



SAW Components

Data Sheet B4956

Data Sheet

An abstract, grayscale graphic featuring a globe with a grid pattern, overlaid with a large, stylized, and slightly blurred "EPCOS" logo. The logo is rendered in a light gray, almost white, color, giving it a three-dimensional appearance as if it's floating or attached to the globe. The background is dark and textured, with some light streaks and a sense of motion or depth.

EPCOS



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Low-Loss Filter for Mobile Communication

85,38 MHz

Data Sheet



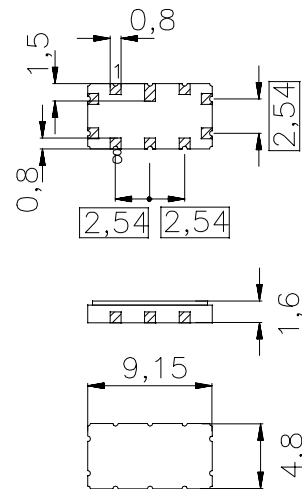
Features

- 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 **Surface Mounted Technology (SMT)**

Terminals

- Gold plated

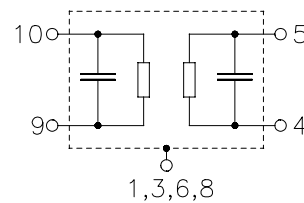
Ceramic package **QCC10B**



Dimensions in mm, approx. weight 0,23 g

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 Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 40/+ 85	°C	Machine Model, 10 pulses
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	3	V	
ESD voltage	V_{ESD}^*	100	V	
Source power	P_s	10	dBm	

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



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Characteristics

Operating temperature range: $T = -35^{\circ}\text{C} \dots +85^{\circ}\text{C}$
Terminating source impedance: $Z_S = 1570 \Omega \parallel 361 \text{ nH}$
Terminating load impedance: $Z_L = 500 \Omega \parallel 258 \text{ nH}$

		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	$\Delta\alpha$				
$f_N - 0,3 \text{ MHz} \dots f_N + 0,3 \text{ MHz}$		—	0,4	1,0	dB
Phase linearity (rms deviation)					
$f_N - 0,615 \text{ MHz} \dots f_N + 0,615 \text{ MHz}$		—	2,0	3,5	°
Relative attenuation (relative to α_{\min})	α_{rel}				
$f_N \pm 0,63 \text{ MHz}$		—	4,5	5,0	dB
$f_N - 0,9 \text{ MHz}$		36	40	—	dB
$f_N + 0,9 \text{ MHz}$		36	42	—	dB
$f_N - 1,7 \text{ MHz}$		37	42	—	dB
$f_N + 1,7 \text{ MHz}$		37	48	—	dB
$f_N - 9,0 \text{ MHz} \dots f_N - 3,0 \text{ MHz}$		39	42	—	dB
$f_N - 3,0 \text{ MHz} \dots f_N - 1,7 \text{ MHz}$		37	42	—	dB
$f_N - 1,7 \text{ MHz} \dots f_N - 0,9 \text{ MHz}$		35	38	—	dB
$f_N + 0,9 \text{ MHz} \dots f_N + 1,7 \text{ MHz}$		34	40	—	dB
$f_N + 1,7 \text{ MHz} \dots f_N + 7,0 \text{ MHz}$		33	36	—	dB
$f_N + 7,0 \text{ MHz} \dots f_N + 9,0 \text{ MHz}$		40	46	—	dB



