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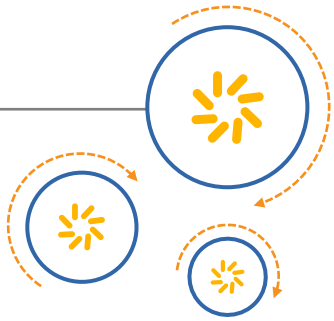

SAW Components

SAW RF filter

GPS

Series/type:	B4300
Ordering code:	B39162B4300F210
Date:	August 25, 2011
Version:	2.1

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SAW Components

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GPS

Series/type:	**B4300**
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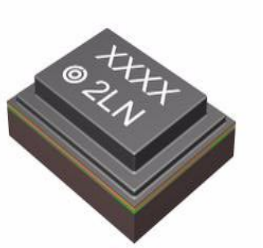
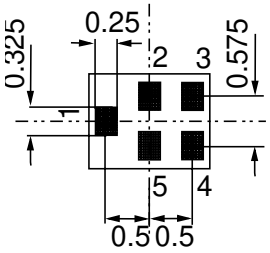
Application

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

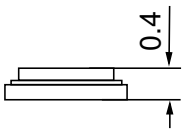


Features

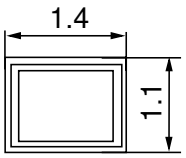
- Package size 1.4 x 1.1 x 0.4 mm³
- Package code QCS5P
- RoHS compatible
- Approximate weight 0.003 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- AEC-Q200 qualified component family (operable temperature range –40˚C to +85˚C)
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



bottom view



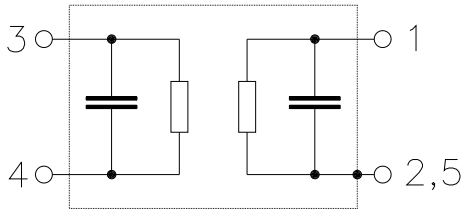
side view



top view

Pin configuration

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



Data sheet SMD

Characteristics

Temperature range for specification: $T = -40\ ^{\circ}C$ to $+85\ ^{\circ}C$
Terminating source impedance: $Z_S = 50\ \Omega$
Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	1575.42	—	MHz
Maximum insertion attenuation	α_{max}				
1573.92 ... 1576.92 MHz		—	1.0	1.3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1573.92 ... 1576.92 MHz		—	0.1	0.6	dB
VSWR					
1573.92 ... 1576.92 MHz		—	1.3	1.7	
Attenuation	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

Additional Passband Characteristics for Galileo

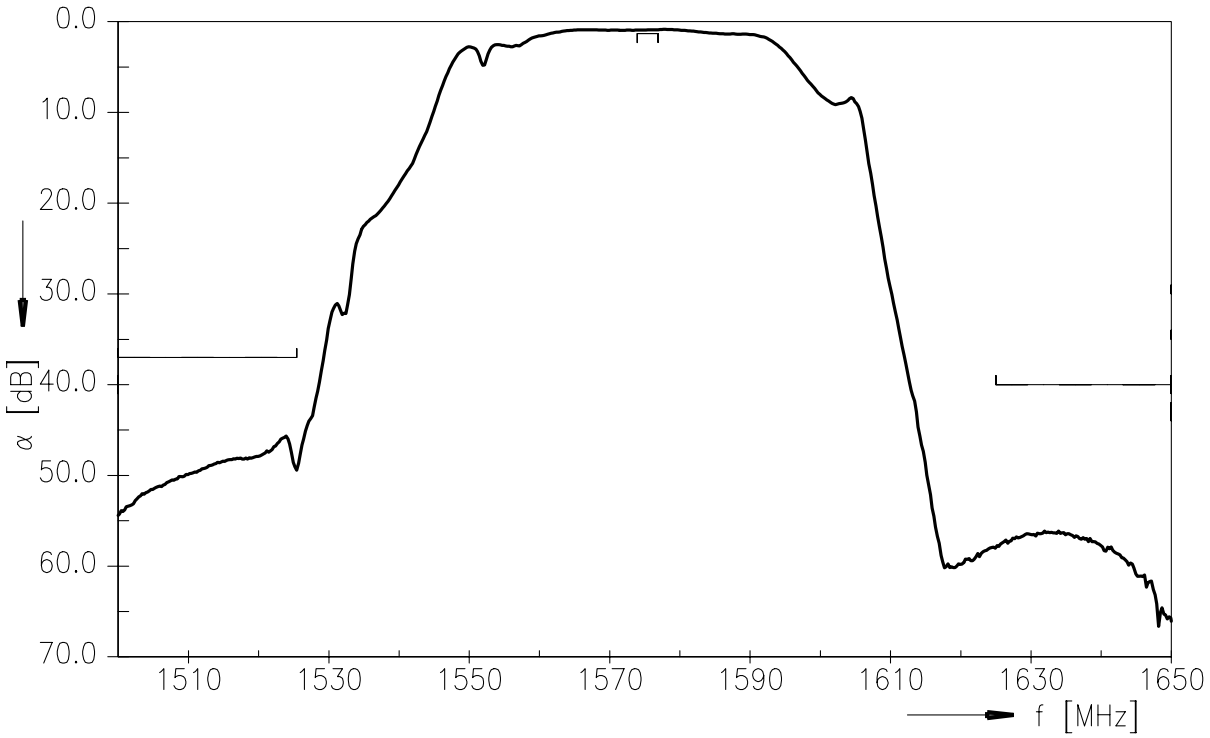
Temperature range for specification: T = –40 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	1575.42	—	MHz
Maximum insertion attenuation	α_{max}				
1572.42 ... 1578.42 MHz		—	1.2	1.8	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1572.42 ... 1578.42 MHz		—	0.4	1.0	dB
VSWR					
1572.42 ... 1578.42 MHz		—	1.5	1.9	

