

RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

## SAW Components

### SAW IF filter

Basestation

Series/type:	B5235
Ordering code:	B39141B5235Z810
Date:	Sep 23, 2011
Version:	2.0

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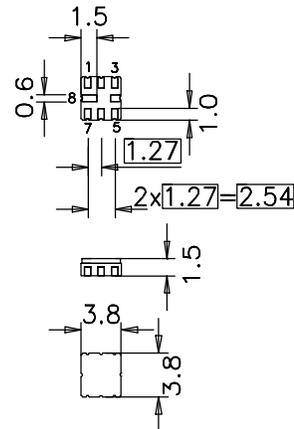
EPCOS AG is a TDK Group Company.


**Application**

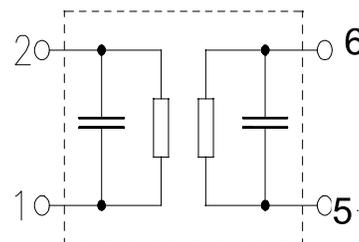
- Low-loss IF filter for basestation
- Usable passband 40 MHz


**Features**

- Package size 3.8 x 3.8 x 1.5 mm<sup>3</sup>
- Package code QCC8B
- RoHS compatible
- Approx. weight 0.07g
- Ceramic package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter Surface Passivated
- Moisture Sensitive Level 1


**Pin configuration**

- 1 Input
- 2 Input ground or return
- 5 Output
- 6 Output ground or return
- 3,4, 7,8 Package ground



<b>SAW Components</b>	<b>B5235</b>
<b>SAW IF filter</b>	<b>140.0 MHz</b>

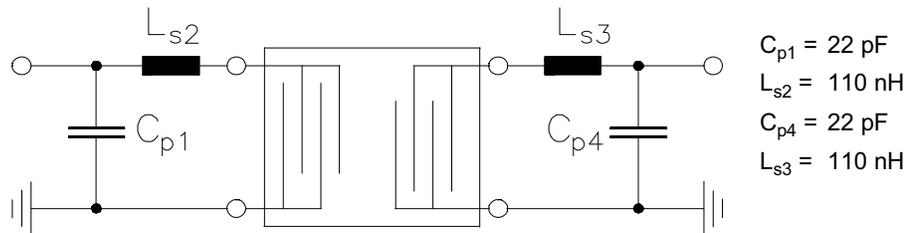
Data Sheet



**Characteristics**

Operating temperature range:  $T = -40\text{ °C to }+85\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$  and matching network  
 Terminating load impedance:  $Z_L = 50\ \Omega$  and matching network

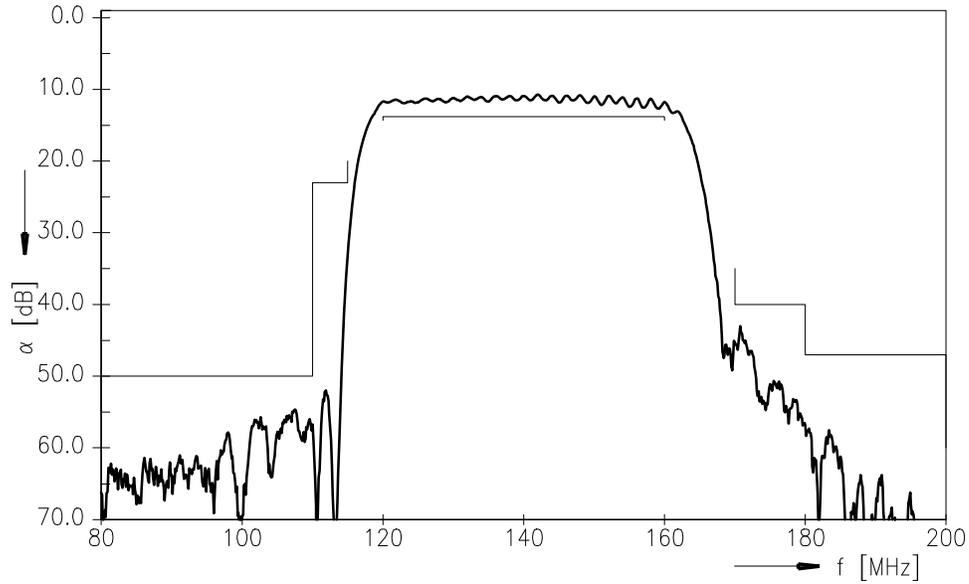
		min.	typ. @ 25 °C	max.	
<b>Nominal frequency</b>	$f_N$	—	140.0	—	MHz
<b>Minimum insertion attenuation</b> (including matching network)	$\alpha_{\min}$	—	10.8	12.5	dB
<b>Amplitude ripple (p-p)</b> $f_N \pm 20\text{ MHz}$	$\Delta\alpha$	—	2.0	2.5	dB
<b>Group delay ripple (p-p)</b> $f_N \pm 20\text{ MHz}$	$\Delta\tau$	—	77	100	ns
<b>Absolute group delay</b> $f_N \pm 20\text{ MHz}$	$\tau$	—	0.27	0.5	$\mu\text{s}$
<b>Absolute attenuation</b>	$\alpha_{\text{abs}}$				
From 10 MHz to 80 MHz		57.0	62.0	—	dB
From 80 MHz to 110 MHz		50.0	54.0	—	dB
From 110 MHz to 115 MHz		23.0	45.0	—	dB
From 170 MHz to 180 MHz		40.0	43.0	—	dB
From 180 MHz to 200 MHz		47.0	50.0	—	dB
From 200 MHz to 1 GHz		60.0	65.0	—	dB
<b>Return loss, input</b> $f_N \pm 20\text{ MHz}$		4.0	7.0	—	dB
<b>Return loss, output</b> $f_N \pm 20\text{ MHz}$		4.0	6.0	—	dB
<b>Temperature coefficient of frequency</b>	$TC_f$		-75		ppm/K

