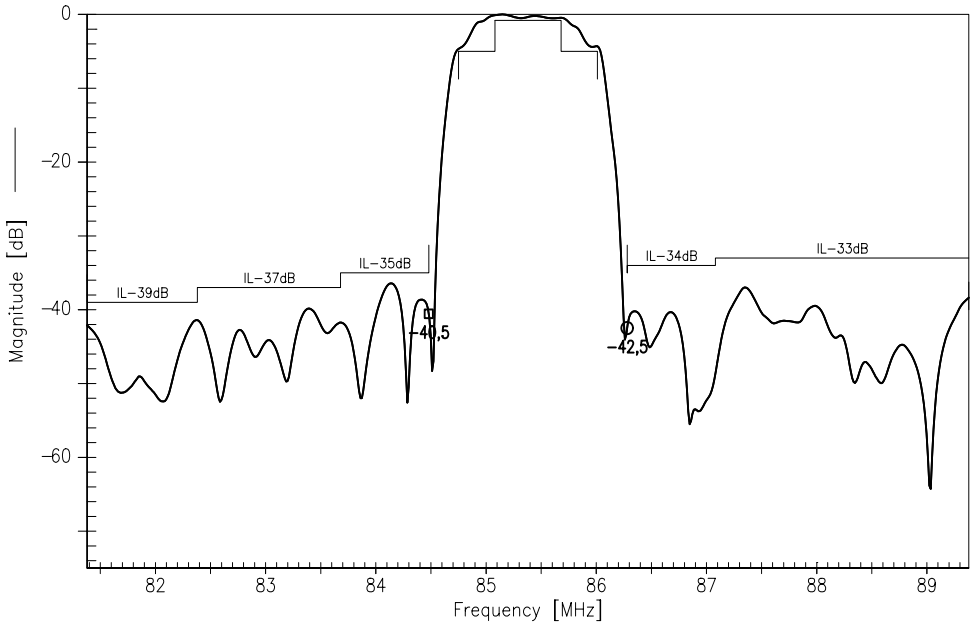
* - acc. to JESD22-A115A (Machine Model), 10 negative & 10 positive pulses

Characteristics

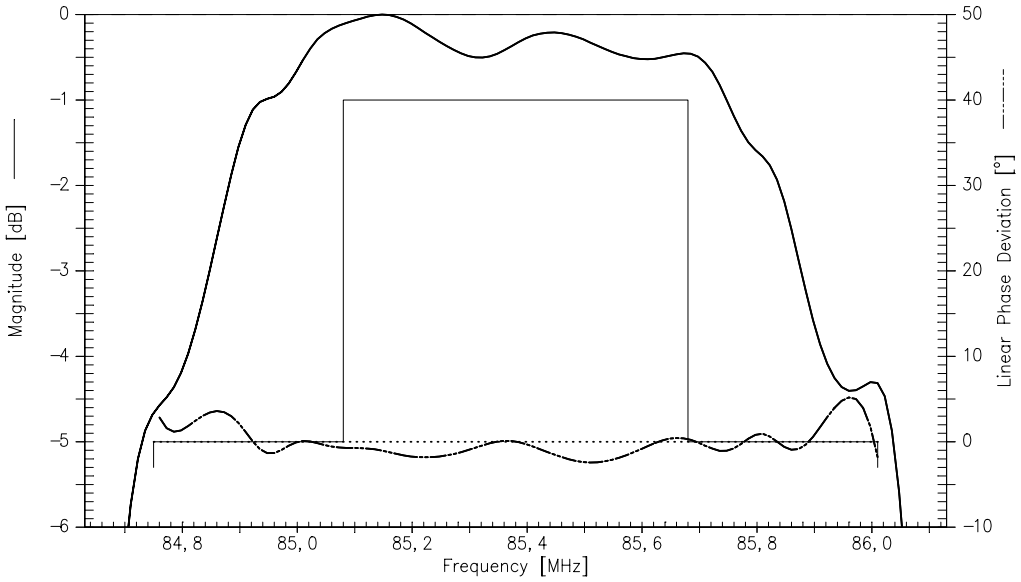
Operating temperature range: T = –35˚C .. +85 ˚C
Terminating source impedance: Z_S = 1570 Ω || 361 nH
Terminating load impedance: Z_L = 500 Ω || 258 nH

