



SAW Components

SAW RF filter

GPS

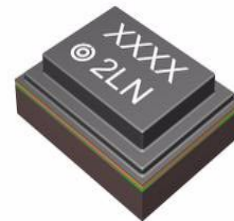
| | |
|-----------------------|------------------------|
| Series/type: | B4300 |
| Ordering code: | B39162B4300F210 |
| Date: | August 25, 2011 |
| Version: | 2.1 |

Data sheet



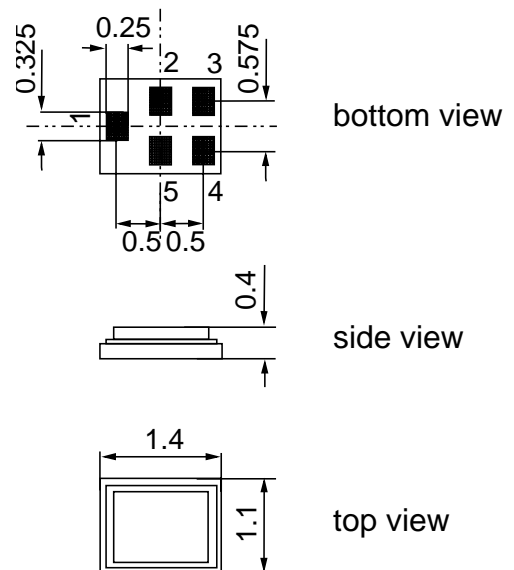
Application

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



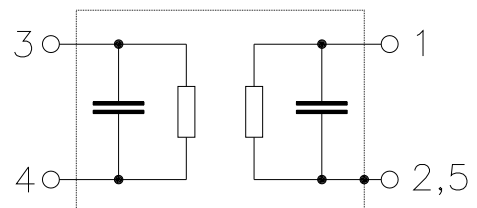
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- Package code QCS5P
- RoHS compatible
- Approximate weight 0.003 g
- Package for **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



Data sheet


Characteristics

Temperature range for specification: $T = -40\text{ °C to }+85\text{ °C}$
 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} | — | 1.0 | 1.3 | dB |
| 1573.92 ... 1576.92 MHz | | | | | |
| Amplitude ripple (p-p) | $\Delta\alpha$ | — | 0.1 | 0.6 | dB |
| 1573.92 ... 1576.92 MHz | | | | | |
| VSWR | | — | 1.3 | 1.7 | |
| 1573.92 ... 1576.92 MHz | | | | | |
| 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 |

Data sheet


Additional Passband Characteristics for Galileo

Temperature range for specification: $T = -40\text{ °C to }+85\text{ °C}$
 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 1572.42 ... 1578.42 MHz | α_{\max} | — | 1.2 | 1.8 | dB |
| Amplitude ripple (p-p) 1572.42 ... 1578.42 MHz | $\Delta\alpha$ | — | 0.4 | 1.0 | dB |
| VSWR 1572.42 ... 1578.42 MHz | | — | 1.5 | 1.9 | |

