

RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

## SAW Components

### SAW IF filters for base stations

Series/type: B5262  
Ordering code: B39181B5262H810  
Date: January 07, 2014  
Version: 2.0

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# SAW Components

## SAW IF filters for base stations

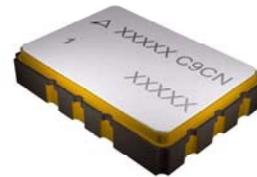
<b>Series/type:</b>	<b>B5262</b>
<b>Ordering code:</b>	<b>B39181B5262H810</b>
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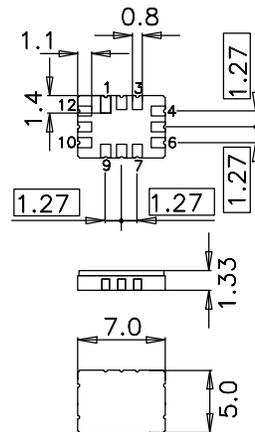
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**Application**

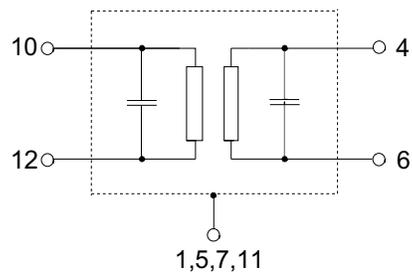
- Low-loss IF filter for base stations
- Usable passband 25 MHz
- Unbalanced or balanced operation possible


**Features**

- Package size 7.0 x 5.0 x 1.33 mm<sup>3</sup>
- Package code QCC12E
- RoHS compatible
- Approx. weight 0.25 g
- Ceramic package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter surface passivated
- **Moisture Sensitive Level 1**


**Pin configuration**

- 10 Input
- 12 Input ground or balanced input
- 4 Output
- 6 Output ground or balanced output
- 1, 5, 7, 11 Case Ground
- 2, 3, 8, 9 To be grounded



**Data sheet**

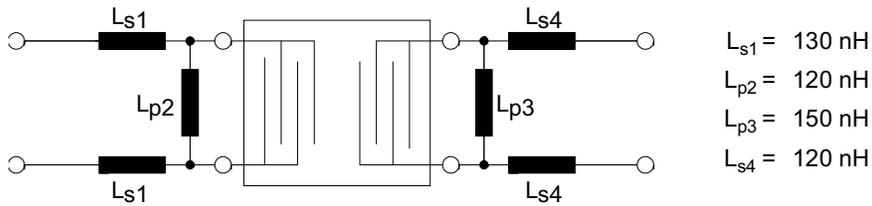
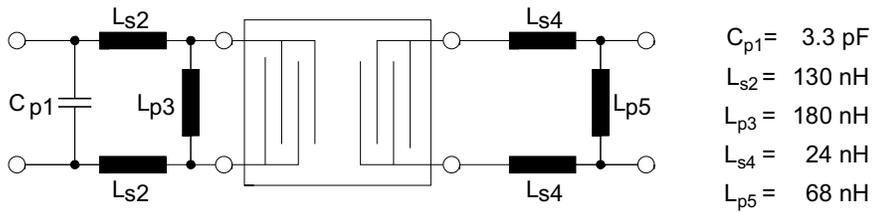
**Characteristics**

Temperature range for specification:  $T = -40\text{ °C to }+85\text{ °C}$   
 Terminating source impedance:  $Z_S = 200\ \Omega$  balanced and matching network  
 Terminating load impedance:  $Z_L = 150\ \Omega$  balanced and matching network

		min.	typ. @ 25 °C	max.	
<b>Nominal frequency</b>	$f_N$	—	184.32	—	MHz
<b>Minimum insertion attenuation</b> (including matching network)	$\alpha_{\min}$	—	8.2	9.5	dB
<b>Passband width</b>	$\alpha_{\text{rel}} \leq 1.0\text{ dB}$ $B_{1.0\text{ dB}}$	25	28	—	MHz
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
	$f_N \pm 12.50\text{ MHz}$	—	0.5	1.0	dB
	in any segment of 5 MHz in $f_N \pm 12.50\text{ MHz}$	—	0.3	0.8	dB
<b>Average error vector magnitude<sup>1)</sup></b>	EVM	—	1.8	2.5	%
<b>Absolute group delay</b>	$\tau$				
	$f_N \pm 12.50\text{ MHz}$	—	0.5	0.55	$\mu\text{s}$
<b>Group delay ripple (p-p)</b>	$\Delta\tau$				
	$f_N \pm 12.50\text{ MHz}$	—	30	50	ns
<b>Return loss (input / output)</b>		7.5	14.5	—	dB
<b>Relative attenuation (relative to <math>\alpha_{\min}</math>)</b>	$\alpha_{\text{rel}}$				
	10.00 ... 75.00 MHz	55	65	—	dB
	75.00 ... 151.82 MHz	40	55	—	dB
	151.82 ... 161.82 MHz	30	43	—	dB
	161.82 ... 166.82 MHz	10	32	—	dB
	201.82 ... 206.82 MHz	10	25	—	dB
	206.82 ... 216.82 MHz	30	37	—	dB
	216.82 ... 290.00 MHz	40	50	—	dB
	290.00 ... 330.00 MHz	50	64	—	dB
	330.00 ... 410.00 MHz	40	60	—	dB
	410.00 ... 1000.00 MHz	45	62	—	dB

