



# SAW Components

SAW RF filter

GPS

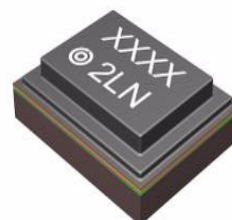
<b>Series/type:</b>	<b>B4300</b>
<b>Ordering code:</b>	<b>B39162B4300F210</b>
Date:	January 26, 2011
Version:	2.1

Preliminary data



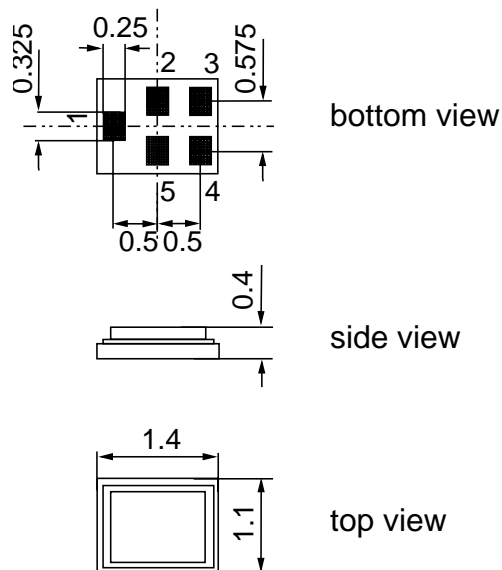
Application

- Low-loss RF filter for GPS application
- No matching network required for operation at 50 Ω
- Additional passband characteristics for Galileo



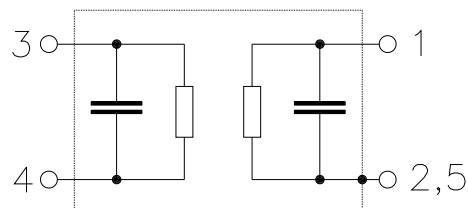
Features

- Package size 1.4 x 1.1 x 0.4 mm<sup>3</sup>
- Package code QCS5P
- RoHS compatible
- Approximate weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- AEC-Q200 qualified component family (operable temperature range -40°C to +85°C)
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

- 1 Input
- 4 Output
- 2,3,5 to be grounded



**Preliminary data**

**Characteristics**

Temperature range for specification:	T = -40 °C to +85 °C
Terminating source impedance:	Z <sub>S</sub> = 50 Ω
Terminating load impedance:	Z <sub>L</sub> = 50 Ω

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	f <sub>C</sub>	—	1575.42	—	MHz
<b>Maximum insertion attenuation</b>	α <sub>max</sub>				
1573.92 ... 1576.92 MHz		—	1.0	1.3	dB
<b>Amplitude ripple (p-p)</b>	Δα				
1573.92 ... 1576.92 MHz		—	0.1	0.6	dB
<b>VSWR</b>					
1573.92 ... 1576.92 MHz		—	1.3	1.7	
<b>Attenuation</b>	α				
1.00 ... 810.00 MHz		41	45	—	dB
810.00 ... 1453.00 MHz		40	45	—	dB
1453.00 ... 1525.00 MHz		37	44	—	dB
1625.00 ... 1710.00 MHz		40	50	—	dB
1710.00 ... 1749.00 MHz		43	50	—	dB
1749.00 ... 1785.00 MHz		44	50	—	dB
1785.00 ... 1920.00 MHz		43	50	—	dB
1920.00 ... 2200.00 MHz		41	52	—	dB
2200.00 ... 2450.00 MHz		35	40	—	dB
2450.00 ... 2700.00 MHz		40	50	—	dB
2700.00 ... 4000.00 MHz		30	35	—	dB

**Preliminary data**

**Additional Passband Characteristics for Galileo**

Temperature range for specification:	T = -40 °C to +85 °C
Terminating source impedance:	Z <sub>S</sub> = 50 Ω
Terminating load impedance:	Z <sub>L</sub> = 50 Ω

