EPCOS

SAW Components

Data Sheet B3841

Data Sheet

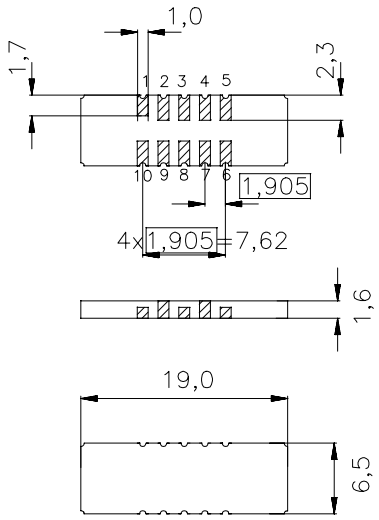
Ceramic package **DCC18**

Features

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

Terminals

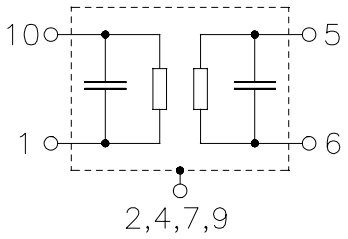
- Gold plated



Dimensions in mm, approx. weight 0,8 g

Pin configuration

10	Input or balanced input
1	Input ground or balanced input
5	Output or balanced output
6	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
B3841	B39171-B3841-U210	C61157-A7-A54	F61074-V8069-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	10	dBm	

Characteristics

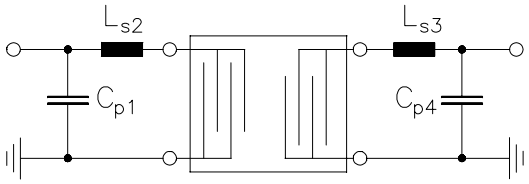
Operating temperature range: T = -5 to +85 °C
Terminating source impedance: Z_S = 250 Ω || 43 nH
Terminating load impedance: Z_L = 400 Ω || 92 nH

		min.	typ.	max.	
Nominal frequency	f_N	—	174,2	—	MHz
Minimum insertion attenuation	α_{min}	—	6,2	8,0	dB
3dB bandwidth α_{rel} ≤ 3,0 dB	$B_{3,0dB}$	660	730	—	kHz
Amplitude ripple (p-p) $f_N \pm 67$ kHz	$\Delta\alpha$	—	0,1	0,25	dB
$f_N \pm 125$ kHz	$\Delta\alpha$	—	0,3	1,0	dB
$f_N \pm 200$ kHz	$\Delta\alpha$	—	0,6	1,2	dB
Absolute group delay (at f_N)	τ	—	2,3	2,6	µs
Group delay ripple (p-p) $f_N \pm 200$ kHz	$\Delta\tau$	—	190	260	ns
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm 469$ kHz ... $f_N \pm 600$ kHz		4	10	—	dB
$f_N \pm 600$ kHz ... $f_N \pm 860$ kHz		11	20	—	dB
$f_N \pm 860$ kHz ... $f_N \pm 1200$ kHz		20	30	—	dB
20 MHz ... 168,2 MHz		50	60	—	dB
168,2 MHz ... $f_N - 1200$ kHz		40	50	—	dB
$f_N + 1200$ kHz ... 180,2 MHz		40	43	—	dB
180,2 MHz ... 400 MHz		50	70	—	dB
Return loss (at f_N)		10	12	—	dB
Temperature coefficient of frequency [1]	TC_f	—	–0,036	—	ppm/K²
Turnover temperature	T_0	—	40	—	°C

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

Matching network to 50 Ω

(Element values depend on PCB layout)