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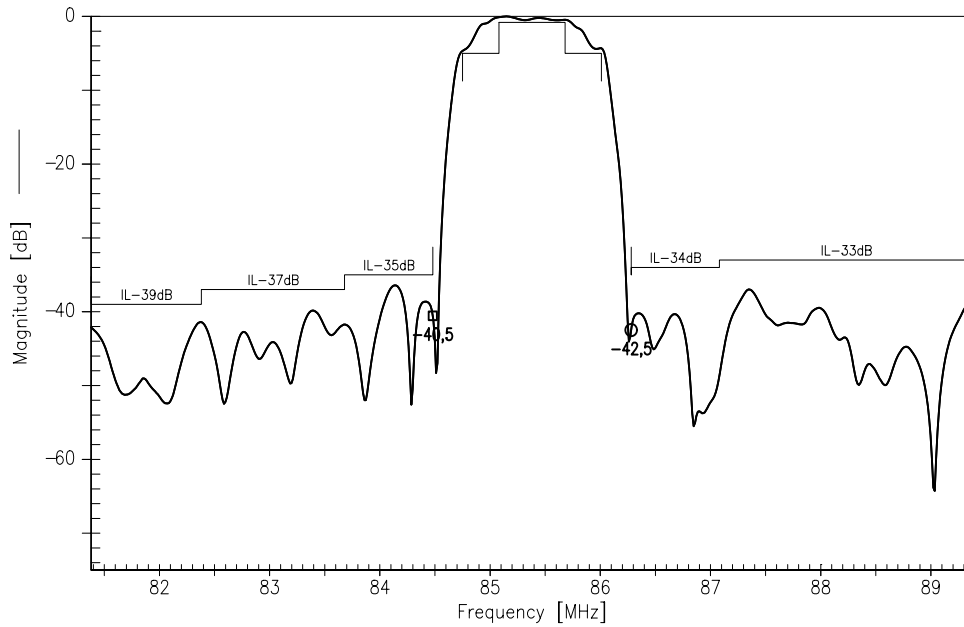
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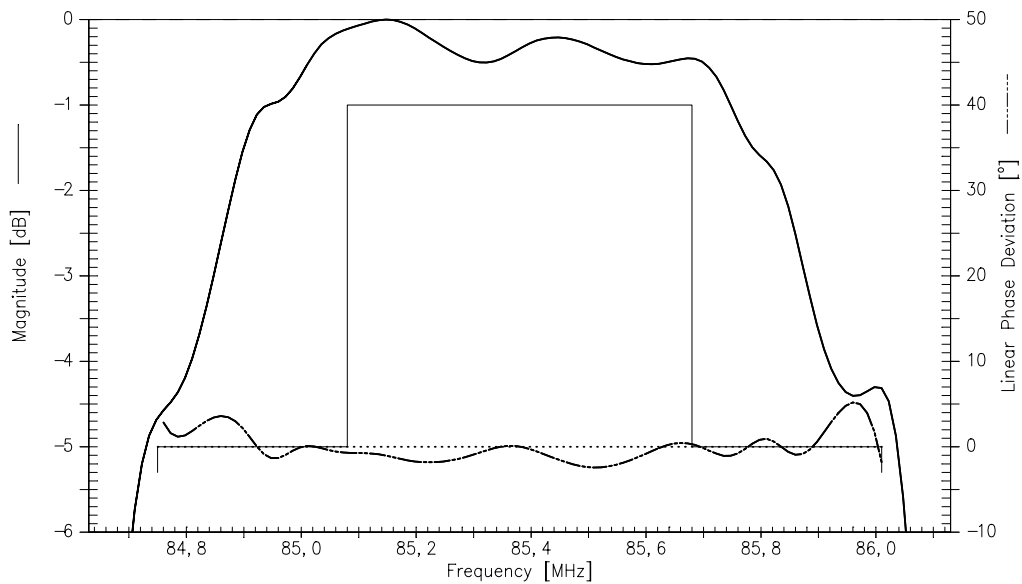
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Normalized transfer function (balanced/balanced):



Normalized transfer function (passband, balanced/balanced):