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	f <sub>C</sub>	—	1575.42	—	MHz
<b>Maximum insertion attenuation</b> 1572.42 ... 1578.42 MHz	α <sub>max</sub>	—	1.2	1.8	dB
<b>Amplitude ripple (p-p)</b> 1572.42 ... 1578.42 MHz	Δα	—	0.4	1.0	dB
<b>VSWR</b> 1572.42 ... 1578.42 MHz		—	1.5	1.9	

**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	
Source power	P <sub>S</sub>	10	dBm	source impedance 50 Ω
		20	dBm	824 MHz to 915 MHz, 1710 MHz to 1785 MHz

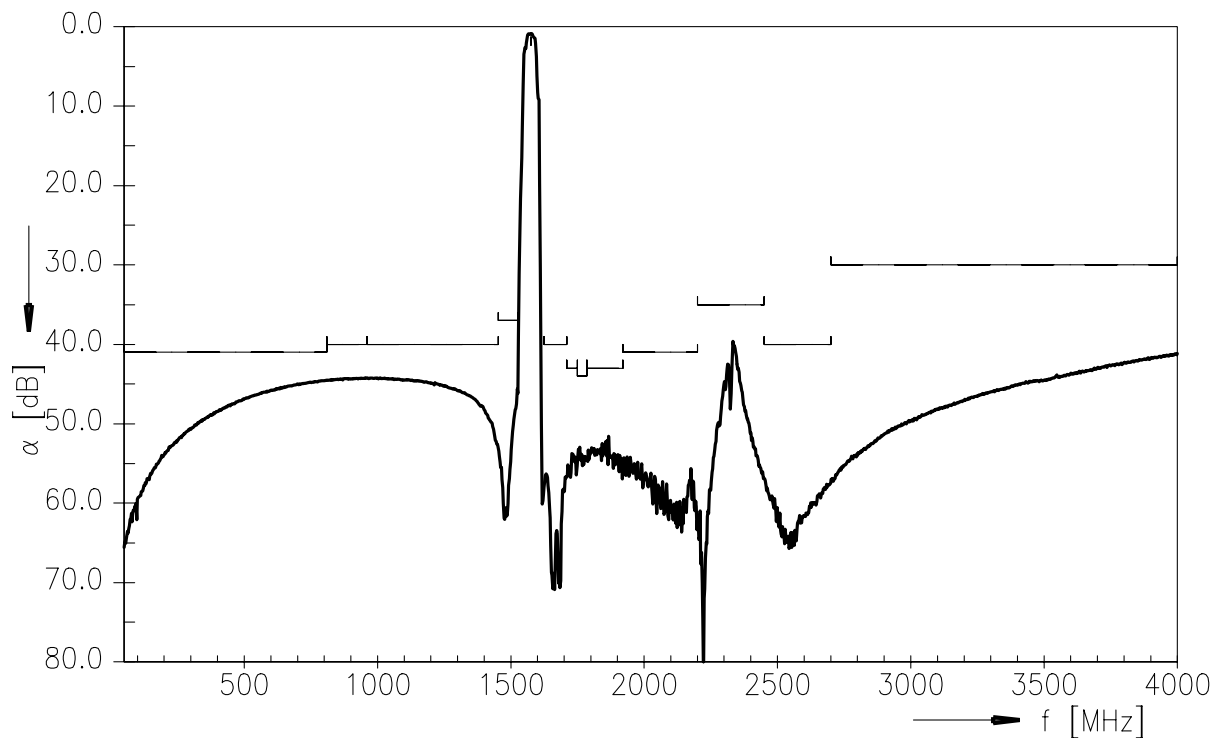
Preliminary data



Transfer function



Transfer function (wideband)



**References**

<b>Type</b>	B4300
<b>Ordering code</b>	B39162B4300F210
<b>Marking and package</b>	C61157-A8-A9
<b>Packaging</b>	F61074-V8212-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B4300_NB.s2p, B4300_WB.s2p See file header for port/pin assignment table.
<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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