		min.	typ.	max.	
Nominal frequency	f_N	—	85,38	—	MHz
Minimum insertion attenuation (without loss in matching network)	α_{min}	—	9,0	10,8	dB
Minimum insertion attenuation (with loss in matching network according to figure 1)	α_{min}	—	11,3	12,8	dB
Amplitude ripple	$\Delta\alpha$				
f_N – 0,3 MHz ... f_N + 0,3 MHz		—	0,4	1,0	dB
Phase linearity (rms deviation)					
f_N – 0,615 MHz ... f_N + 0,615 MHz		—	2,0	3,5	˚
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm 0{,}63$ MHz		—	4,5	5,0	dB
f_N – 0,9 MHz		36	40	—	dB
f_N + 0,9 MHz		36	42	—	dB
f_N – 1,7 MHz		37	42	—	dB
f_N + 1,7 MHz		37	48	—	dB
f_N – 9,0 MHz ... f_N – 3,0 MHz		39	42	—	dB
f_N – 3,0 MHz ... f_N – 1,7 MHz		37	42	—	dB
f_N – 1,7 MHz ... f_N – 0,9 MHz		35	38	—	dB
f_N + 0,9 MHz ... f_N + 1,7 MHz		34	40	—	dB
f_N + 1,7 MHz ... f_N + 7,0 MHz		33	36	—	dB
f_N + 7,0 MHz ... f_N + 9,0 MHz		40	46	—	dB

Normalized transfer function (balanced/balanced):



Normalized transfer function (passband, balanced/balanced):



Normalized transfer function (wideband, balanced/balanced):

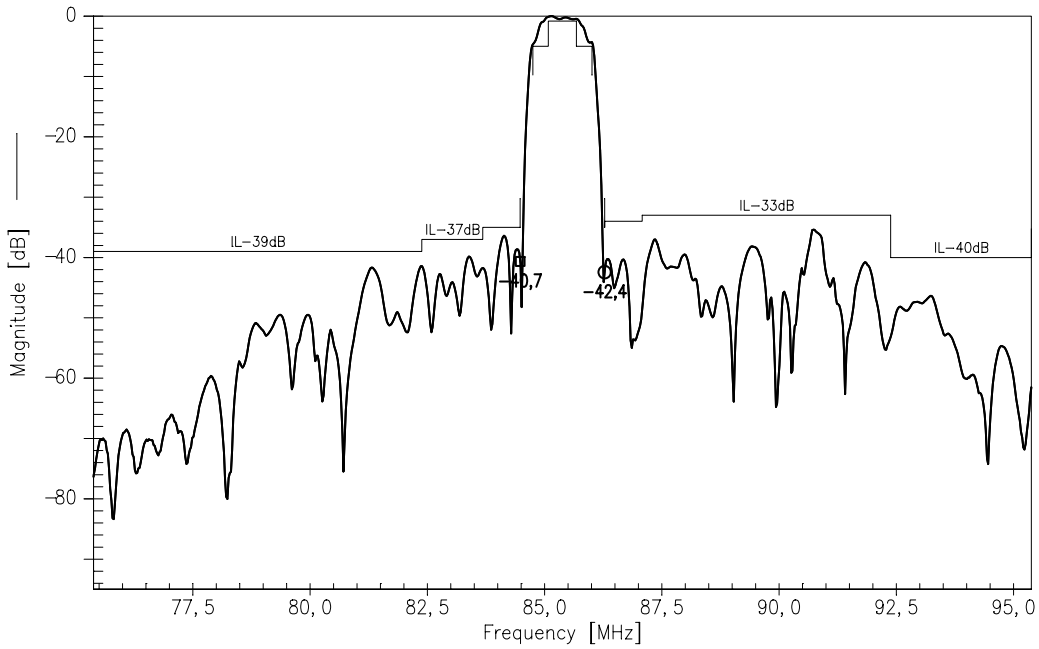
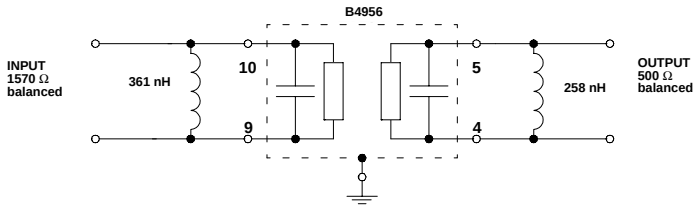


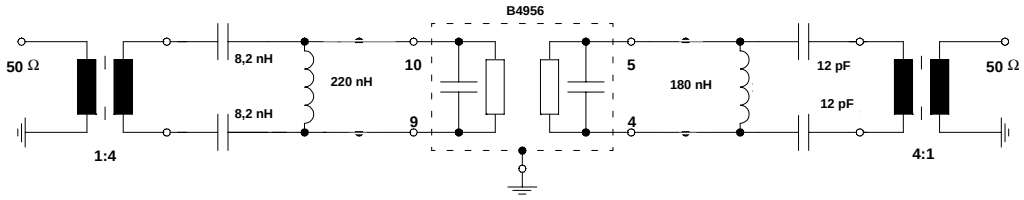
Figure 1: Matching network for 1570Ω / 500Ω configuration



balanced input: pins 9,10
balanced output: pins 4,5

Figure 2: Test matching network

(Element values depend on pcb layout)



balanced input: pins 9,10
balanced output: pins 4,5

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