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The following products presented in this data sheet are being withdrawn.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

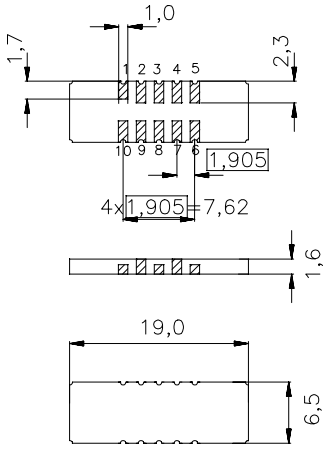
Ceramic package **DCC18**

Features

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

Terminals

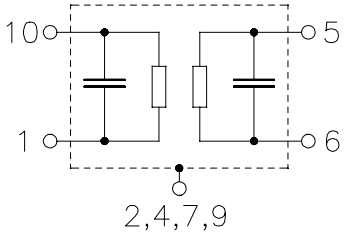
- Gold plated



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 **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}	0	V	
Source power	P_s	0	dBm	

Characteristics

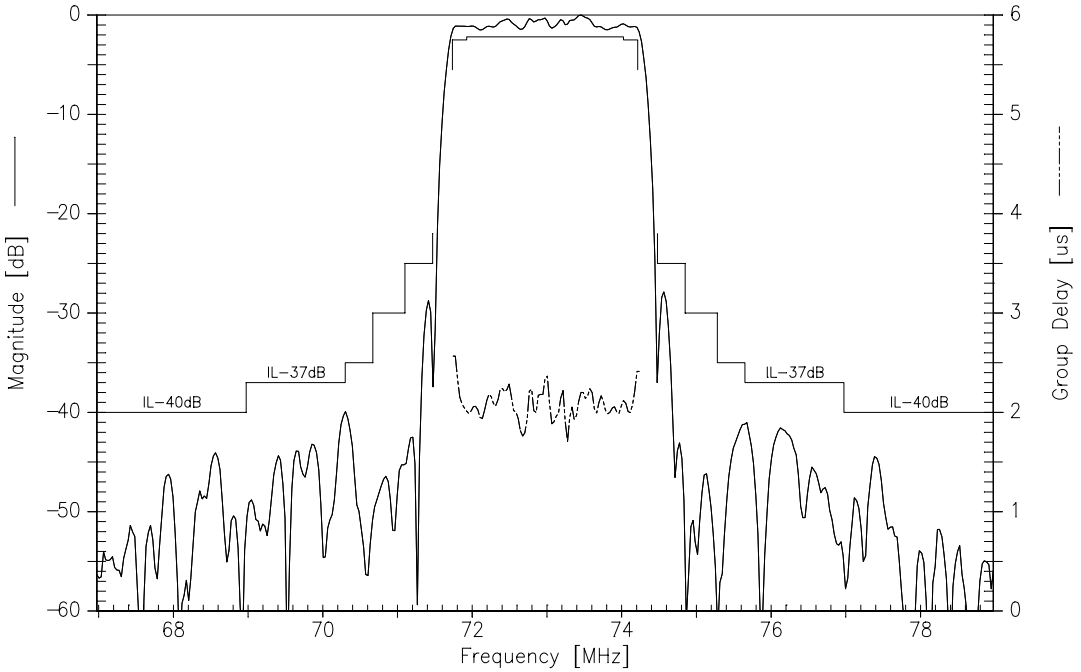
Operating temperature range: T = –40 to +85 °C
Terminating source impedance: Z_S = 50 Ω and matching network
Terminating load impedance: Z_L = 50 Ω and matching network

			min.	typ.	max.	
Nominal frequency		f_N	—	72,9746	—	MHz
Minimum insertion attenuation		α_N	—	22,0	24,0	dB
2,5 dB bandwidth	α_{rel} ≤2,5 dB	$B_{2,5dB}$	2,48	2,54	—	MHz
Amplitude ripple (p-p)	$f_N \pm 1{,}05$ MHz	$\Delta\alpha$	—	1,7	2,2	dB
Integrated phase error (rms)	$f_N \pm 1{,}24$ MHz	$\Delta\varphi$	—	3,4	4,0	deg
Phase linearity (p-p)	$f_N \pm 1{,}24$ MHz	$\Delta\varphi$	—	15,5	18,0	deg
Group delay ripple (p-p)	$f_N \pm 1{,}05$ MHz	$\Delta\tau$	—	650	800	ns
Return loss	$f_N \pm 1{,}05$ MHz		—	10	—	dB
Relative attenuation (relative to α_N)		α_{rel}				
0 MHz ... $f_N - 6{,}0$ MHz			45	60	—	dB
$f_N \pm 1{,}505$ MHz ... $f_N \pm 1{,}875$ MHz			25[1]	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
Input 3rd-order intercept point		*IIP3*	40	—	—	dBm
Temperature coefficient of frequency [2]		TC_f	—	–0,036	—	ppm/K²
Turnover temperature		T_0	—	30,0	—	°C