**Matching network to 50 Ω single ended / 50 Ω single ended**

**Maximum ratings**

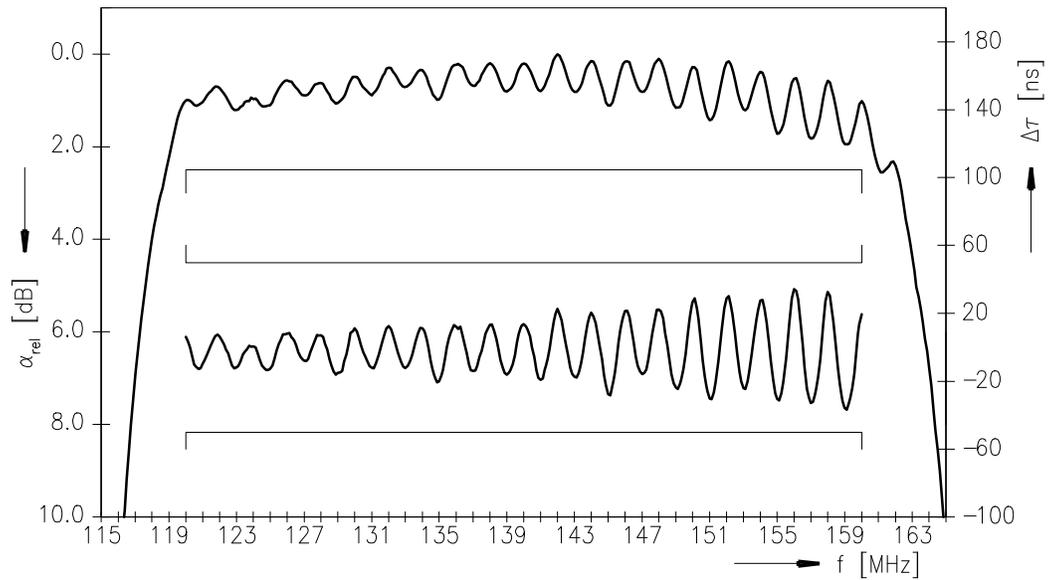
Operable temperature range	T	-40/+85	°C
Storage temperature range	T <sub>stg</sub>	-40/+85	°C
DC voltage	V <sub>DC</sub>	0	V
Input power	P <sub>IN</sub>	20	dBm



Transfer function

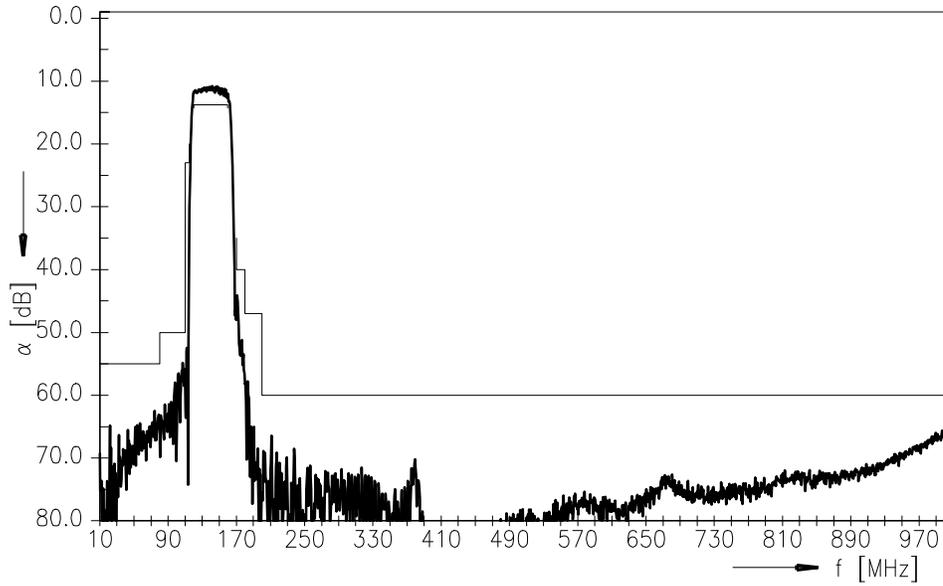


Transfer function (Passband)



