



## IF Filters for Basestations

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39730B3863U210		2006-12-01	2007-02-28	2007-05-31

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# SAW Components

Data Sheet B3863

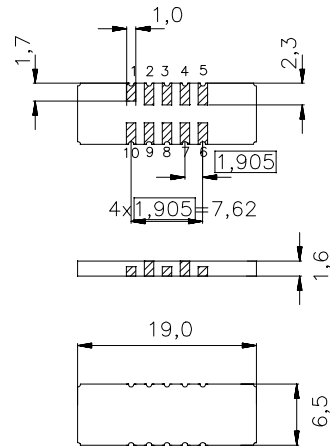


**Data Sheet**
**Features**

- Low-loss IF filter for CDMA base station
- Temperature stable
- Ceramic SMD package
- Unbalanced or balanced operation

**Terminals**

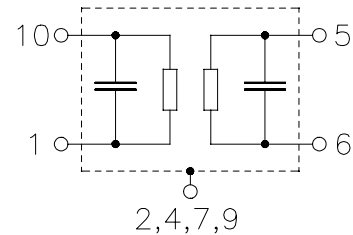
- Gold plated

**Ceramic package DCC18**


Dimensions in mm, approx. weight 0,8 g

**Pin configuration**

1	Input or balanced input
10	Input ground or balanced input
6	Output or balanced output
5	Output ground or balanced output
3, 8	Ground
2, 4, 7, 9	Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B3863	B39730-B3863-U210	C61157-A7-A54	F61074-V8081-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operable temperature range	$T$	-40 / +85	°C
Storage temperature range	$T_{stg}$	-40 / +85	°C
DC voltage	$V_{DC}$	0	V
Source power	$P_s$	0	dBm



**SAW Components**

**B3863**

**Low-Loss Filter**

**72,9746 MHz**

**Data Sheet**

**Characteristics**

Operating temperature range:  $T = -40$  to  $+85$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$  and matching network  
 Terminating load impedance:  $Z_L = 50 \Omega$  and matching network

			<b>min.</b>	<b>typ.</b>	<b>max.</b>	
<b>Nominal frequency</b>	$f_N$		—	72,9746	—	MHz
<b>Minimum insertion attenuation</b>	$\alpha_N$		—	22,0	24,0	dB
<b>2,5 dB bandwidth</b>	$\alpha_{rel} \leq 2,5$ dB	$B_{2,5dB}$	2,48	2,54	—	MHz
<b>Amplitude ripple (p-p)</b>	$f_N \pm 1,05$ MHz	$\Delta\alpha$	—	1,7	2,2	dB
<b>Integrated phase error (rms)</b>	$f_N \pm 1,24$ MHz	$\Delta\phi$	—	3,4	4,0	deg
<b>Phase linearity (p-p)</b>	$f_N \pm 1,24$ MHz	$\Delta\phi$	—	15,5	18,0	deg
<b>Group delay ripple (p-p)</b>	$f_N \pm 1,05$ MHz	$\Delta\tau$	—	650	800	ns
<b>Return loss</b>	$f_N \pm 1,05$ MHz		—	10	—	dB
<b>Relative attenuation (relative to <math>\alpha_N</math>)</b>		$\alpha_{rel}$				
	0 MHz ... $f_N - 6,0$ MHz		45	60	—	dB
	$f_N \pm 1,505$ MHz ... $f_N \pm 1,875$ MHz		25 <sup>1)</sup>	28	—	dB
	$f_N \pm 1,875$ MHz ... $f_N \pm 2,305$ MHz		30	45	—	dB
	$f_N \pm 2,305$ MHz ... $f_N \pm 2,675$ MHz		35	41	—	dB
	$f_N \pm 2,675$ MHz ... $f_N \pm 4,0$ MHz		37	40	—	dB
	$f_N \pm 4,0$ MHz ... $f_N \pm 6,0$ MHz		40	44	—	dB
	$f_N + 6,0$ MHz ... 150 MHz		45	60	—	dB
<b>Input 3rd-order intercept point</b>		$IIP3$	40	—	—	dBm
<b>Temperature coefficient of frequency</b> <sup>2)</sup>		$TC_f$	—	-0,036	—	ppm/K <sup>2</sup>
<b>Turnover temperature</b>		$T_0$	—	30,0	—	°C

