EPCOS

SAW Components

Data Sheet B3864

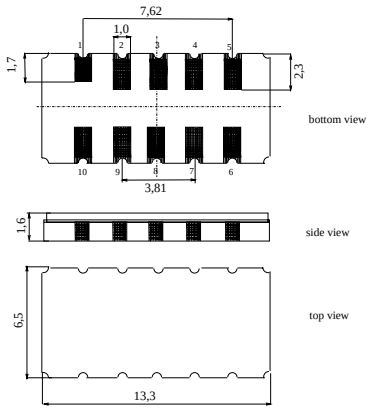
Ceramic package **DCC12A**

Features

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

Terminals

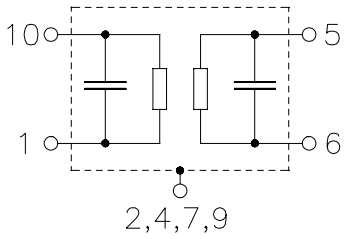
- Gold plated



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
B3864	B39121-B3864-H510	C61157-A7-A94	F61074-V8163-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

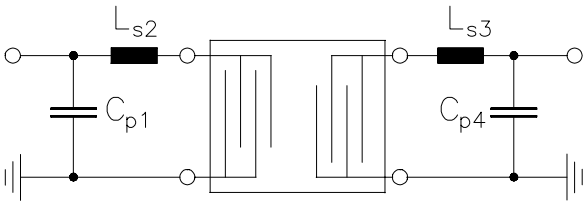
Operating temperature range: T = -10 to +85 °C
Terminating source impedance: Z_S = 350 Ω || 100 nH
Terminating load impedance: Z_L = 200 Ω || 65 nH

		min.	typ.	max.	
Nominal frequency	f_N	—	119,6	—	MHz
Minimum insertion attenuation	α_{min}	—	5,1	8,0	dB
1dB bandwidth α_{rel} ≤ 1,0 dB	$B_{1,0dB}$	—	350	—	kHz
Amplitude ripple (p-p) $f_N \pm 75$ kHz	$\Delta\alpha$	—	0,2	1,0	dB
Group delay ripple (p-p) $f_N \pm 75$ kHz	$\Delta\tau$	—	100	400	ns
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm 400$ kHz ... $f_N \pm 600$ kHz		9	12	—	dB
$f_N \pm 600$ kHz ... $f_N \pm 800$ kHz		20	35	—	dB
$f_N \pm 800$ kHz ... $f_N \pm 3$ MHz		26	37	—	dB
$f_N \pm 3$ MHz ... $f_N \pm 20$ MHz		30	45	—	dB
1 MHz ... $f_N - 20$ MHz		55	65	—	dB
$f_N + 20$ MHz ... 187 MHz		55	65	—	dB
187 MHz ... 223 MHz		50	60	—	dB
223 MHz ... 1000 MHz		55	75	—	dB
Return loss (at f_N)		9	17	—	dB
Temperature coefficient of frequency [1]	TC_f	—	–0,036	—	ppm/K²
Turnover temperature	T_0	—	45	—	°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)



