



# SAW Components

Data Sheet B3864

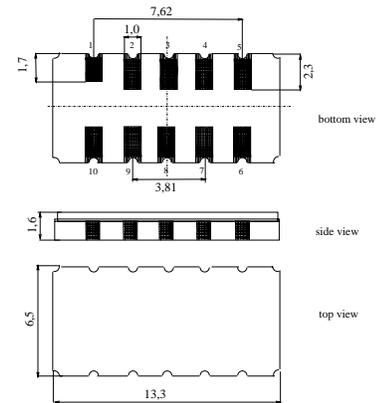


**Data Sheet**
**Ceramic package DCC12A**
**Features**

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

**Terminals**

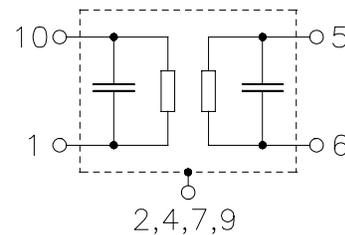
- Gold plated



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 Sensitive Device (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


**SAW Components**
**B3864**
**Low-Loss Filter**
**119,6 MHz**
**Data Sheet**
**Characteristics**

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

			min.	typ.	max.	
<b>Nominal frequency</b>	$f_N$		—	119,6	—	MHz
<b>Minimum insertion attenuation</b>	$\alpha_{\min}$		—	5,1	8,0	dB
<b>1dB bandwidth</b>	$\alpha_{\text{rel}} \leq 1,0$ dB	$B_{1,0\text{dB}}$	—	350	—	kHz
<b>Amplitude ripple (p-p)</b>	$f_N \pm 75$ kHz	$\Delta\alpha$	—	0,2	1,0	dB
<b>Group delay ripple (p-p)</b>	$f_N \pm 75$ kHz	$\Delta\tau$	—	100	400	ns
<b>Relative attenuation (relative to <math>\alpha_{\min}</math>)</b>		$\alpha_{\text{rel}}$				
$f_N \pm 400$ 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
<b>Return loss (at <math>f_N</math>)</b>			9	17	—	dB
<b>Temperature coefficient of frequency</b> <sup>1)</sup>	$TC_f$		—	-0,036	—	ppm/K <sup>2</sup>
<b>Turnover temperature</b>	$T_0$		—	45	—	°C

<sup>1)</sup> 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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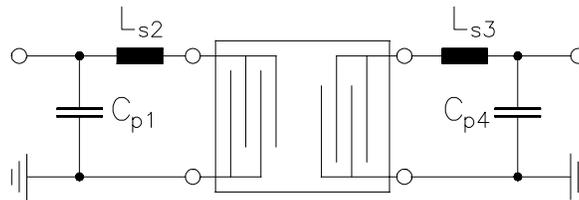
Low-Loss Filter

119,6 MHz

Data Sheet

Matching network to 50  $\Omega$

(Element values depend on PCB layout)



