EPCOS

SAW Components

Data Sheet B3874

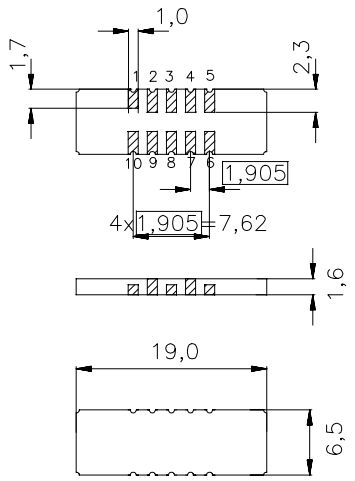
Ceramic package **DCC18**

Features

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

Terminals

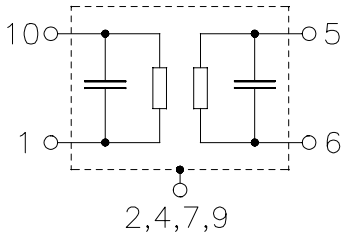
- Gold plated



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	

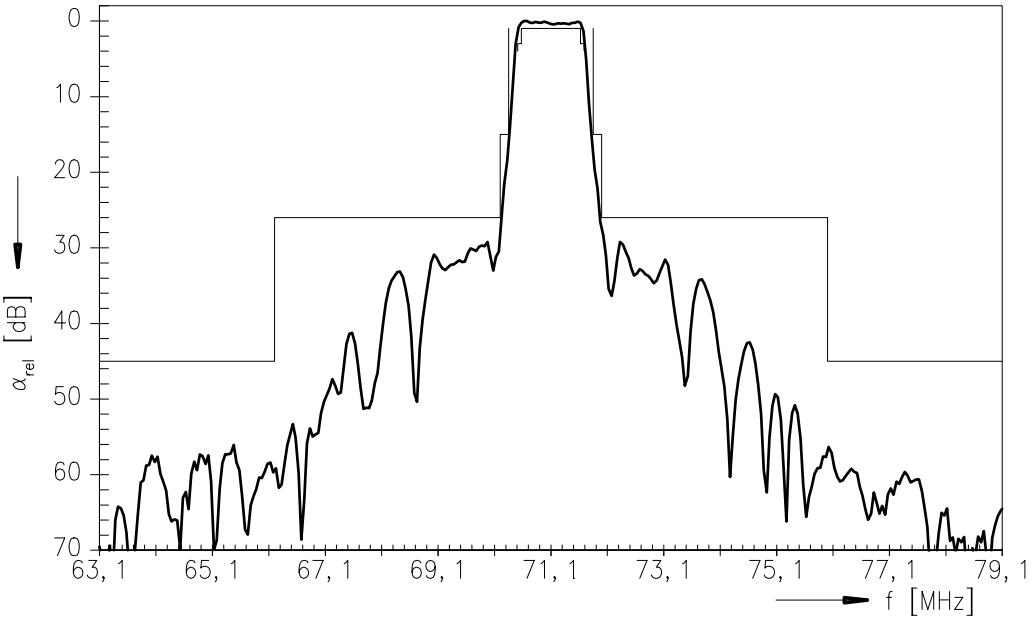
Characteristics

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

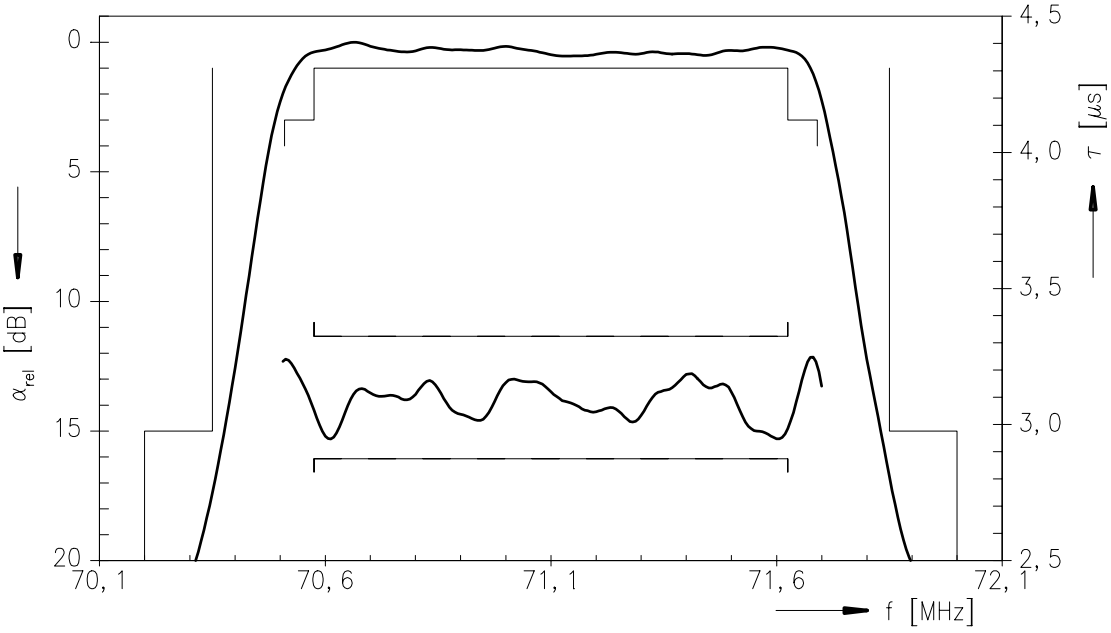
		min.	typ.	max.	
Nominal frequency	f_N	—	71,1	—	MHz
Minimum insertion attenuation	α_N	—	9,0	11,0	dB
3,75 dB bandwidth α_{rel} ≤ 3,75 dB	$B_{3,75dB}$	1,18	1,24	—	MHz
