SAW Components

Data Sheet B5014

SAW Components	B5014
Low-Loss Filter	**119,6 MHz**

Data Sheet
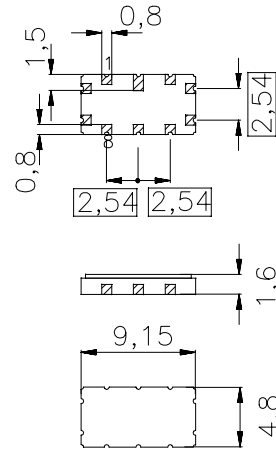
Ceramic package **QCC10B**

Features

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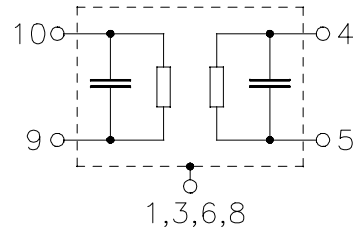
Terminals

■ Gold plated

Dimensions in mm, approx. weight 0,8 g

Pin configuration

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

Type	Ordering code	Marking and Package according to	Packing according to
B5014	B39121-B5014-Z710	C61157-A7-A49	F61074-V8172-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	

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Characteristics

Operating temperature range: T = -10 to +85 ˚C
Terminating source impedance: Z_S = 50 Ω and external matching network
Terminating load impedance: Z_L = 50 Ω and external matching network

		min.	**typ.**	**max.**	
Nominal frequency	f_N	—	119,6	—	MHz
Minimum insertion attenuation	α_{min}	—	6,5	8,0	dB
1dB bandwidth					
α_{rel} ≤ 1,0 dB	$B_{1,0dB}$	—	400	—	kHz
Amplitude ripple (p-p) $f_N \pm 75$ kHz	$\Delta\alpha$	—	0,3	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	15	—	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	35	—	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 ... 500 MHz		55	65	—	dB
Return loss (at f_N)		9	15	—	dB
Temperature coefficient of frequency [1]	TC_f	—	–0,036	—	ppm/K²
Turnover temperature	T_0	—	40	—	˚C

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

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Data Sheet

Matching network to 50 Ω

(Element values depend on PCB layout)
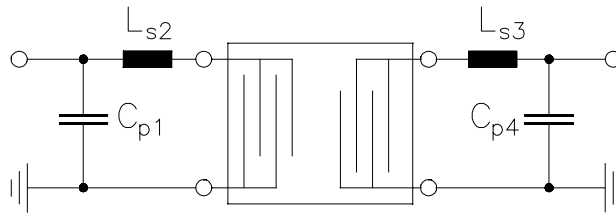
C_{p1} = 39 pF L_{s3} = 150 nH || 1.2 pF

L_{s2} = 180 nH || 1.0 pF C_{p4} = 47 pF

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Data Sheet

Normalized frequency response
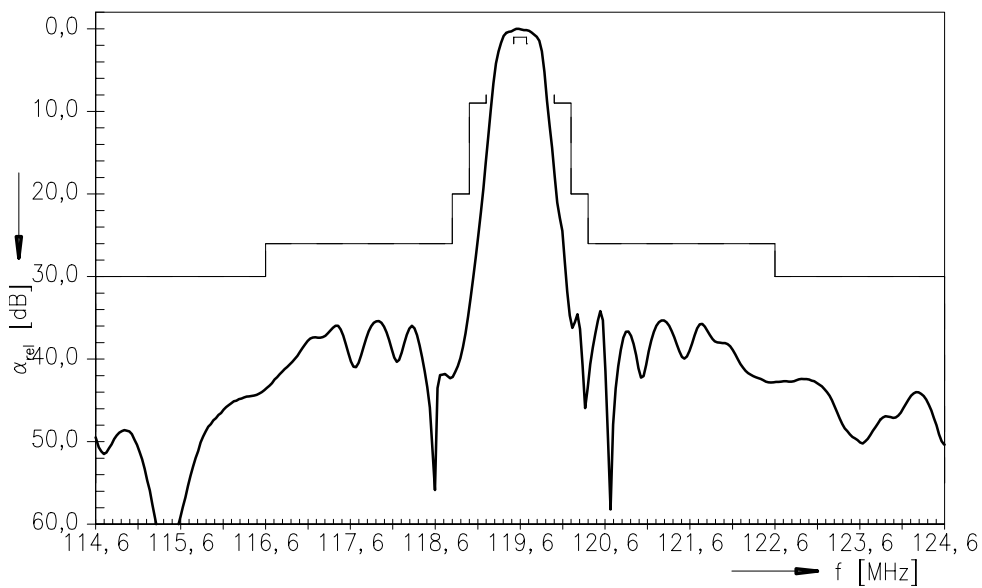
Normalized frequency response (pass band)

