

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The following products presented in this data sheet are being withdrawn.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

Data Sheet

A large, stylized, 3D-effect logo for "EPCCOS". The letters are white with a metallic, reflective finish and are set against a dark, abstract background that features a faint, glowing globe and some geometric shapes.

# SAW Components

B4957

## Low-Loss Filter for Mobile Communication

128,1 MHz

### Data Sheet



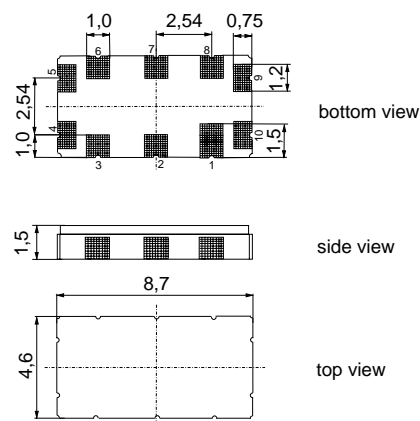
#### Features

- 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**

#### Terminals

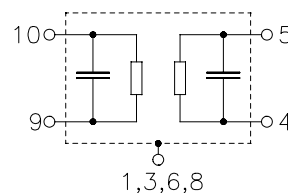
- Gold plated



Dimensions in mm, approx. weight 0,23 g

#### 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	

**SAW Components**
**B4957**
**Low-Loss Filter for Mobile Communication**
**128,1 MHz**
**Data Sheet**

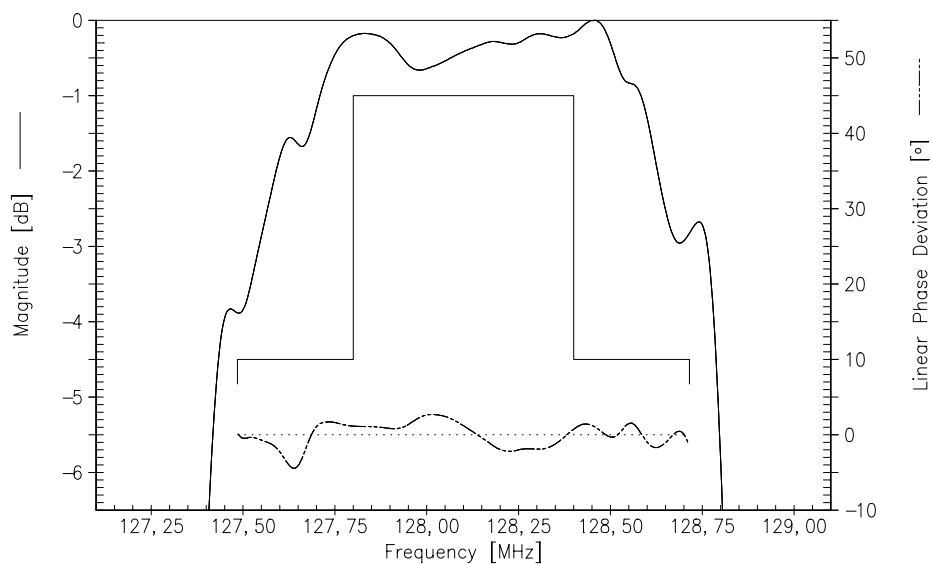

Operating temperature range:  $T = -30^{\circ}\text{C} \dots +85^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 1370 \Omega \parallel 170 \text{ nH}$   
 Terminating load impedance:  $Z_L = 760 \Omega \parallel 119 \text{ nH}$

		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	°
<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