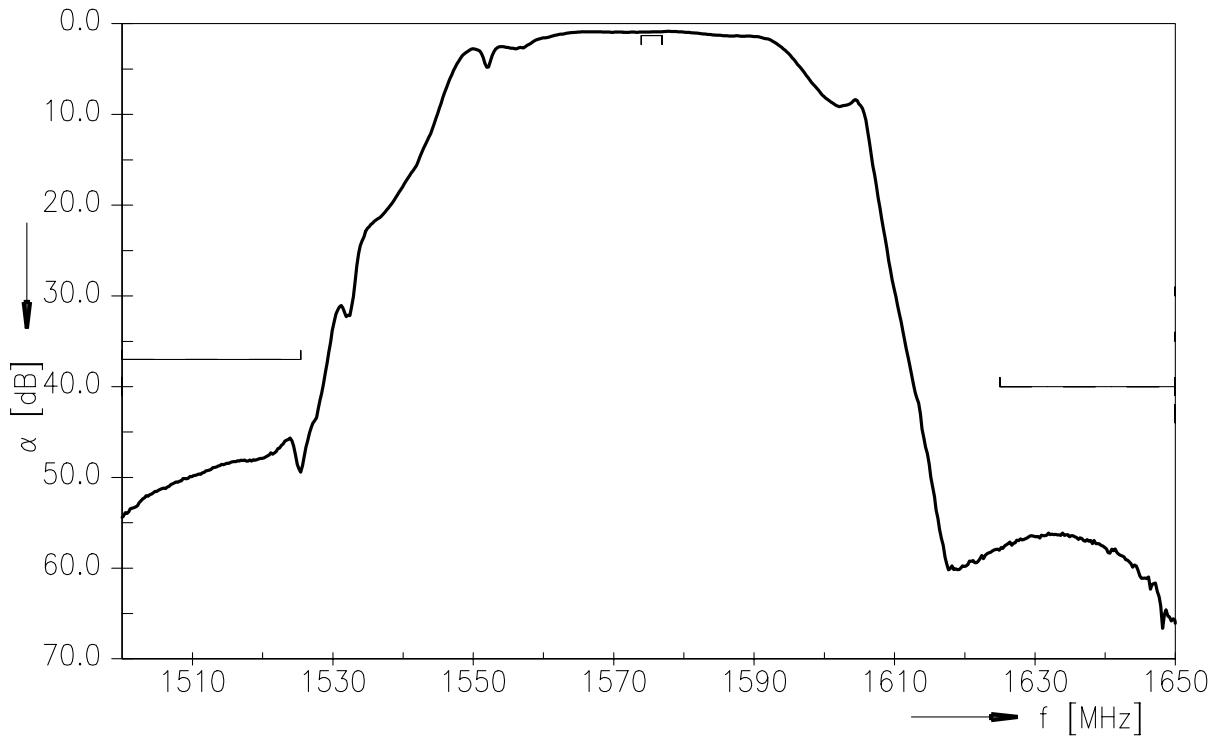
Maximum ratings

| | | | | |
|----------------------------|------------------|---------|-----|---|
| 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 to 1785 MHz |

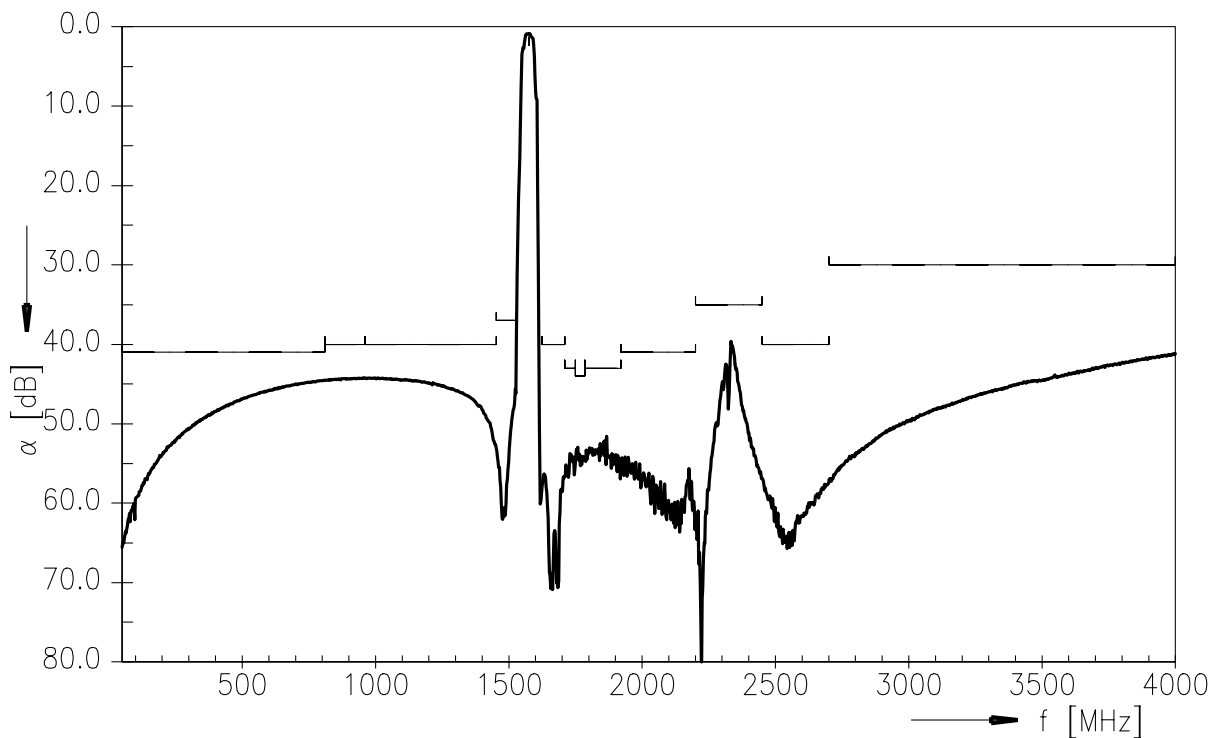
Data sheet



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 |

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com .

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