



SAW Components

Data Sheet B3874





SAW Components

B3874

Low-Loss Filter

71,1 MHz

Data Sheet

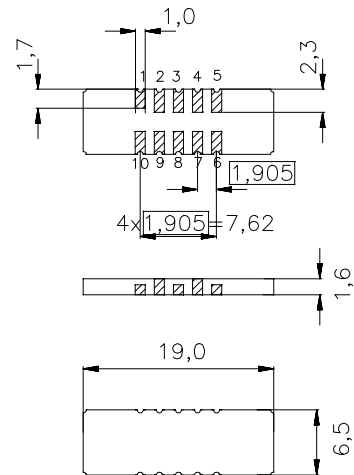
Features

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

Terminals

- Gold plated

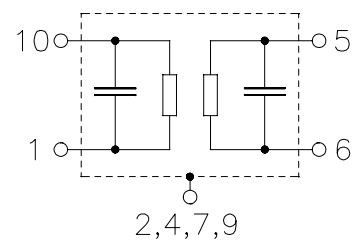
Ceramic package DCC18



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
B3874	B39710-B3874-U210	C61157-A7-A54	F61074-V8166-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

B3874

Low-Loss Filter

71,1 MHz

Data Sheet

Characteristics

Operating temperature range: $T = 0 \text{ to } +85 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$ and external matching network
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$ and external matching network

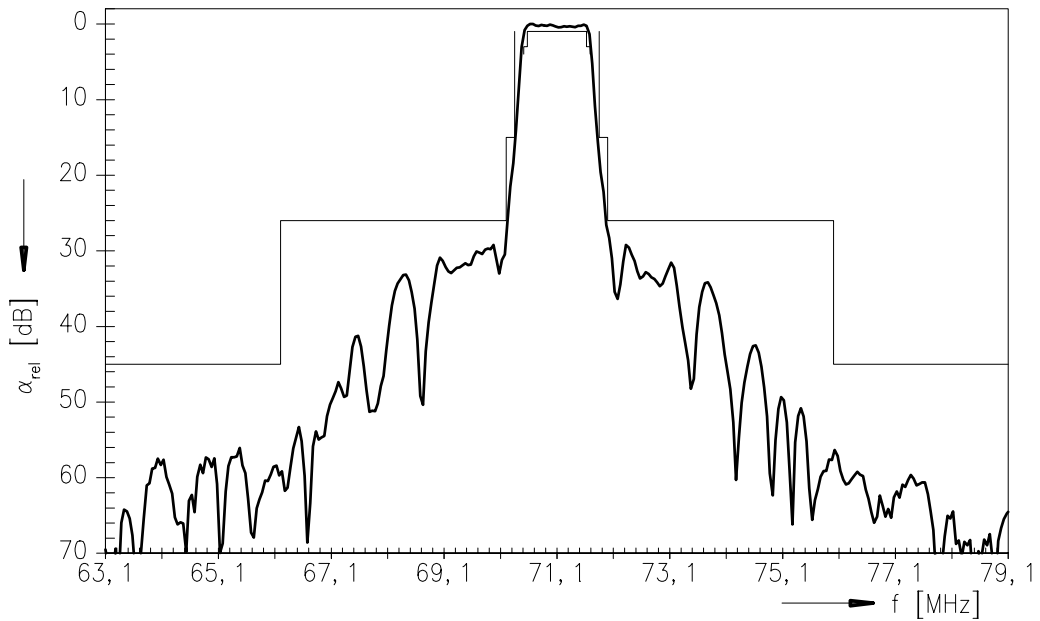
			min.	typ.	max.	
Nominal frequency	f_N		—	71,1	—	MHz
Minimum insertion attenuation	α_N		—	9,0	11,0	dB
3,75 dB bandwidth	$\alpha_{rel} \leq 3,75 \text{ dB}$	$B_{3,75\text{dB}}$	1,18	1,24	—	MHz
Amplitude ripple (p-p)	$f_N \pm 525 \text{ kHz}$	$\Delta\alpha$	—	0,5	1,0	dB
Phase Linearity (rms)	$f_N \pm 630 \text{ kHz}$	$\Delta\varphi$	—	1,3	2,0	deg
Absolute group delay	$f_N \pm 630 \text{ kHz}$	τ	—	3,1	—	μs
Group delay ripple (p-p)	$f_N \pm 525 \text{ kHz}$	$\Delta\tau$	—	320	450	ns
Relative attenuation (relative to α_N)		α_{rel}				
31,0 MHz ...	$f_N - 4900 \text{ kHz}$		45	60	—	dB
$f_N - 4900 \text{ kHz}$...	$f_N - 900 \text{ kHz}$		26	29	—	dB
$f_N - 900 \text{ kHz}$...	$f_N - 750 \text{ kHz}$		15	18	—	dB
$f_N + 750 \text{ kHz}$...	$f_N + 900 \text{ kHz}$		15	17	—	dB
$f_N + 900 \text{ kHz}$...	$f_N + 4900 \text{ kHz}$		26	29	—	dB
$f_N + 4900 \text{ kHz}$...	500 MHz		45	60	—	dB
Input Return loss	$f_N \pm 525 \text{ kHz}$		8	11	—	dB
Output Return loss	$f_N \pm 525 \text{ kHz}$		10	15	—	dB
3rd-order intercept point		$IP3$	35	—	—	dB
Temperature coefficient of frequency ¹⁾		TC_f	—	-0,036	—	ppm/K ²
Turnover temperature		T_0	—	35	—	$^\circ\text{C}$