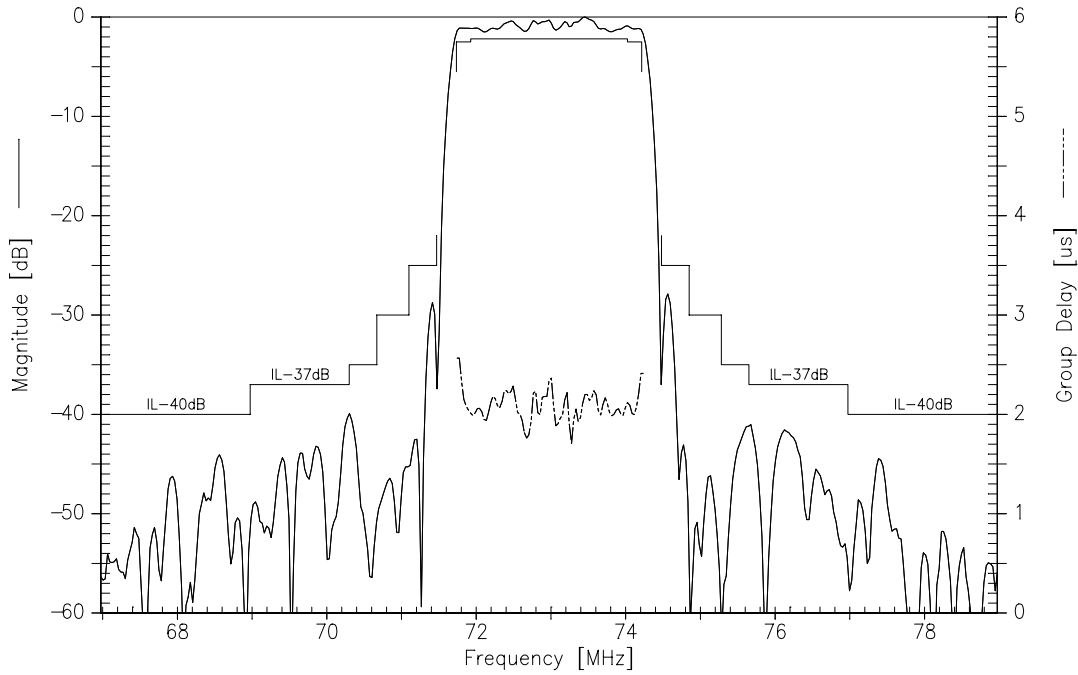
<sup>1)</sup> 26 dB for temperatures greater than -25 °C

<sup>2)</sup> Temperature dependance of  $f_c$ :  $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

