



## IF Filters for CDMA Cellular Phones

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39131B4957H710		2006-12-01	2007-02-28	2007-05-31

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# SAW Components

Data Sheet B4957





SAW Components

B4957

Low-Loss Filter for Mobile Communication

128,1 MHz

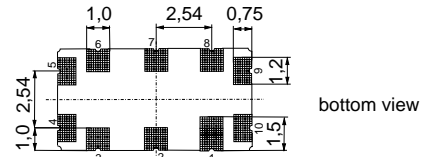
Data Sheet



**Features**

- IF filter for mobile telephone
- Channel selection in CDMA systems
- High rejection, small size
- Low insertion attenuation, low amplitude ripple
- Filter surface passivated
- Package for **Surface Mounted Technology (SMT)**

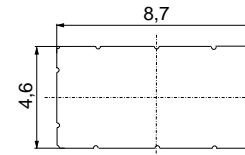
SMD package **QCC10E**



bottom view



side view



top view

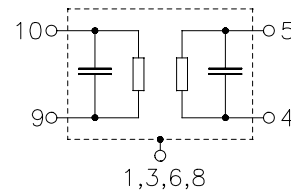
Dimensions in mm, approx. weight 0,23 g

**Terminals**

- Gold plated

**Pin configuration**

- |            |                       |
|------------|-----------------------|
| 9, 10      | Balanced Output       |
| 4          | Input or Input Ground |
| 5          | Input                 |
| 2, 7       | Ground                |
| 1, 3, 6, 8 | Case ground           |



Type	Ordering code	Marking and Package according to	Packing according to
B4957	<b>B39131-B4957-H710</b>	C61157-A7-A127	F61074-V8192-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operable temperature range	$T$	- 40/+ 85	°C
Storage temperature range	$T_{stg}$	- 40/+ 85	°C
DC voltage	$V_{DC}$	5	V
Source power	$P_s$	10	dBm



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Operating temperature range:  $T = -30^{\circ}\text{C} \dots +85^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 1370 \Omega \parallel 170 \text{ nH}$   
 Terminating load impedance:  $Z_L = 760 \Omega \parallel 119 \text{ nH}$

		min.	typ.	max.	
<b>Nominal frequency</b>	$f_N$	—	128,1	—	MHz
<b>Minimum insertion attenuation</b> (including loss in matching network without loss in balun)	$\alpha_{\min}$	—	9,2	10,5	dB
<b>Amplitude ripple</b>	$\Delta\alpha$				
$f_N - 0,3 \text{ MHz} \dots f_N + 0,3 \text{ MHz}$		—	0,6	1,0	dB
<b>Phase linearity (rms deviation)</b>					
$f_N - 0,615\text{MHz} \dots f_N + 0,615 \text{ MHz}$		—	1,6	3,0	$^{\circ}$
<b>Relative attenuation (relative to <math>\alpha_{\min}</math>)</b>	$\alpha_{\text{rel}}$				
$f_N \pm 0,615\text{MHz}$		—	4,0	4,5	dB
10,0 MHz ... $f_N - 5,0 \text{ MHz}$		45 <sup>1)</sup>	48	—	dB
$f_N - 5,0 \text{ MHz} \dots f_N - 0,9 \text{ MHz}$		37	39	—	dB
$f_N - 2,05 \text{ MHz}$		37	49	—	dB
$f_N - 1,7 \text{ MHz}$		37	44	—	dB
$f_N - 1,25 \text{ MHz}$		37	52	—	dB
$f_N - 0,9 \text{ MHz}$		37	43	—	dB
$f_N + 0,9 \text{ MHz}$		37	40	—	dB
$f_N + 1,25 \text{ MHz}$		37	53	—	dB
$f_N + 1,7 \text{ MHz}$		37	44	—	dB
$f_N + 2,05 \text{ MHz}$		37	54	—	dB
$f_N + 0,9 \text{ MHz} \dots f_N + 5,0 \text{ MHz}$		37	40	—	dB
$f_N + 5,0 \text{ MHz} \dots f_N + 70,0 \text{ MHz}$		45 <sup>2)</sup>	48	—	dB
172,485 MHz ... 173,715 MHz		60	75	—	dB
207,485 MHz ... 208,715 MHz		48	50	—	dB