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

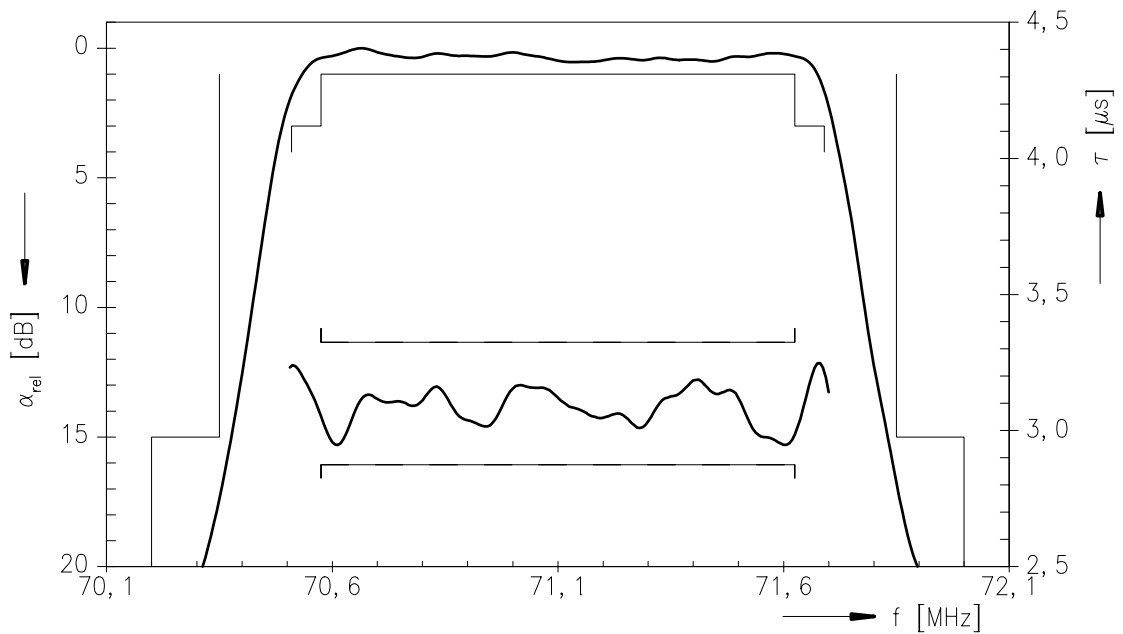


Data Sheet

Normalized frequency response



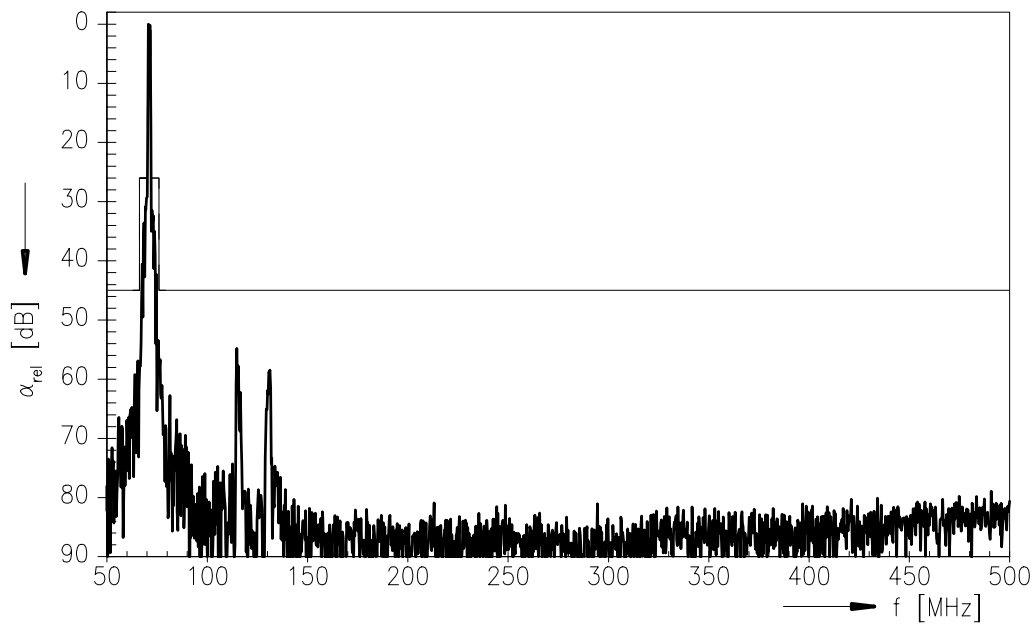
Normalized frequency response (pass band)





Data Sheet

Normalized frequency response (wide band)

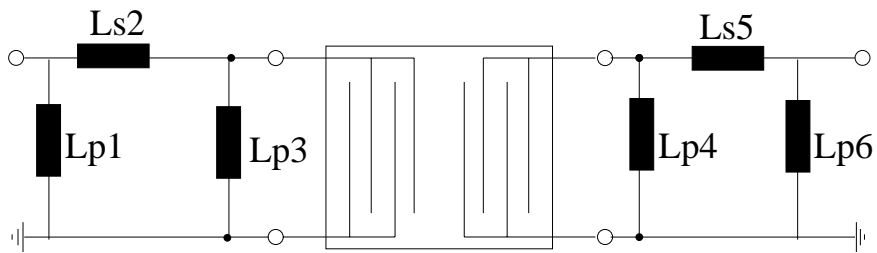




Data Sheet

Matching network to 50 Ω

(Element values depend on PCB layout)



Lp1 = 150 nH

Ls2 = 390 nH

Lp3 = 330 nH

Lp4 = 470 nH

Ls5 = 620 nH

Lp6 = not used



SAW Components

B3874

Low-Loss Filter

71,1 MHz

Data Sheet

Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC

P.O. Box 80 17 09, 81617 Munich, GERMANY

© EPCOS AG 2004. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.