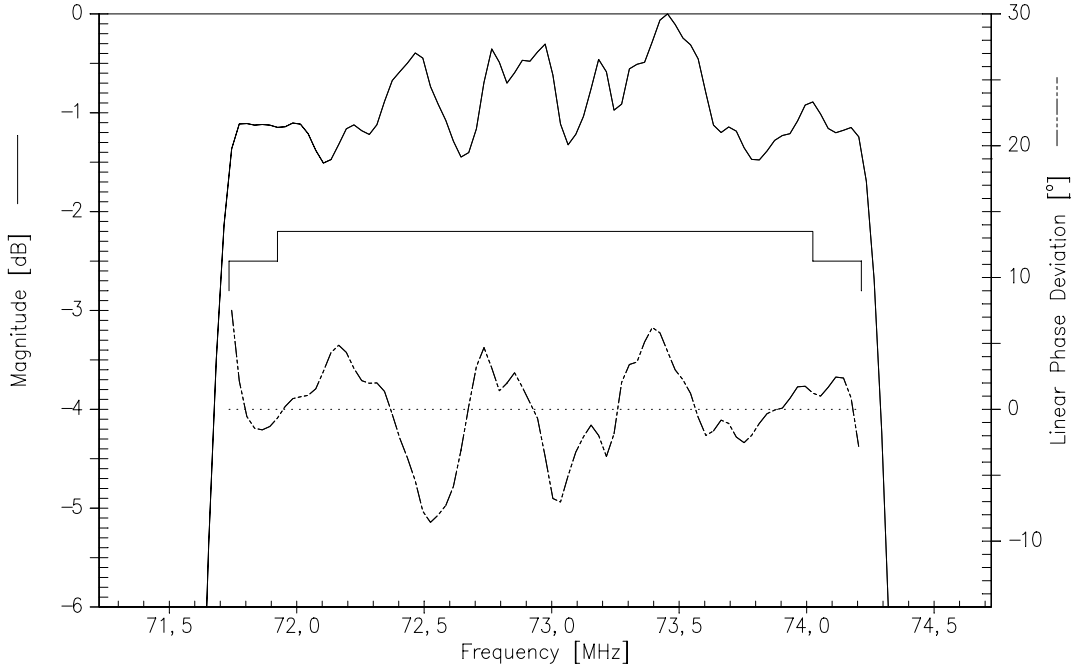
[1] 26 dB for temperatures greater than -25°C

[2] Temperature dependance of f_c: $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

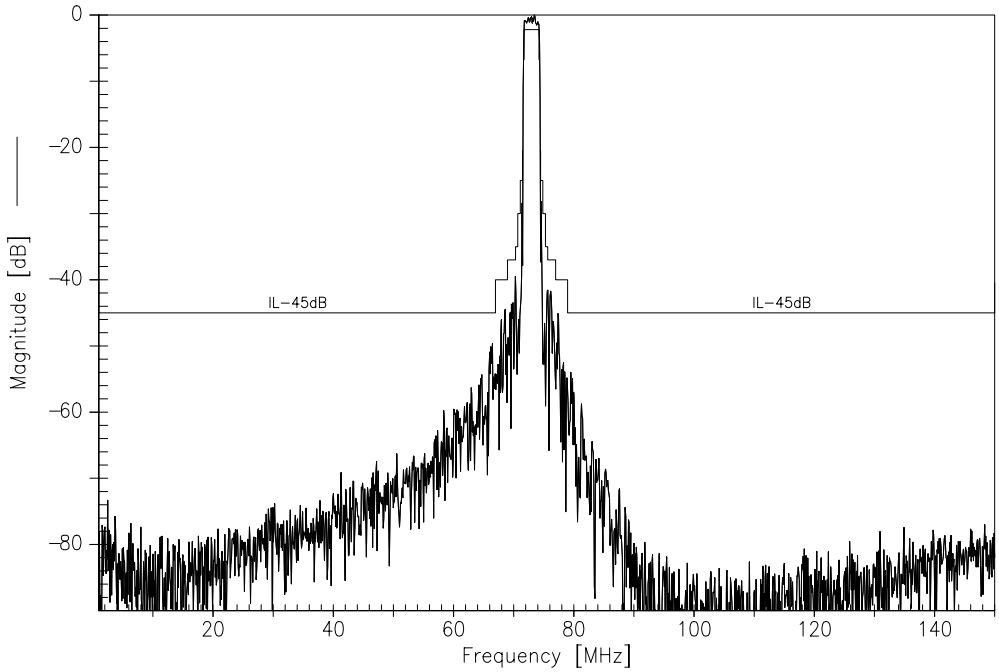
Normalized frequency response



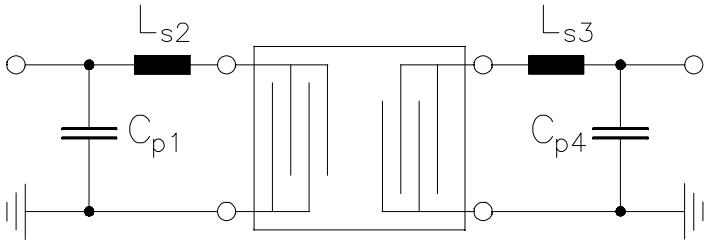
Normalized frequency response (passband)



Normalized frequency response (wideband)



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



C_{p1} = 47 pF
L_{s2} = 470 nH || 1,2 pF || 1,2 pF
L_{s3} = 330 nH || 2,2 pF || 2,7 pF
C_{p4} = 100 pF

Published by EPCOS AG
Surface Acoustic Wave Components Division, SAW MC IS
P.O. Box 80 17 09, 81617 Munich, GERMANY

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