<sup>1)</sup> EVM calculation based on root raised cosine filtered QPSK signal  
 ( $f_{\text{CRRRC}}$  within 174.32 ... 194.32 MHz,  $\text{bw}_{\text{RRC}} = 3.84\text{ MHz}$ )

Data sheet


**Matching network to 200 Ω balanced input and 150 Ω balanced output**

**Alternative matching network to 200 Ω balanced input and 150 Ω balanced output**


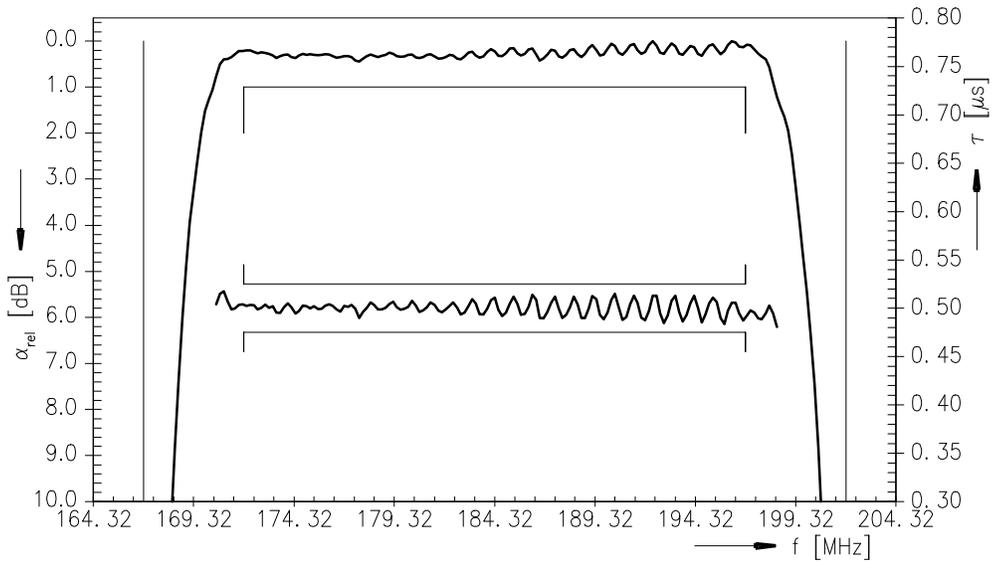
Element values depend upon board layout and properties.

**Maximum ratings**

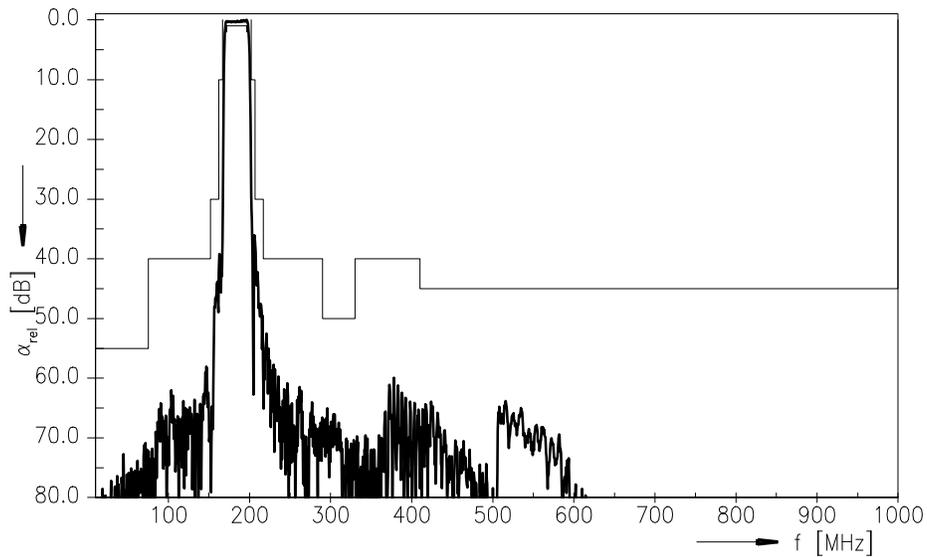
Operable temperature range	T	-40/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	0	V	
Input power	P <sub>IN</sub>	10	dBm	
		171.82 ... 196.82 MHz		



Transfer function (S21, narrowband, normalized)



Transfer function (S21, wideband, normalized)



<b>SAW Components</b>	<b>B5262</b>
<b>SAW IF filter</b>	<b>184.32 MHz</b>

Data sheet



## References

<b>Type</b>	B5262
<b>Ordering code</b>	B39181B5262H810
<b>Marking and package</b>	C61157-Z7-A103
<b>Packaging</b>	F61074-V8170-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B5262_UN_NB.s4p, B5262_UN_WB.s4p, B5262_NB.s4p, B5262_WB.s4p see file header for port/pin assignment table
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8 <sup>th</sup> , 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases.
<b>Matching coils</b>	See Inductor pdf-catalog <a href="http://www.tdk.co.jp/tefe02/coil.htm#aname1">http://www.tdk.co.jp/tefe02/coil.htm#aname1</a> and Data Library for circuit simulation <a href="http://www.tdk.co.jp/etvcl/index.htm">http://www.tdk.co.jp/etvcl/index.htm</a>

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