SAW Components

SAW RF filter

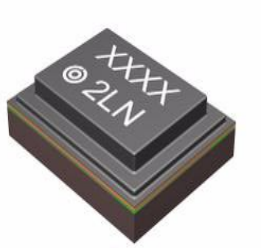
GPS

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

Data sheet SMD

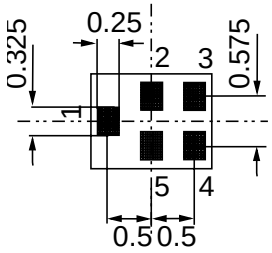
Application

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

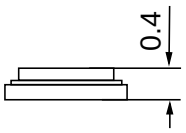


Features

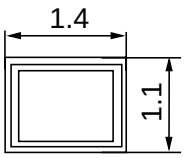
- Package size 1.4 x 1.1 x 0.4 mm³
- Package code QCS5P
- RoHS compatible
- Approximate weight 0.003 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- AEC-Q200 qualified component family (operable temperature range –40˚C to +85˚C)
- **E**lectrostatic **S**ensitive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



bottom view



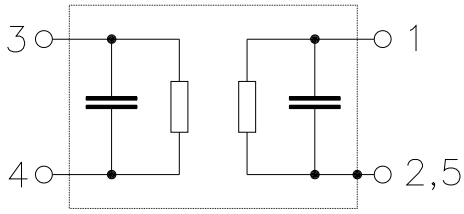
side view



top view

Pin configuration

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



Data sheet SMD

Characteristics

Temperature range for specification: T = –40 ˚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}				
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

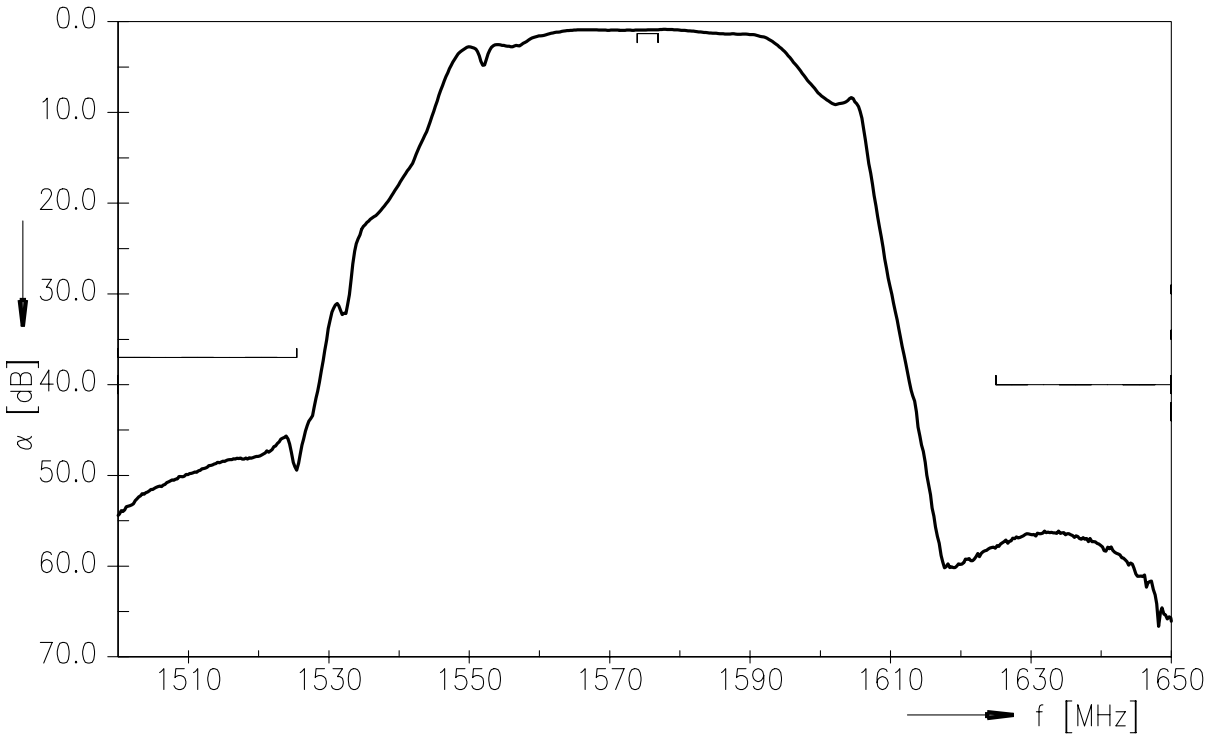
Temperature range for specification: T = –40 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		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	

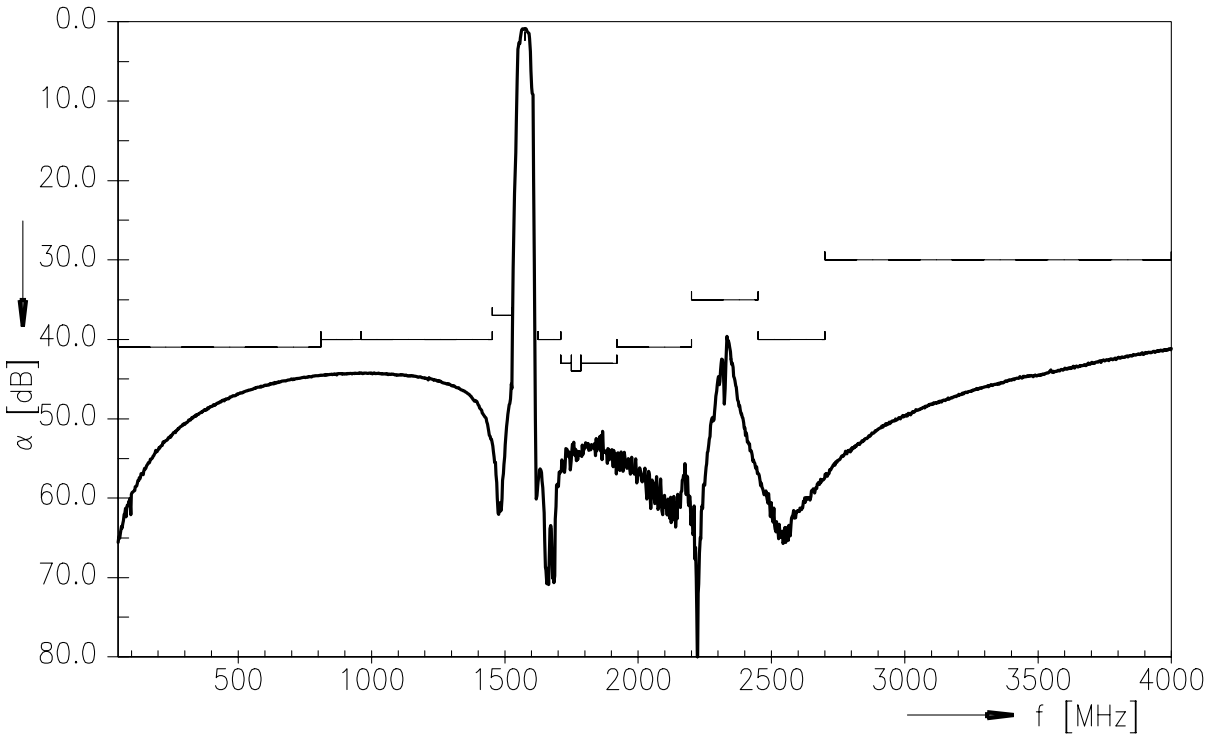
Maximum ratings

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."
Moldability	Before using in overmolding environment, please contact your EPCOS sales office.
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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