

RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

SAW Components

SAW RF low loss filter

Satellite CSS

| | |
|----------------|-------------------|
| Series/type: | B1665 |
| Ordering code: | B39122-B1665-U510 |
| Date: | October 01, 2010 |
| Version: | 2.0 |

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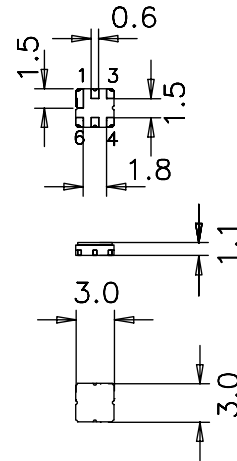
Data sheet


Application

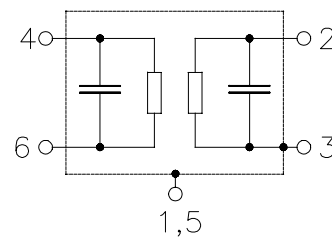
- Low-loss RF filter for digital video
- Impedance transformation from 200 Ω to 50 Ω
- Balanced to unbalanced operation
- Usable passband 60.0 MHz


Features

- Package size 3.0 x3.0 x 1.1 mm³
- Maximum height of 1.225 mm
- Package code DCC6D
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- AEC-Q200 qualified component family


Pin configuration

- 4,6 Input balanced
- 2 Output unbalanced
- 1,3,5 To be grounded



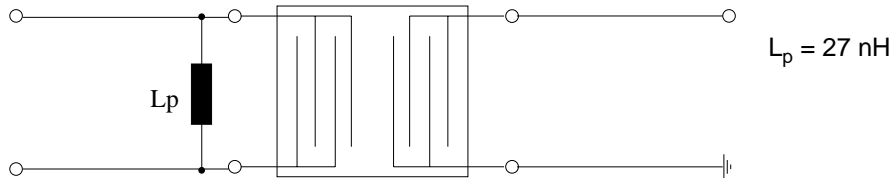
SAW Components
B1665
SAW RF low loss filter
1210.00 MHz

Data sheet


Characteristics

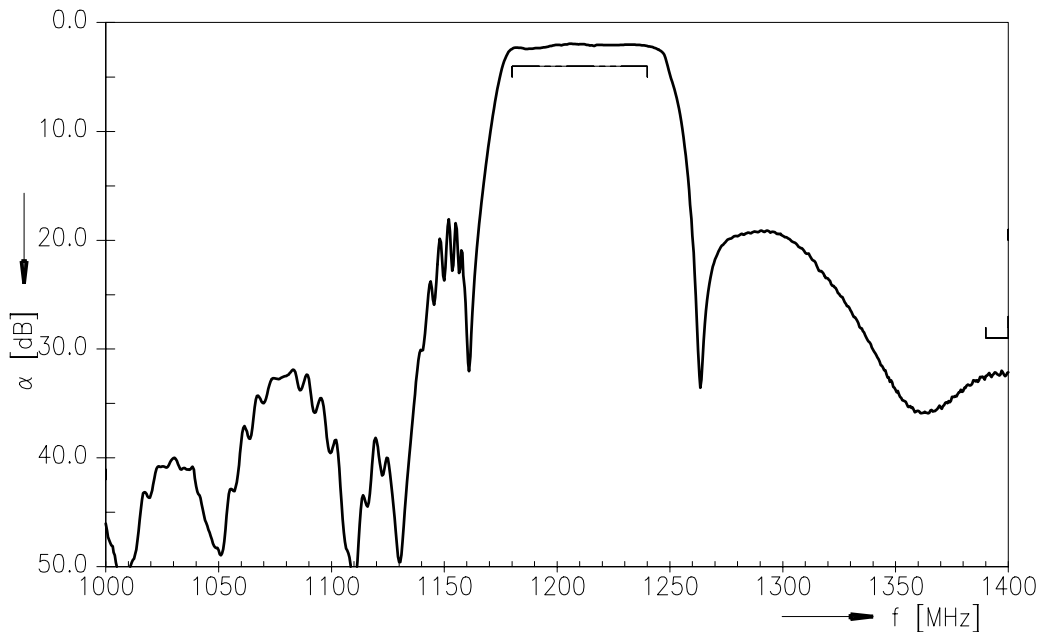
Temperature range for specification: $T = -40\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 200\Omega$ (balanced) and matching network
 Terminating load impedance: $Z_L = 50\Omega$

