



## **SAW Components**

### **SAW IF Filter**

W-CDMA base station, Rx

<b>Series/Type:</b>	<b>B5026</b>
<b>Ordering code:</b>	<b>B39191-B5026-H510</b>
<b>Date:</b>	Jun 06, 2006
<b>Version:</b>	2.1



## SAW Components

B5026

### Low-Loss Filter

190.00 MHz

#### Data Sheet



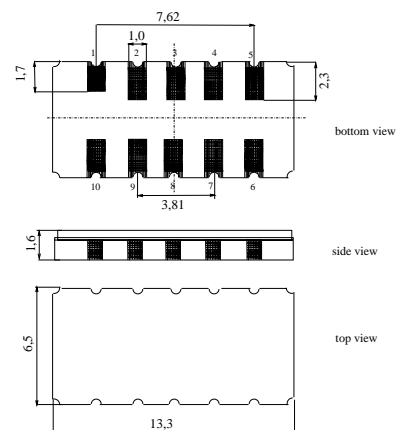
#### Application

- Low-loss IF filter for W-CDMA base station, receive path (Rx)
- Unbalanced or balanced operation possible
- High near-by selectivity
- Temperature stable



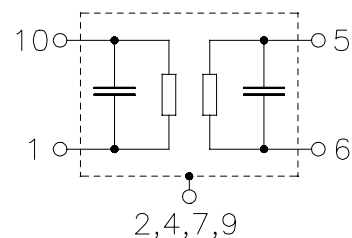
#### Features

- Package size 13.3 x 6.5 x 1.6 mm<sup>3</sup>
- Package code DCC12A
- RoHS compatible
- Approx. weight 0.4 g
- Ceramic package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter surface passivated



#### Pin configuration

- 10 Input
- 1 Input ground
- 5 Output
- 6 Output ground
- 3,8 To be grounded
- 2,4,7,9 Case ground





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#### Characteristics

Operating temperature range:	T	=	-30 to +85 °C
Terminating source impedance:	Z <sub>S</sub>	=	50 Ω and matching network
Terminating load impedance:	Z <sub>L</sub>	=	50 Ω and matching network

			min.	typ. @ 25°C	max.	
<b>Nominal frequency</b>	f <sub>N</sub>		—	190.0	—	MHz
<b>Minimum insertion attenuation</b> (including matching network)	α <sub>min</sub>		—	12.0	15.0	dB
<b>Passband width</b>	α <sub>rel</sub> ≤ 1 dB	B <sub>1dB</sub>	3.84	4.2	—	MHz
	α <sub>rel</sub> ≤ 30 dB	B <sub>30dB</sub>	—	4.8	—	MHz
<b>Amplitude ripple (p-p)</b>	f <sub>N</sub> ± 1.92 MHz	Δα	—	0.7	1.0	dB
<b>Phase ripple (rms)</b>	f <sub>N</sub> ± 1.92 MHz	Δφ	—	1.0	1.5	° rms
<b>Absolute group delay</b> mean value within f <sub>N</sub> ± 1.92 MHz at 25 °C <sup>1)</sup>		τ	1688	1693	1698	ns
<b>Error vector magnitude</b>	f <sub>N</sub> ± 1.92 MHz	EVM	—	2.0	—	%
<b>Adjacent channel suppression</b> f <sub>N</sub> ± 3.08 MHz ... f <sub>N</sub> ± 6.92 MHz		ACS	—	50	—	dB
<b>Relative attenuation (relative to α<sub>min</sub>)</b>		α <sub>rel</sub>				
	f <sub>N</sub> ± 2.515 MHz ... f <sub>N</sub> ± 3.08 MHz		32	38	—	dB
	f <sub>N</sub> ± 3.08 MHz ... f <sub>N</sub> ± 3.5 MHz		37	42	—	dB
	f <sub>N</sub> ± 3.5 MHz ... f <sub>N</sub> ± 20 MHz		40	45	—	dB
<b>Temperature coefficient of frequency</b> <sup>2)</sup>	TC <sub>f</sub>		—	-0.036	—	ppm/K <sup>2</sup>
<b>Turnover temperature</b>	T <sub>0</sub>		—	20	—	°C

<sup>1)</sup> At other temperatures the variation from filter to filter is also restricted to +/- 5 ns.