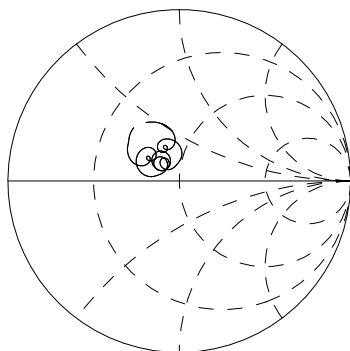
1) exception: 122,1 MHz +/- 200 kHz

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

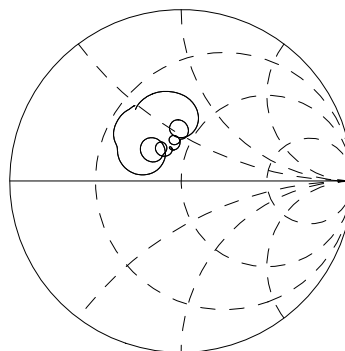
**Transfer function:** passband, single ended (pin 5) - balanced (pins 9,10)

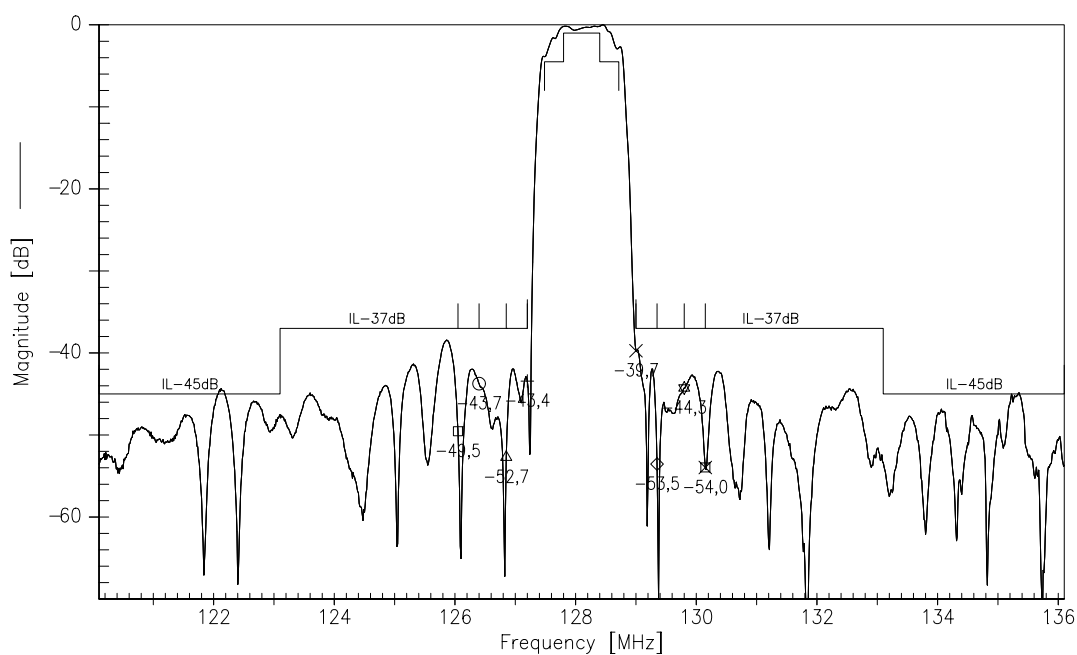


output reflection

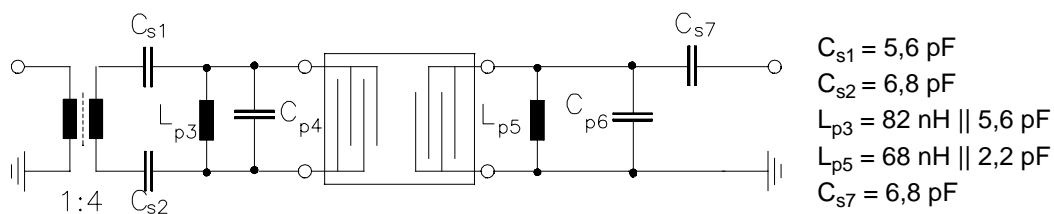


input reflection



**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)



<b>SAW Components</b>	<b>B4957</b>
<b>Low-Loss Filter for Mobile Communication</b>	<b>128,1 MHz</b>
<b>Data Sheet</b>	

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