

# SAW Components

Data Sheet B5014





SAW Components	B5014
Low-Loss Filter	119,6 MHz

**Data Sheet** 

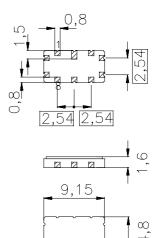
#### **Features**

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

#### **Terminals**

■ Gold plated

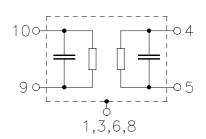
# Ceramic package QCC10B



Dimensions in mm, approx. weight 0,8 g

# Pin configuration

9	Input or balanced input
10	Input ground or balanced input
4	Output or balanced output
5	Output ground or balanced output
2, 7	Ground
1. 3. 6. 8	Case ground



Туре	Ordering code		Packing according to		
B5014	B39121-B5014-Z710	C61157-A7-A49	F61074-V8172-Z000		

Electrostatic Sensitive Device (ESD)

## **Maximum ratings**

Operable temperature range	T	-40 / +85	°C
Storage temperature range	$T_{\rm stg}$	-40 / +85	°C
DC voltage	$V_{\rm DC}$	0	V
Source power	$P_{s}$	10	dBm



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## Characteristics

Operating temperature range:  $T = -10 \text{ to } +85 \text{ }^{\circ}\text{C}$ 

Terminating source impedance:  $Z_{\rm S} = 50~\Omega$  and external matching network Terminating load impedance:  $Z_{\rm L} = 50~\Omega$  and external matching network

			min.	typ.	max.	
Nominal frequency		$f_{N}$	_	119,6	_	MHz
Minimum insertion attenuation		$\alpha_{\text{min}}$	_	6,5	8,0	dB
1dB bandwidth						
$\alpha_{rel} \le 1.0 \text{ dB}$		$B_{1,0dB}$	_	400	_	kHz
Amplitude ripple (p-p)	$f_{\rm N} \pm 75~{\rm kHz}$	$\Delta \alpha$	_	0,3	1,0	dB
Group delay ripple (p-p)	$f_{\rm N} \pm 75~{\rm kHz}$	$\Delta  au$	_	100	400	ns
Relative attenuation (relative to $\alpha_{min}$ )		$lpha_{rel}$				
$f_{\rm N} \pm 400 \text{ kHz}$	$f_{\rm N} \pm 600 \text{ kHz}$		9	15	_	dB
$f_{\rm N} \pm 600 \; {\rm kHz} \qquad$	$f_{\rm N} \pm 800 \ \rm kHz$		20	35	_	dB
$f_{\rm N} \pm 800 \; {\rm kHz} \qquad$	$f_{\rm N} \pm 3~{\rm MHz}$		26	35	<u> </u>	dB
$f_{N} \pm 3 \text{ MHz}$	$f_{\rm N} \pm 20~{ m MHz}$		30	45	_	dB
1 MHz	<i>f</i> <sub>N</sub> – 20 MHz		55	65	_	dB
$f_{N} + 20 \text{ MHz}$	500 MHz		55	65	_	dB
Return loss (at $f_{\rm N}$ )			9	15	_	dB
Temperature coefficient of frequency 1)		TC <sub>f</sub>	_	-0,036	_	ppm/K <sup>2</sup>
Turnover temperature		$T_0$	_	40	_	°C

<sup>&</sup>lt;sup>1)</sup> Temperature dependance of  $f_c$ :  $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$ 



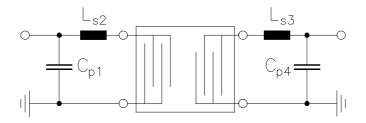
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# Matching network to 50 $\boldsymbol{\Omega}$

(Element values depend on PCB layout)



$$C_{p1} = 39 \text{ pF}$$

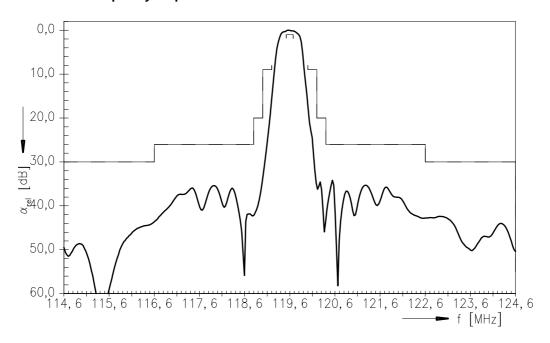
$$C_{p4} = 47 \text{ pF}$$



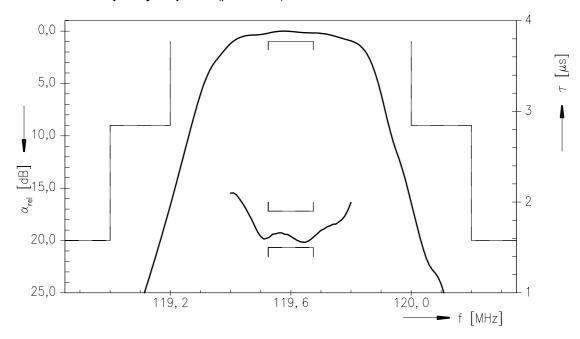
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## Normalized frequency response



# Normalized frequency response (pass band)

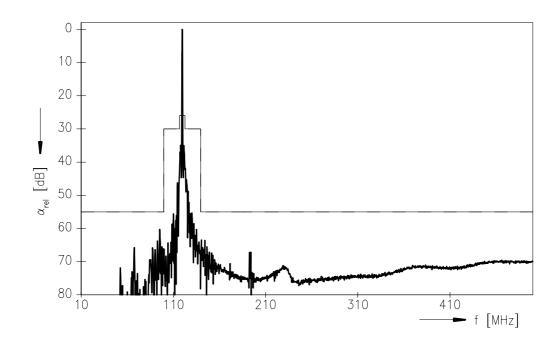




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# Normalized frequency response (wideband)





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