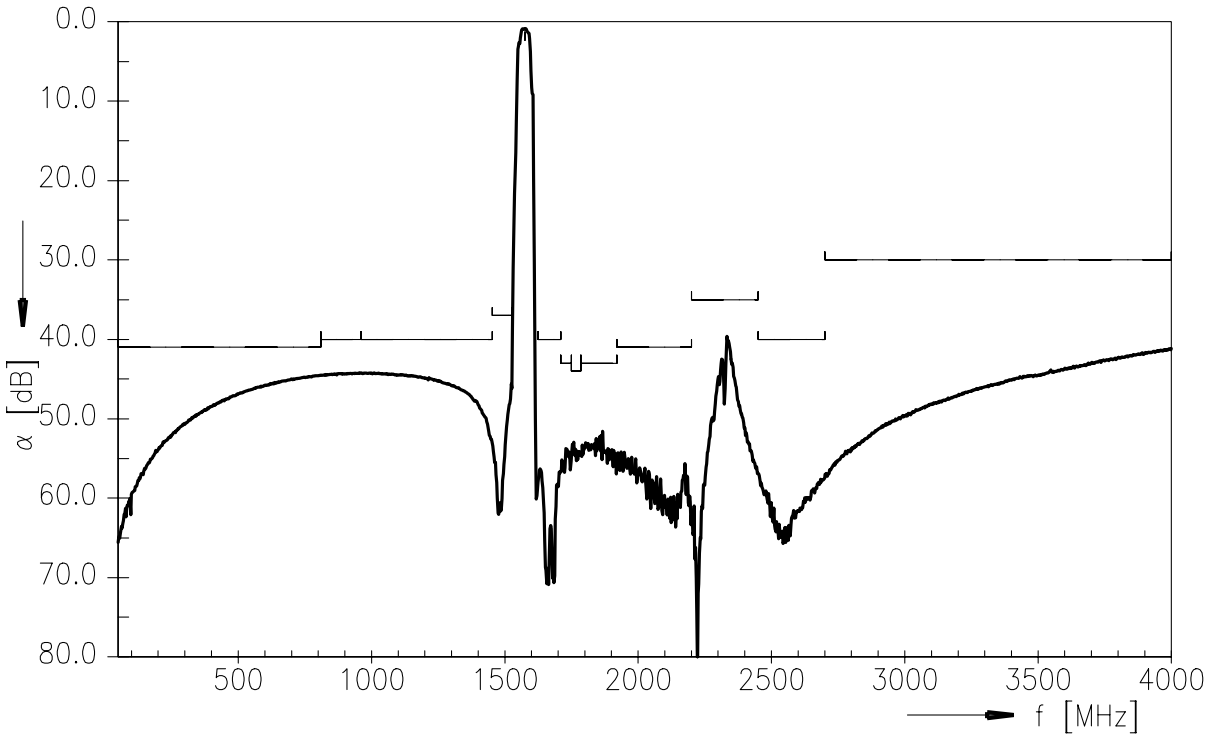
Maximum ratings

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	source impedance 50 Ω
		20	dBm	824 MHz to 915 MHz, 1710 MHz to1785 MHz

Transfer function



Transfer function (wideband)



References

Type	B4300
Ordering code	B39162B4300F210
Marking and package	C61157-A8-A9
Packaging	F61074-V8212-Z000
Date codes	L_1126
S-parameters	B4300_NB.s2p, B4300_WB.s2p See file header for port/pin assignment table.
Soldering profile	S_6001
RoHS compatible	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."
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Matching coils	See Inductor pdf-catalog http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation http://www.tdk.co.jp/etvcl/index.htm

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