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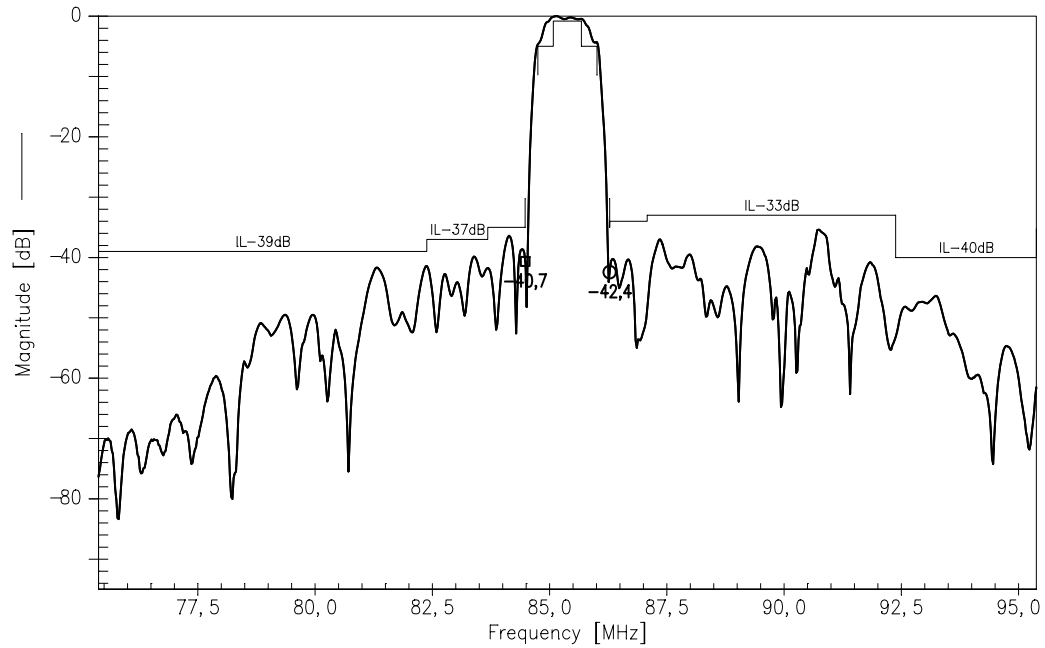
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Normalized transfer function (wideband, balanced/balanced):





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

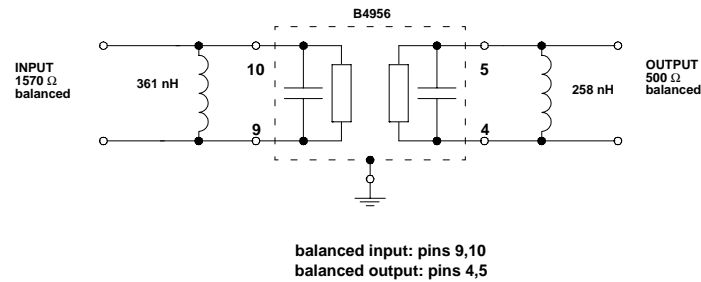
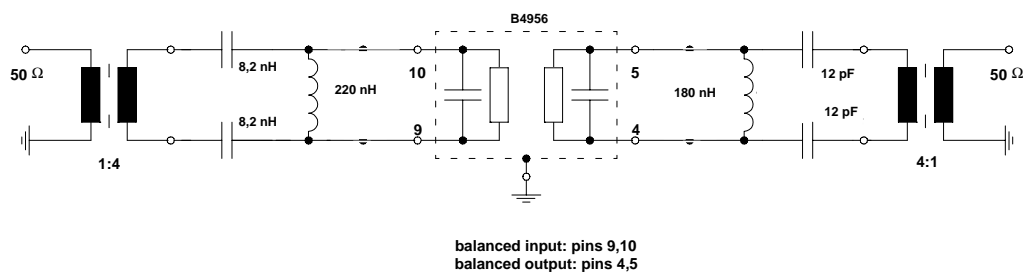


Figure 2: Test matching network

(Element values depend on pcb layout)



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