From -30 ... +85 °C the variation of mean value of group delay is restricted to +/- 10 ns.

<sup>2)</sup> Temperature dependance of f<sub>c</sub>: f<sub>c</sub>(T<sub>A</sub>) = f<sub>c</sub>(T<sub>0</sub>) (1 + TC<sub>f</sub>(T<sub>A</sub> - T<sub>0</sub>)<sup>2</sup>)

#### Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	3	V	
Input Power(passband)	P <sub>IN</sub>	10	dBm	
Input Power(stopband)	P <sub>IN</sub>	20	dBm	f <sub>N</sub> ± 5 MHz ... f <sub>N</sub> ± 70 MHz

Please read *cautions and warnings* and *important notes* at the end of this document.



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### Low-Loss Filter

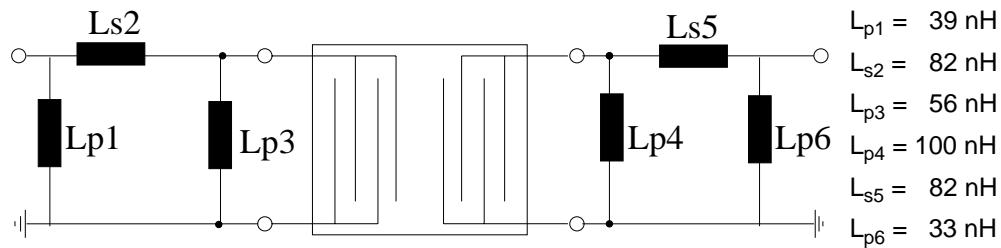
190.00 MHz

#### Data Sheet



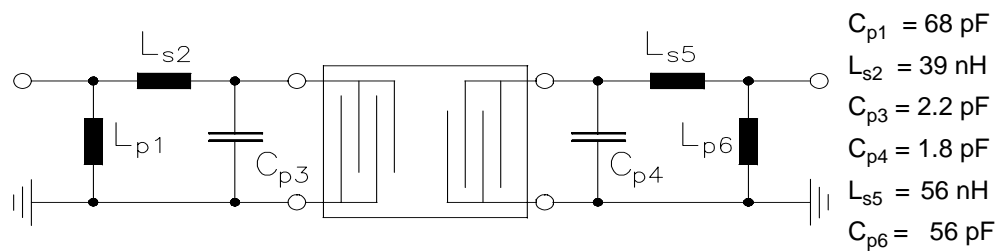
#### Matching network to 50 $\Omega$

Element values depend upon board layout.



#### Alternative matching network to 50 $\Omega$

Element values depend upon board layout.





