EPCOS

SAW Components

Data Sheet B3864

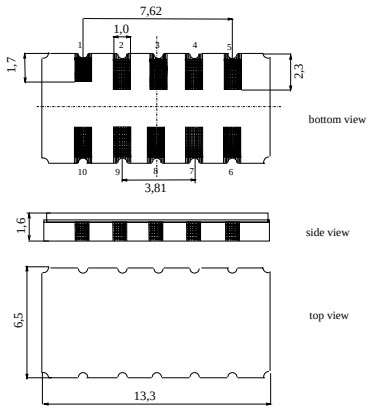
Ceramic package **DCC12A**

Features

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

Terminals

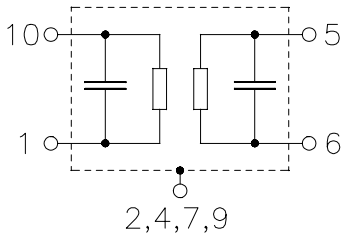
- Gold plated



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

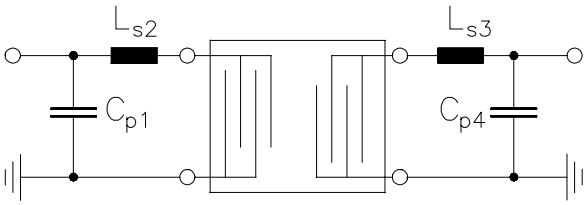
Operating temperature range: T = -10 to +85 °C
Terminating source impedance: Z_S = 350 Ω || 100 nH
Terminating load impedance: Z_L = 200 Ω || 65 nH

		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)