1) exception: 122,1 MHz +/- 200 kHz  
 2) exception: 135,2 MHz +/- 300 kHz



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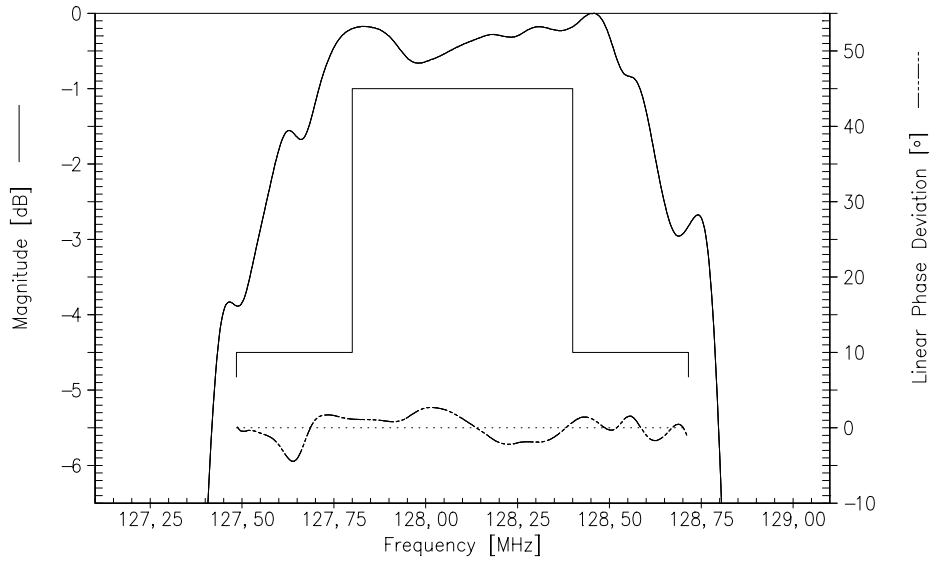
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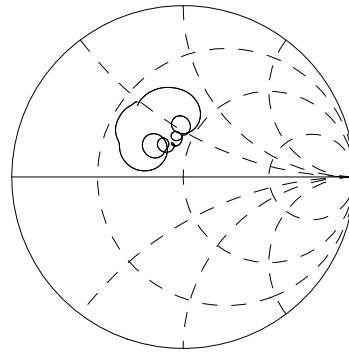
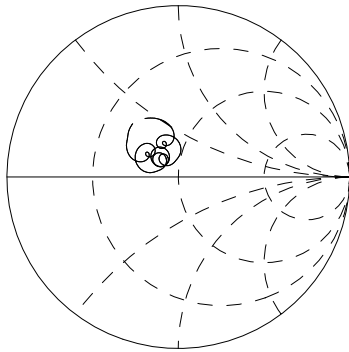


Transfer function: passband, single ended (pin 5) - balanced (pins 9,10)



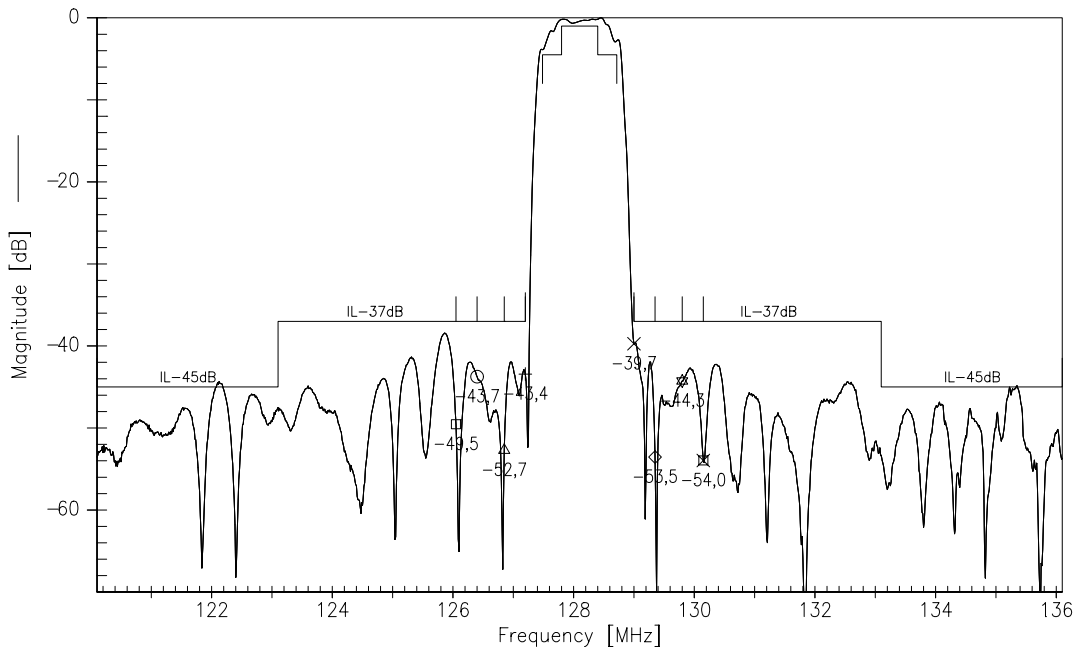
output reflection

input reflection



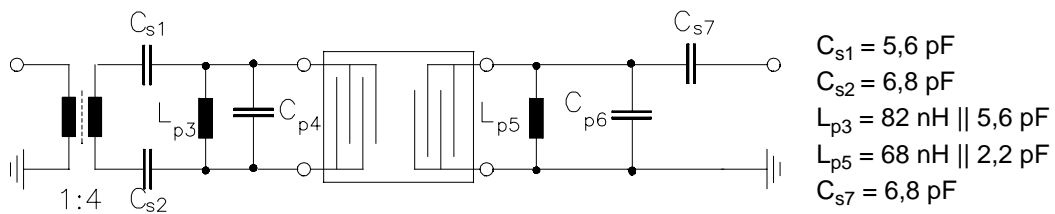


Transfer function: wide band, single ended (pin 5) - balanced (pins 9,10)



**Test matching network to 50Ω**

(Element values depend on pcb layout. Input is at the right hand side)





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**Published by EPCOS AG**

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