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B5026

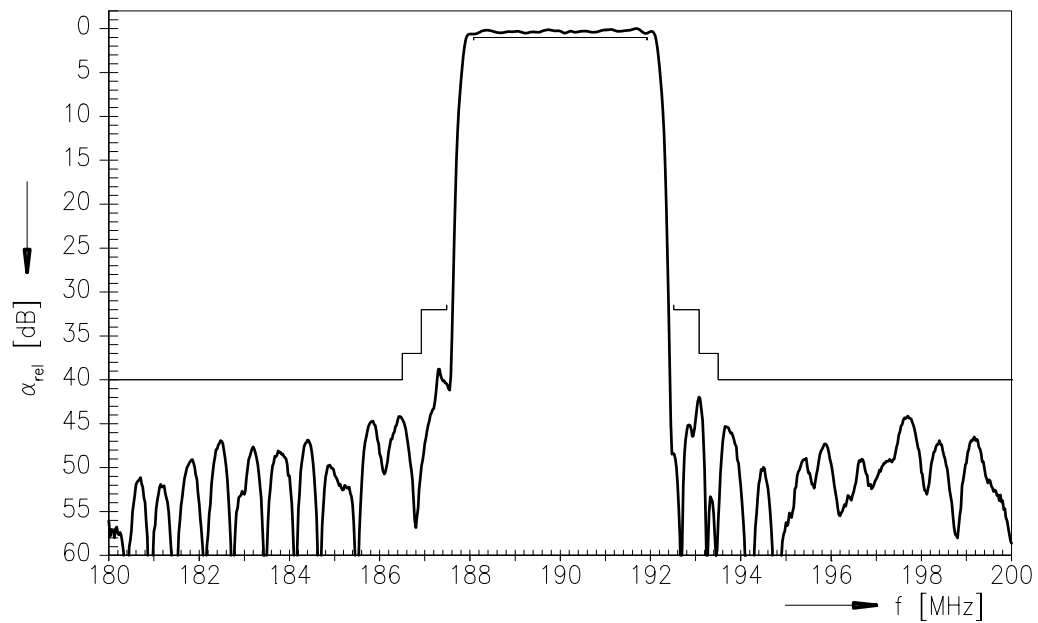
Low-Loss Filter

190.00 MHz

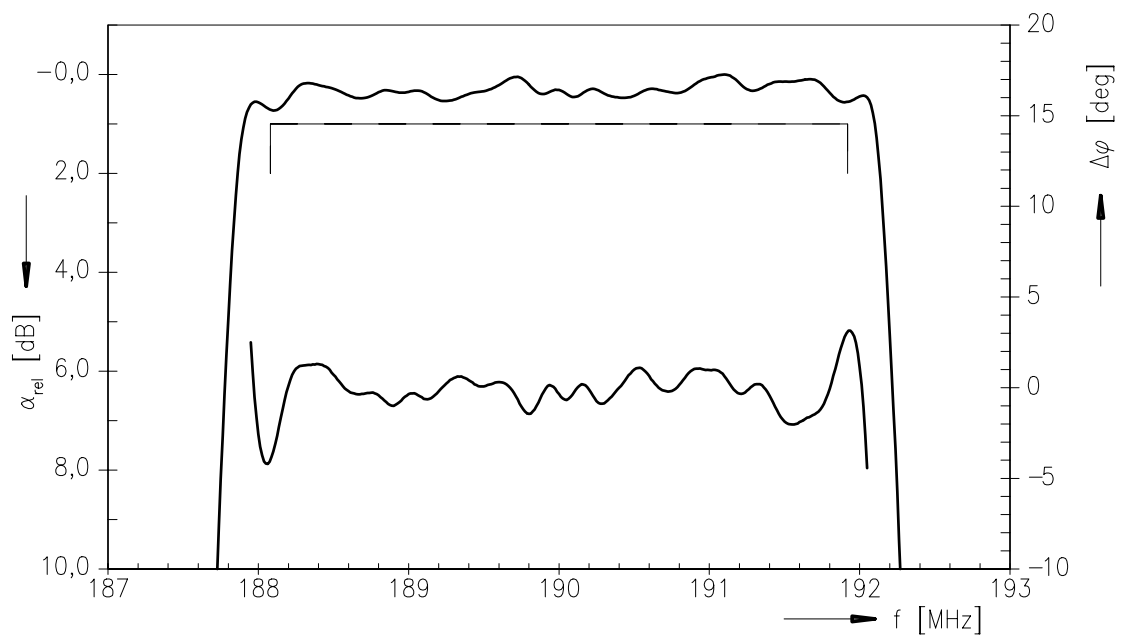
Data Sheet



Transfer function



Transfer function (passband)



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**SAW Components****B5026****Low-Loss Filter****190.00 MHz****Data Sheet**

<b>Type</b>	B5026	
<b>Ordering code</b>	B39191-B5026-H510	
<b>Marking and Package</b>	<b>C61157-A7-A94</b>	
<b>Packaging</b>	<b>F61074-V8163-Z000</b>	
<b>Date Codes</b>	L_1126	
<b>S-Parameters</b>		
<b>Soldering profile</b>	S_6001	

For further information please contact your local EPCOS sales office or visit our webpage at [www.epcos.com](http://www.epcos.com).

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