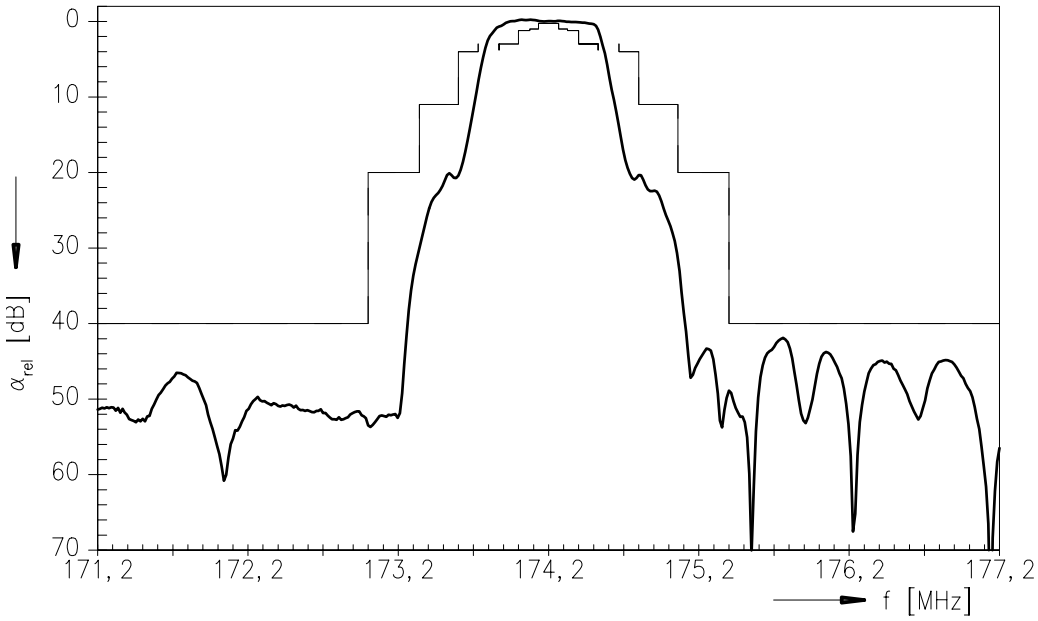
C_{p1} = 47 pF

L_{s2} = 39 nH

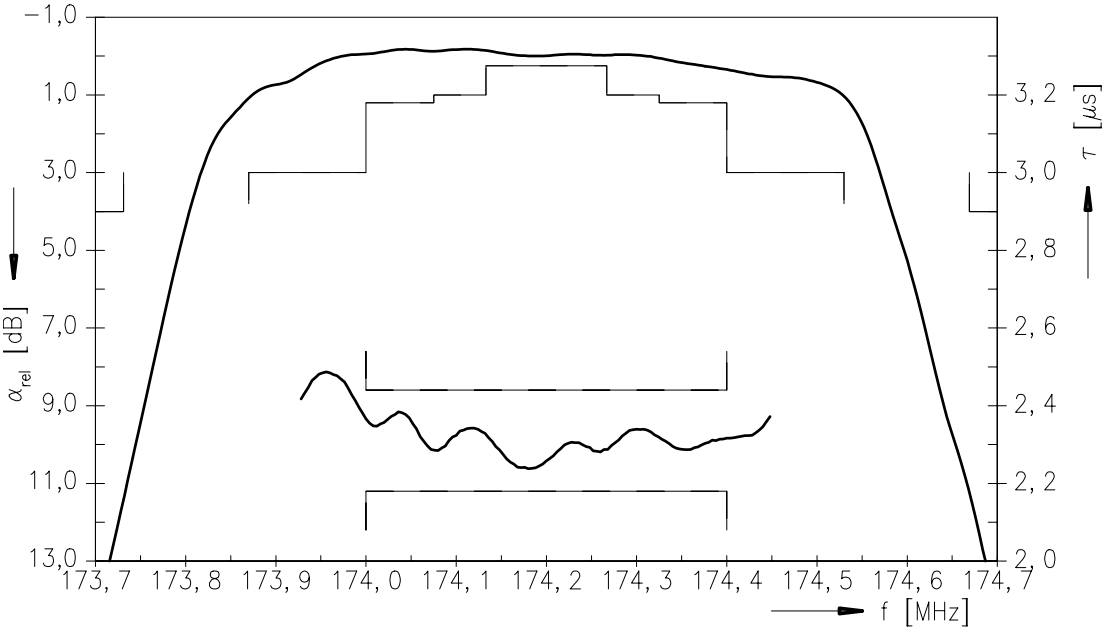
L_{s3} = 36 nH

C_{p4} = 56 pF

Normalized frequency response



Normalized frequency response (pass band)



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This brochure replaces the previous edition.

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