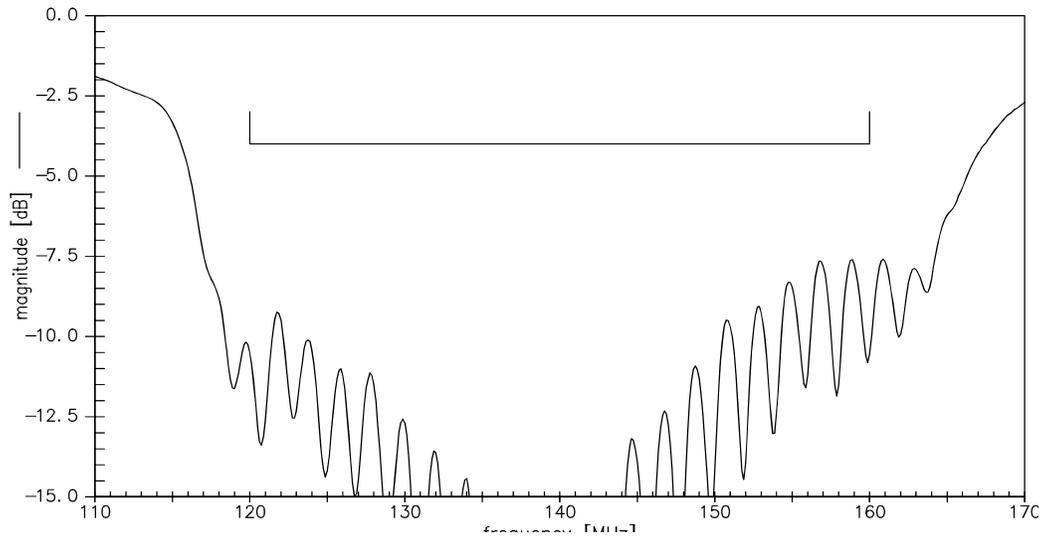


Transfer function (Wide band plot)

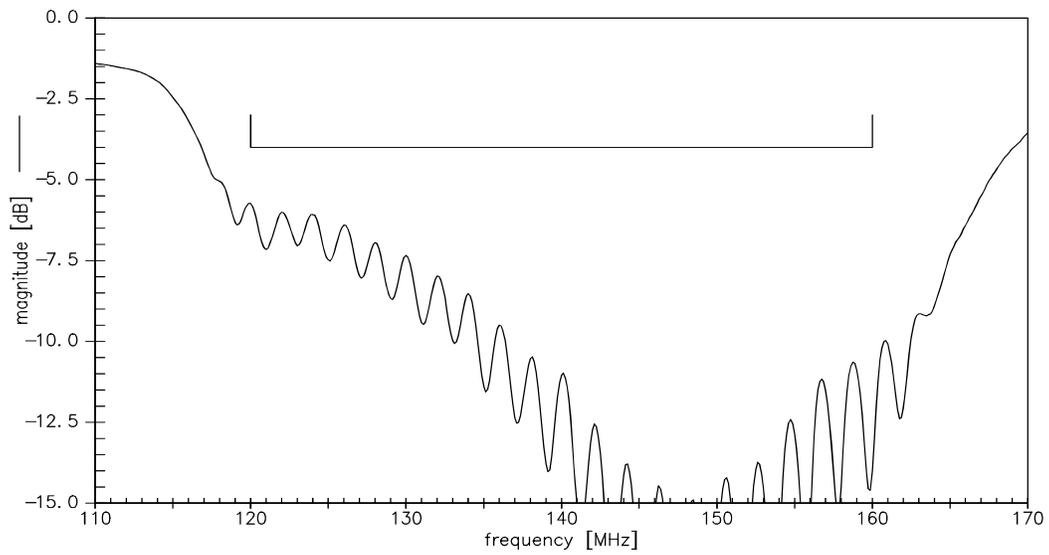




**Input return loss**



**Output return loss**



<b>SAW Components</b>	<b>B5235</b>
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<b>SAW IF filter</b>	<b>140.0 MHz</b>
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Data Sheet



## References

<b>Type</b>	B5235
<b>Ordering code</b>	B39141B5235Z810
<b>Marking and package</b>	C61157-A7-A46
<b>Packaging</b>	F61074-V8229-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B5235_NB.S2P, B5235_WB.S2P
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."
<b>Moldability</b>	Before using in overmolding environment, please contact your EPCOS sales office.
<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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