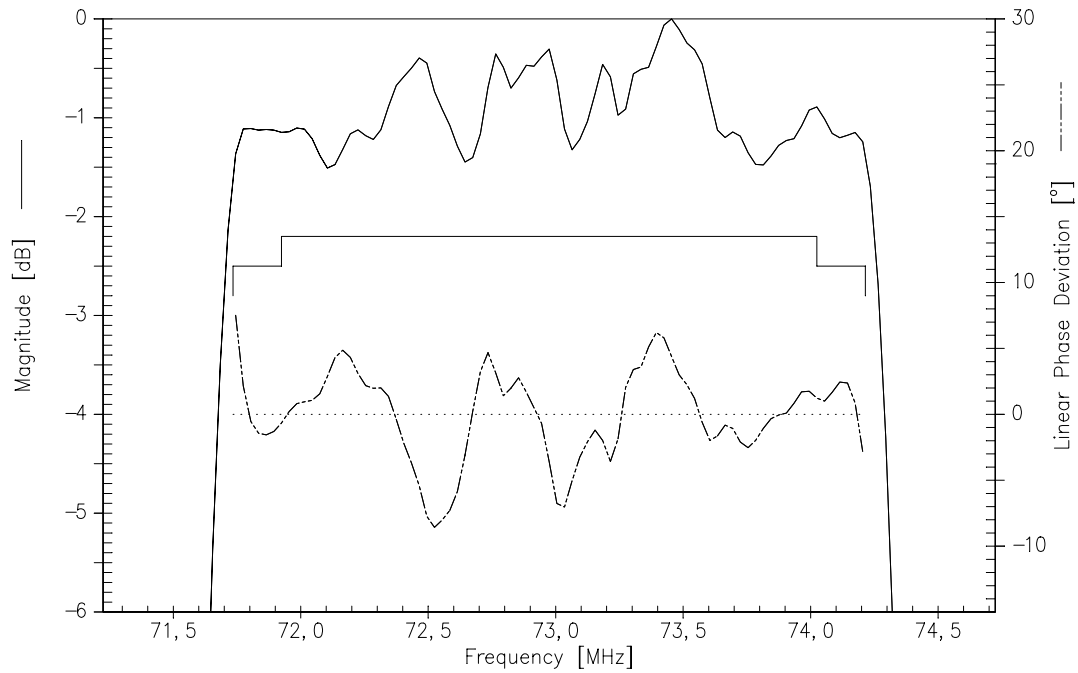


Data Sheet

Normalized frequency response



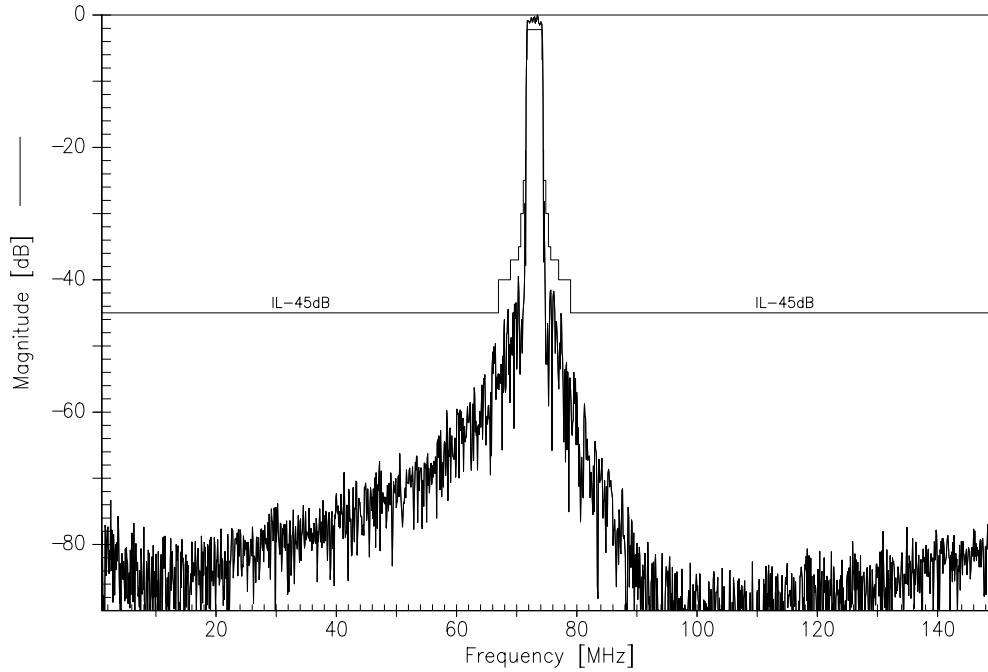
Normalized frequency response (passband)



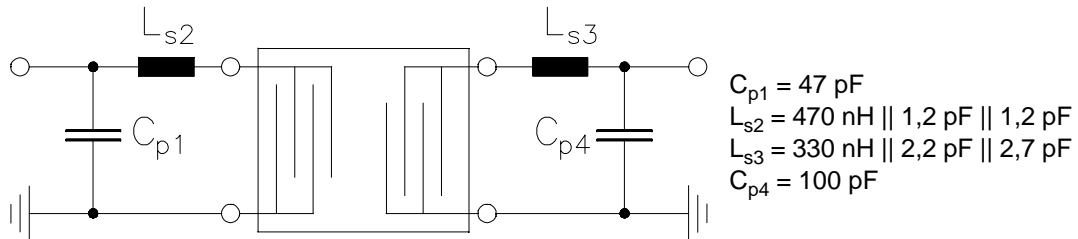


Data Sheet

Normalized frequency response (wideband)



Test Matching Network to 50Ω (element values depend on PCB layout)





**SAW Components**

**B3863**

**Low-Loss Filter**

**72,9746 MHz**

Data Sheet

**Published by EPCOS AG**

**Surface Acoustic Wave Components Division, SAW MC IS**

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