Cp1 = 56 pF

Ls3 = 82 nH

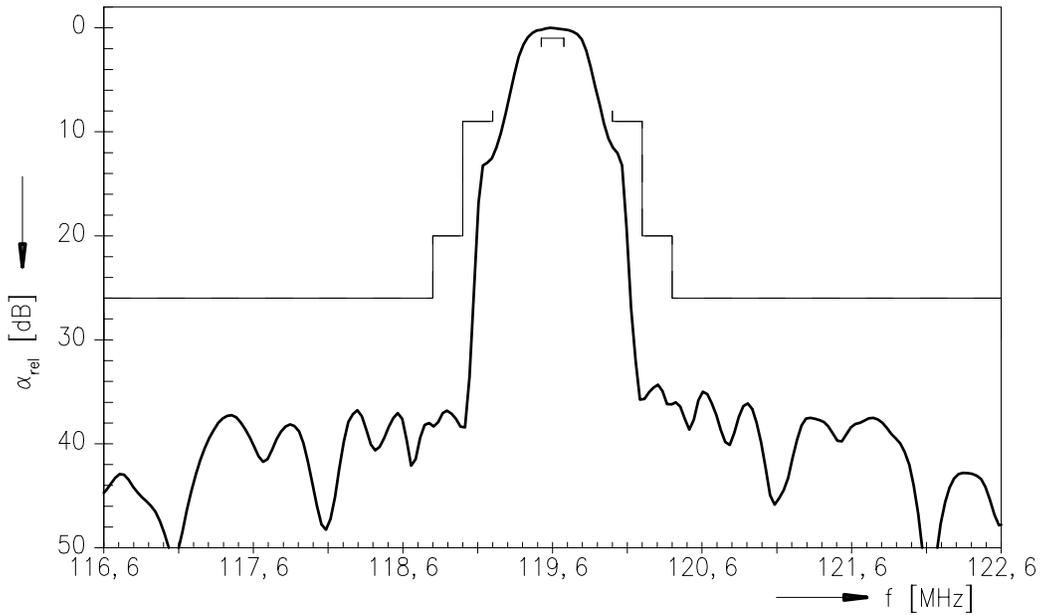
Ls2 = 100 nH || 1.2 pF

Cp4 = 56 pF

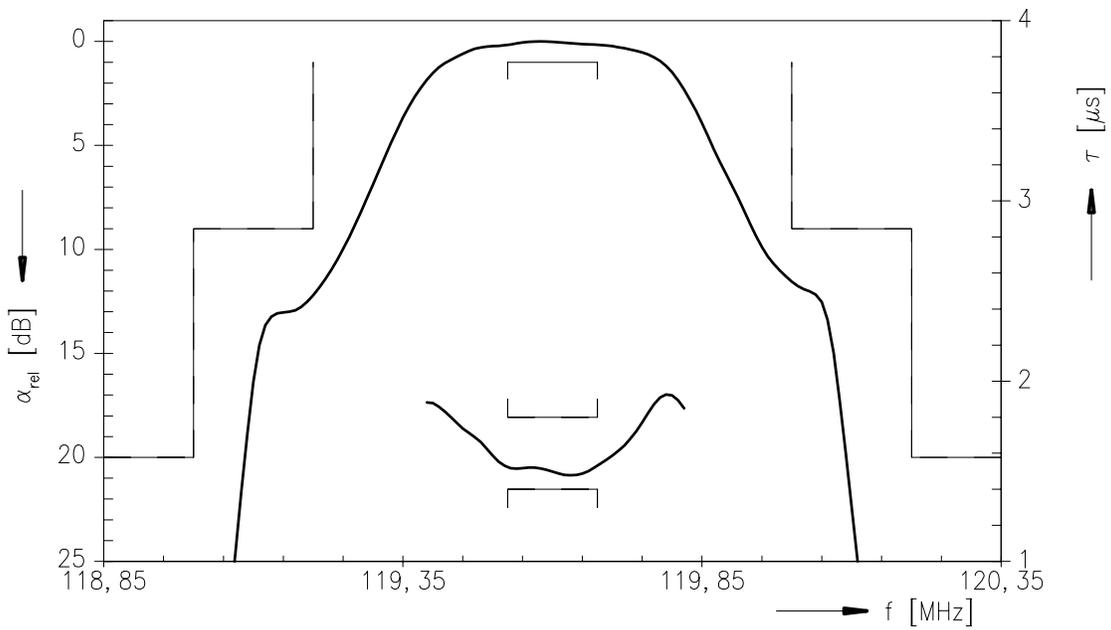


Data Sheet

Normalized frequency response



Normalized frequency response (pass band)





SAW Components

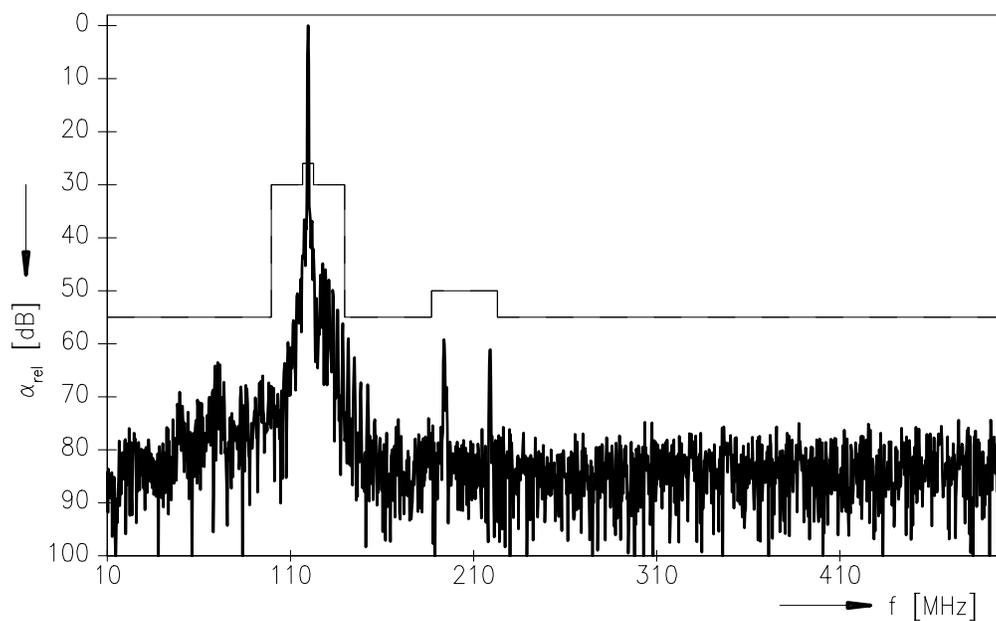
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Low-Loss Filter

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Normalized frequency response (wideband)





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**Low-Loss Filter**

**119,6 MHz**

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