![EPCOS logo]

SAW Components

Data Sheet B3874

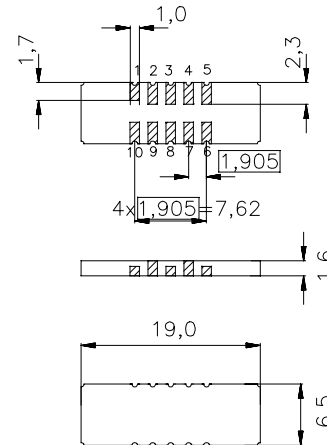| SAW Components	B3874
Low-Loss Filter	**71,1 MHz**

Data Sheet

Ceramic package **DCC18**

Features

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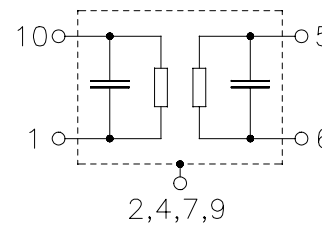■ Unbalanced or balanced operation

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
B3874	B39710-B3874-U210	C61157-A7-A54	F61074-V8166-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}	5	V	
Source power	P_s	10	dBm	

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Characteristics

Operating temperature range: T = 0 to +85 °C
Terminating source impedance: Z_S = 50 Ω and external matching network
Terminating load impedance: Z_L = 50 Ω 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						
α_{rel} ≤ 3,75 dB		$B_{3,75dB}$	1,18	1,24	—	MHz
Amplitude ripple (p-p)	$f_N \pm 525$ kHz	$\Delta\alpha$	—	0,5	1,0	dB
Phase Linearity (rms)	$f_N \pm 630$ kHz	$\Delta\varphi$	—	1,3	2,0	deg
Absolute group delay	$f_N \pm 630$ kHz	τ	—	3,1	—	µs
Group delay ripple (p-p)	$f_N \pm 525$ kHz	$\Delta\tau$	—	320	450	ns
Relative attenuation (relative to α_N)		α_{rel}				
31,0 MHz ... $f_N - 4900$ kHz			45	60	—	dB
$f_N - 4900$ kHz ... $f_N - 900$ kHz			26	29	—	dB
$f_N - 900$ kHz ... $f_N - 750$ kHz			15	18	—	dB
$f_N + 750$ kHz ... $f_N + 900$ kHz			15	17	—	dB
$f_N + 900$ kHz ... $f_N + 4900$ kHz			26	29	—	dB
$f_N + 4900$ kHz ... 500 MHz			45	60	—	dB
Input Return loss	$f_N \pm 525$ kHz		8	11	—	dB
Output Return loss	$f_N \pm 525$ kHz		10	15	—	dB
3rd-order intercept point		IP3	35	—	—	dB
Temperature coefficient of frequency [1]		TC_f	—	–0,036	—	ppm/K²
Turnover temperature		T_0	—	35	—	°C

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

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Normalized frequency response

Normalized frequency response (pass band)