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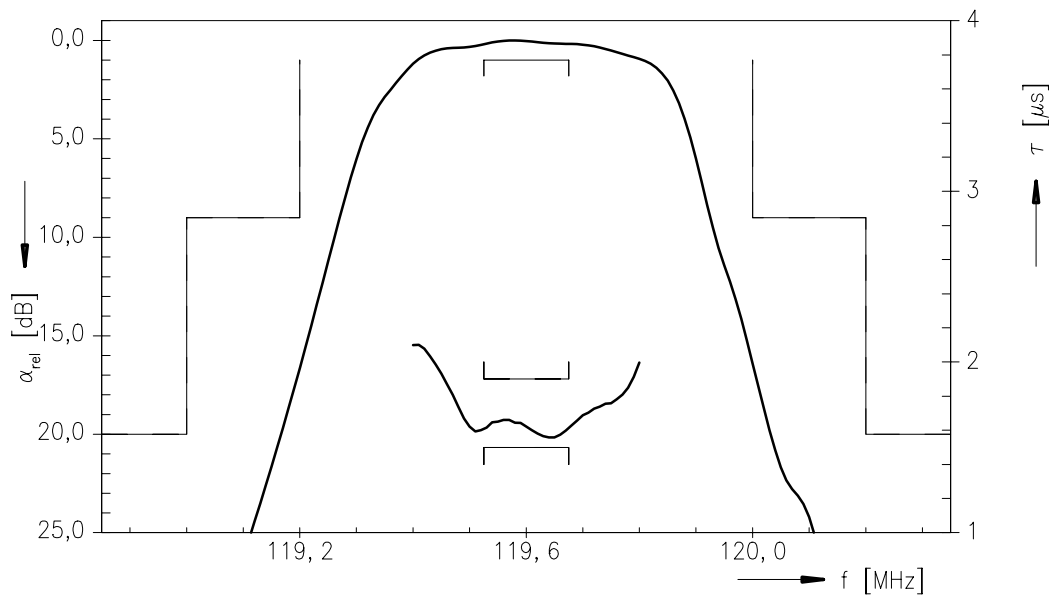
Data Sheet

Normalized frequency response (wideband)
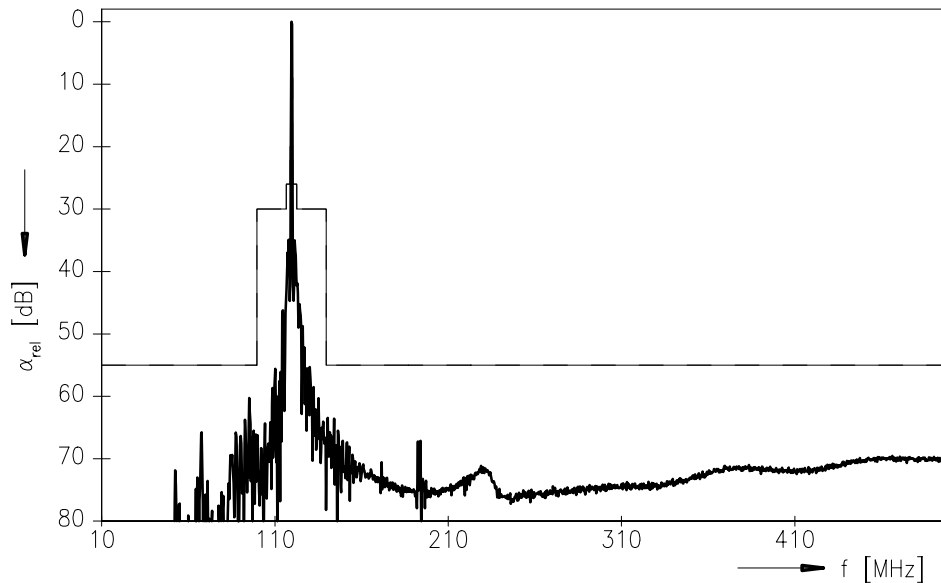
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