Amplitude ripple (p-p) $f_N \pm 525$ kHz	$\Delta\alpha$	—	0,5	1,0	dB
Phase Linearity (rms) $f_N \pm 630$ kHz	$\Delta\varphi$	—	1,3	2,0	deg
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: $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

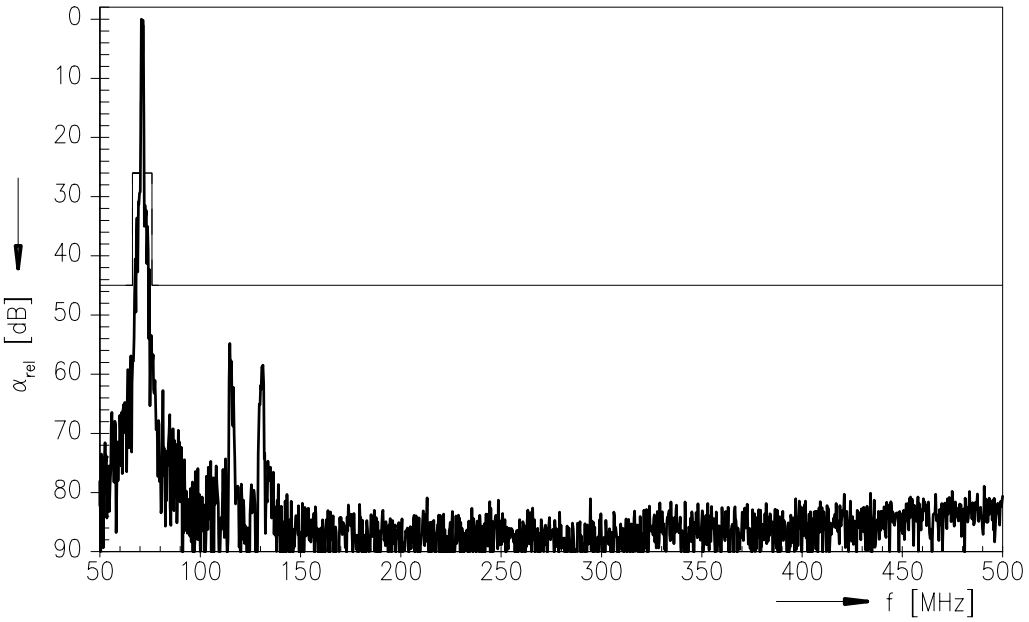
Normalized frequency response



Normalized frequency response (pass band)

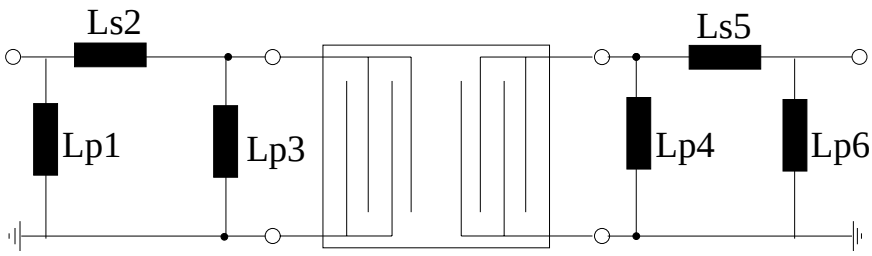


Normalized frequency response (wide band)



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

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