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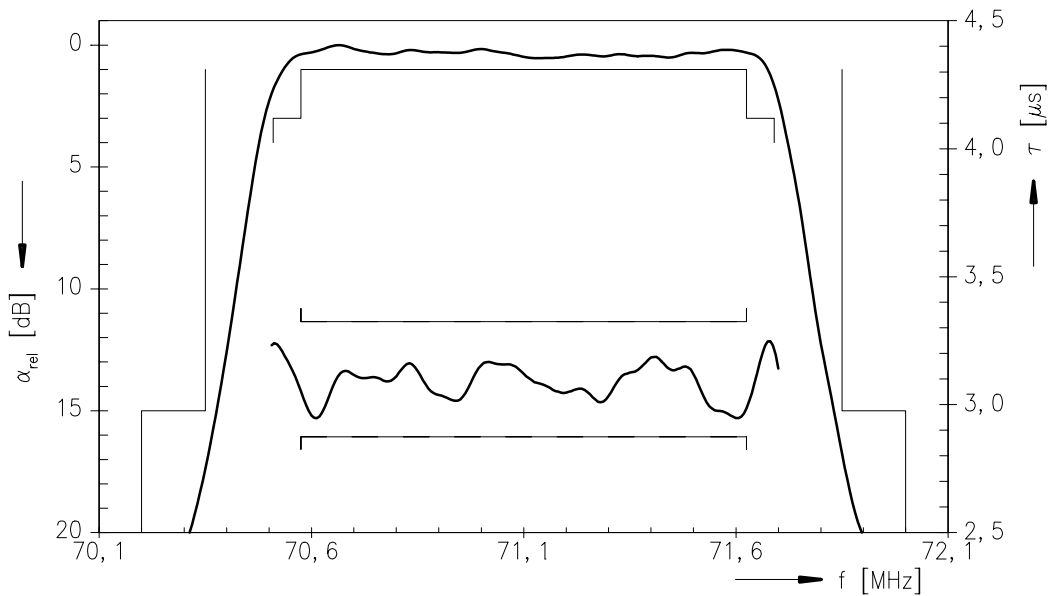
Data Sheet

Normalized frequency response (wide band)
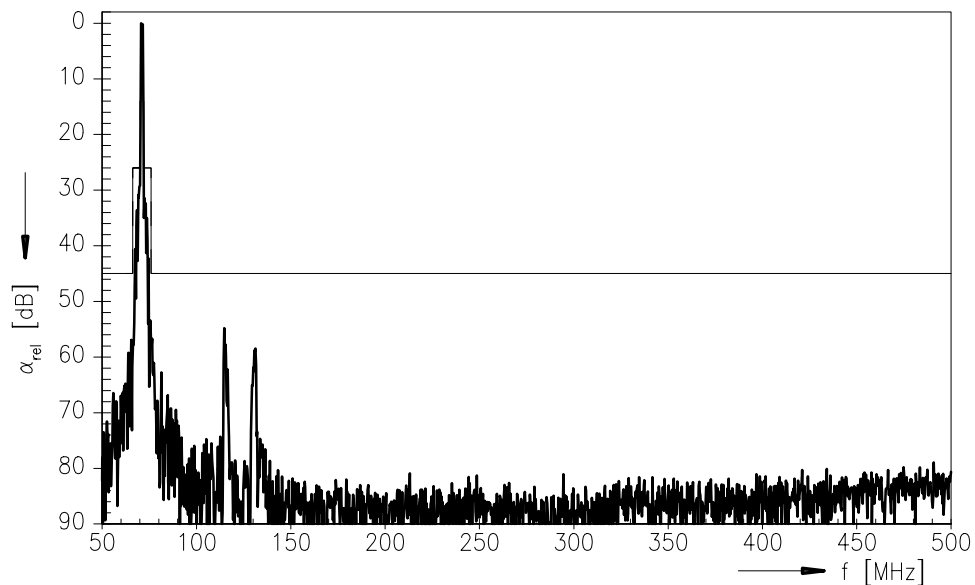
Data Sheet

Matching network to 50 Ω

(Element values depend on PCB layout)
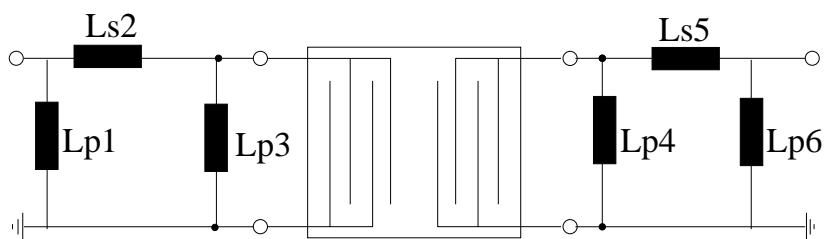
Lp1 = 150 nH   Lp4 = 470 nH

Ls2 = 390 nH   Ls5 = 620 nH

Lp3 = 330 nH   Lp6 = not used

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.

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