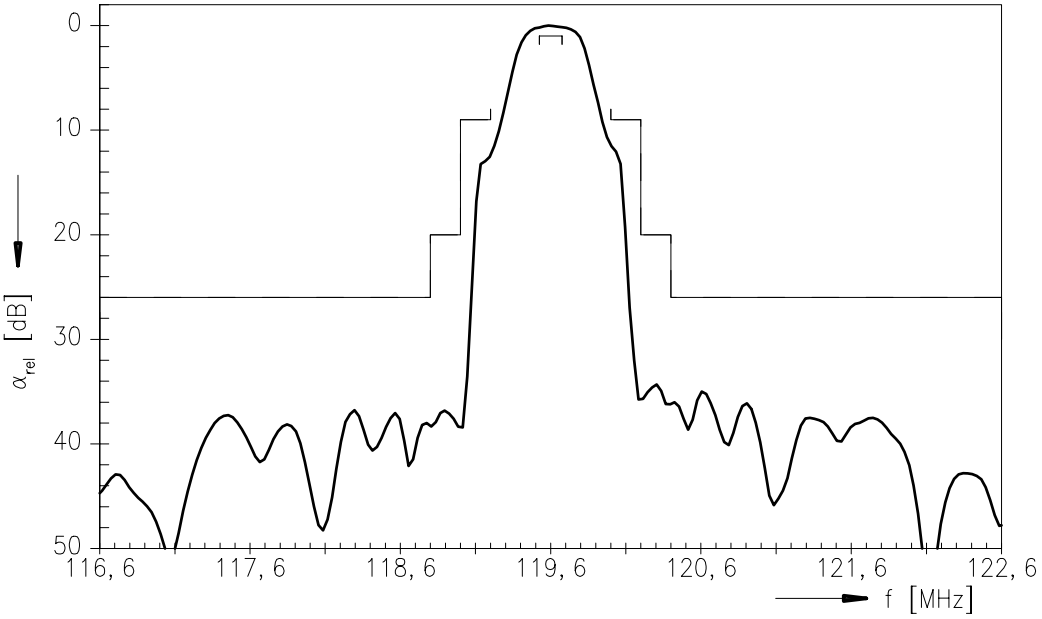
Cp1 = 56 pF

Ls2 = 100 nH || 1.2 pF

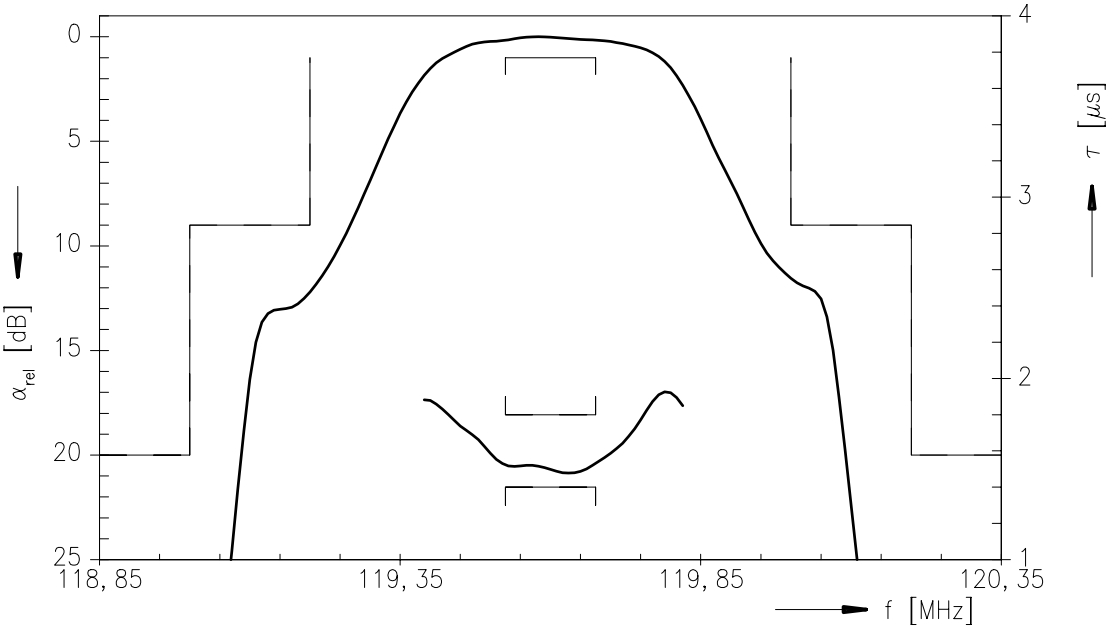
Ls3 = 82 nH

Cp4 = 56 pF

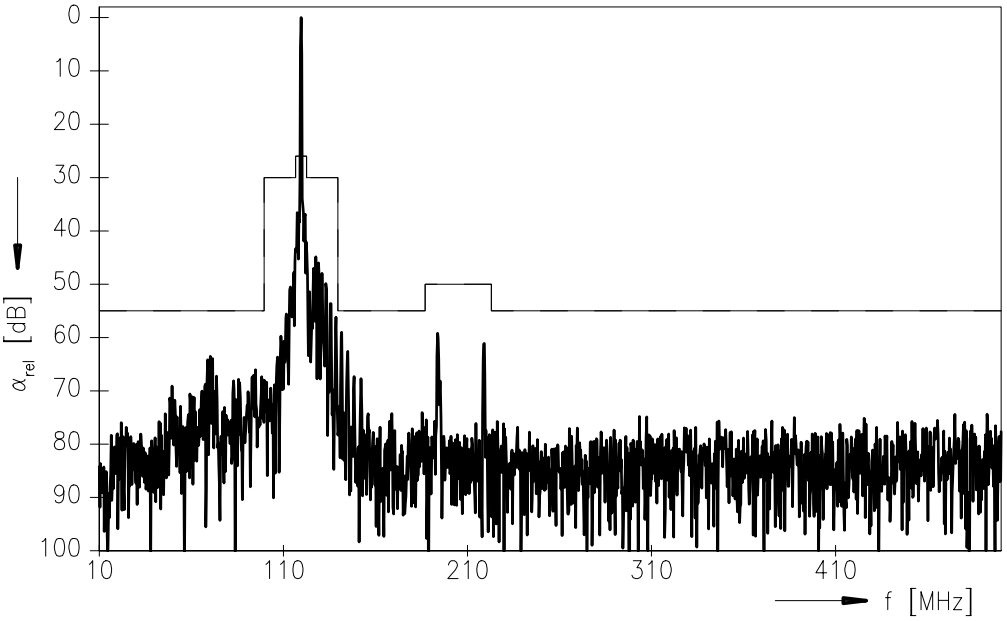
Normalized frequency response



Normalized frequency response (pass band)



Normalized frequency response (wideband)



Published by EPCOS AG
Surface Acoustic Wave Components Division, SAW MC IS
P.O. Box 80 17 09, 81617 Munich, GERMANY

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