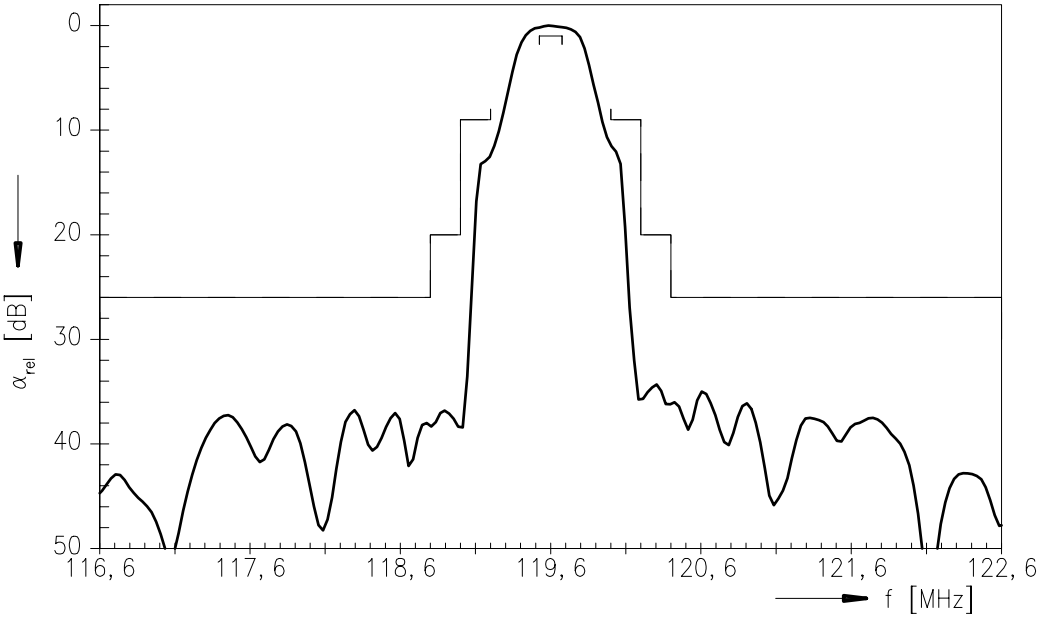
Cp1 = 56 pF

Ls2 = 100 nH || 1.2 pF

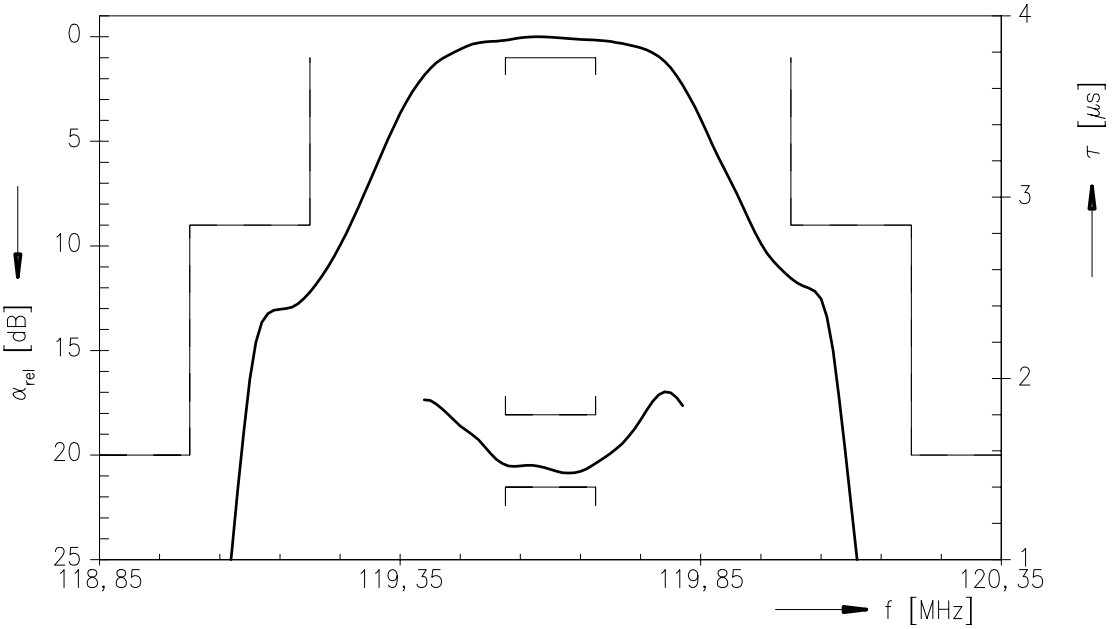
Ls3 = 82 nH

Cp4 = 56 pF

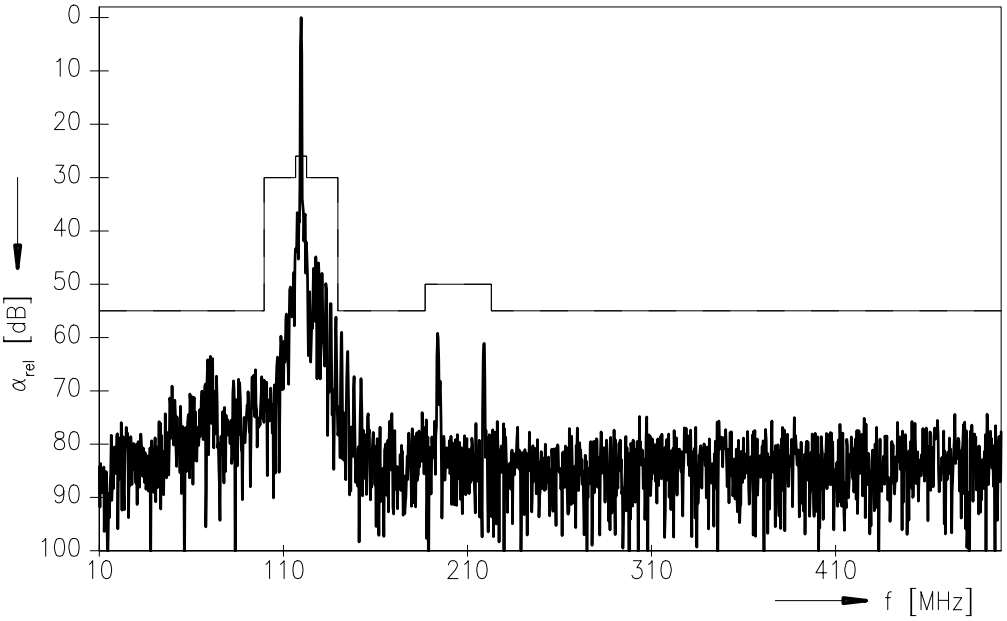
Normalized frequency response



Normalized frequency response (pass band)



Normalized frequency response (wideband)



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