| | | min. | typ. @ 25 °C | max. | |
|--|-----------------|------|-----------------|------|-----|
| Nominal frequency | f_N | — | 1210.00 | — | MHz |
| Maximum insertion attenuation 1180.0 ... 1240.0 MHz | α_{\max} | — | 3.0 | 4.0 | dB |
| Amplitude ripple in any 30MHz band (p-p) 1180.0 ... 1240.0 MHz | $\Delta\alpha$ | — | 1.0 | 2.2 | dB |
| Amplitude ripple (p-p) 1180.0 ... 1240.0 MHz | $\Delta\alpha$ | — | 1.0 | 2.2 | dB |
| Differential to common mode ratio ($ S_{dd21}/S_{cd21} $) 1180.0 ... 1240.0 MHz | | 17.0 | 20.0 | — | dB |
| Input return loss | | 6.0 | 8.5 | — | dB |
| Output return loss | | 6.0 | 8.5 | — | dB |
| Attenuation | α | | | | |
| 50.0 ... 900.0 MHz | | 42 | 45 | — | dB |
| 1390.0 ... 1450.0 MHz | | 29 | 32 | — | dB |
| 1450.0 ... 2070.0 MHz | | 28 | 31 | — | dB |
| 2070.0 ... 5000.0 MHz | | 20 | 25 | — | dB |
| Group delay ripple (p-p) 1180.0 ... 1240.0 MHz | | — | 18 | 30 | ns |


Matching Network (element values depend on PCB layout)

Maximum ratings

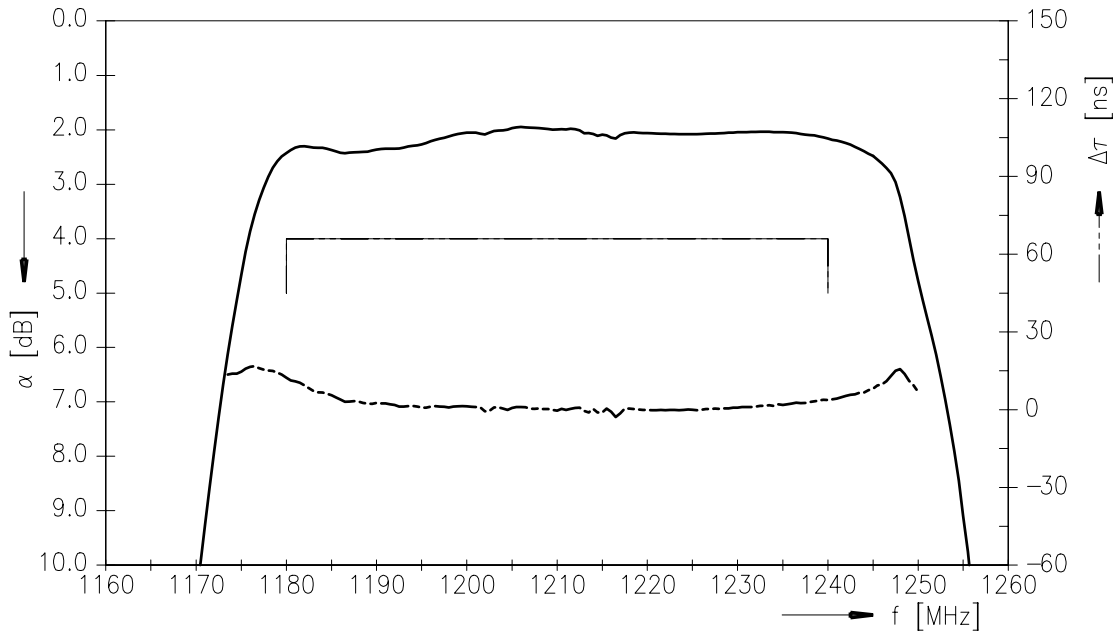
| | | | | |
|---|------------------|------------------|-----|------------------------|
| Operable temperature range | T | -40/+85 | °C | |
| Storage temperature range | T _{stg} | -40/+85 | °C | |
| DC voltage | V _{DC} | 0 | V | |
| ESD voltage | V _{ESD} | 50 ¹⁾ | V | machine model, 1 pulse |
| Input power at 1180.0 MHz...1240.0 MHz | P _{IN} | 0 | dBm | source impedance 200 Ω |

1) according to JESD22-A115A (machine model), 1 negative & 1 positive pulse.

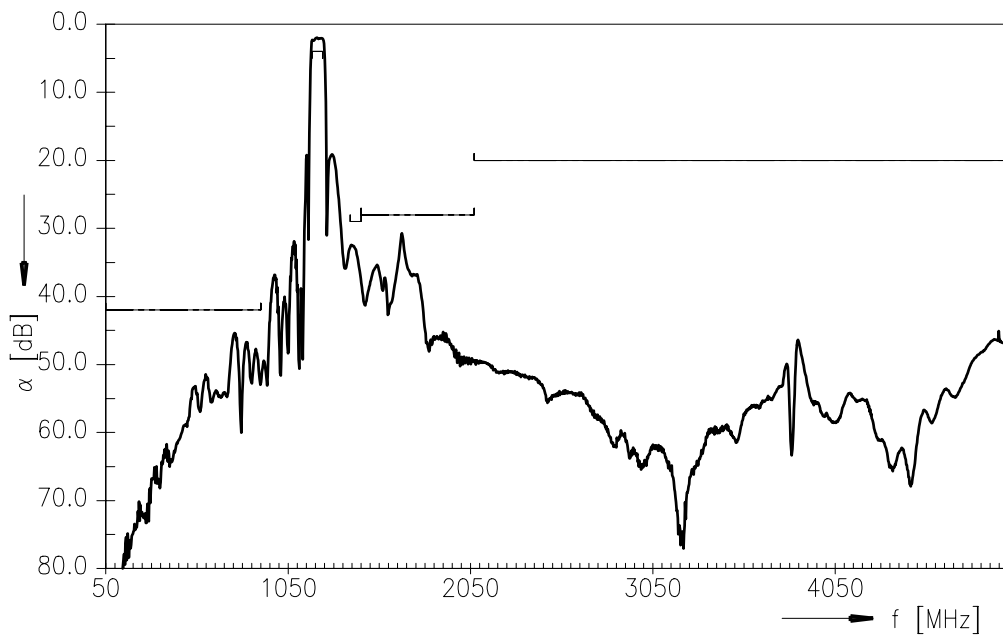
Transfer function




Transfer function (passband)



Transfer function (wideband)



| | |
|-------------------------------|--------------------|
| SAW Components | B1665 |
| SAW RF low loss filter | 1210.00 MHz |

Data sheet



References

| | |
|----------------------------|--|
| Type | B1665 |
| Ordering code | B39122-B1665-U510 |
| Marking and package | C61157-A7-A68 |
| Packaging | F61074-V8168-Z000 |
| Date codes | L_1126 |
| S-parameters | B1665_NB.s3p B1665_WB.s3p 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." |
| 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.

Published by EPCOS AG
Surface Acoustic Wave Components Division
P.O. Box 80 17 09, 81617 Munich, GERMANY

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