



SAW Components

SAW RF low loss filter

Satellite CSS

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



SAW Components

B1665

SAW RF low loss filter

1210.00 MHz

Data sheet



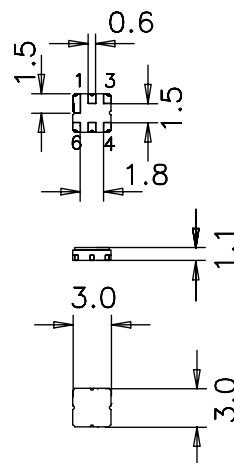
Application

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



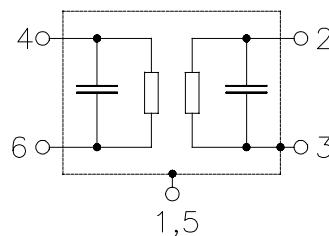
Features

- Package size 3.0 x 3.0 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





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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	$\alpha_{\max}$				
1180.0 ... 1240.0 MHz		—	3.0	4.0	dB
Amplitude ripple in any 30MHz band (p-p)	$\Delta\alpha$				
1180.0 ... 1240.0 MHz		—	1.0	2.2	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1180.0 ... 1240.0 MHz		—	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



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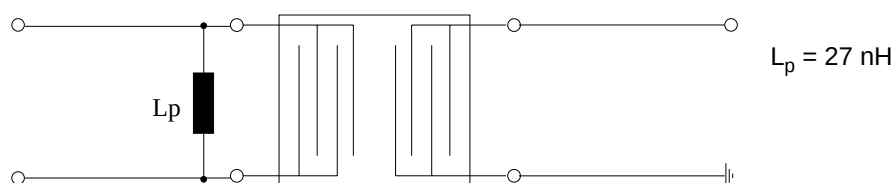
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Matching Network (element values depend on PCB layout)

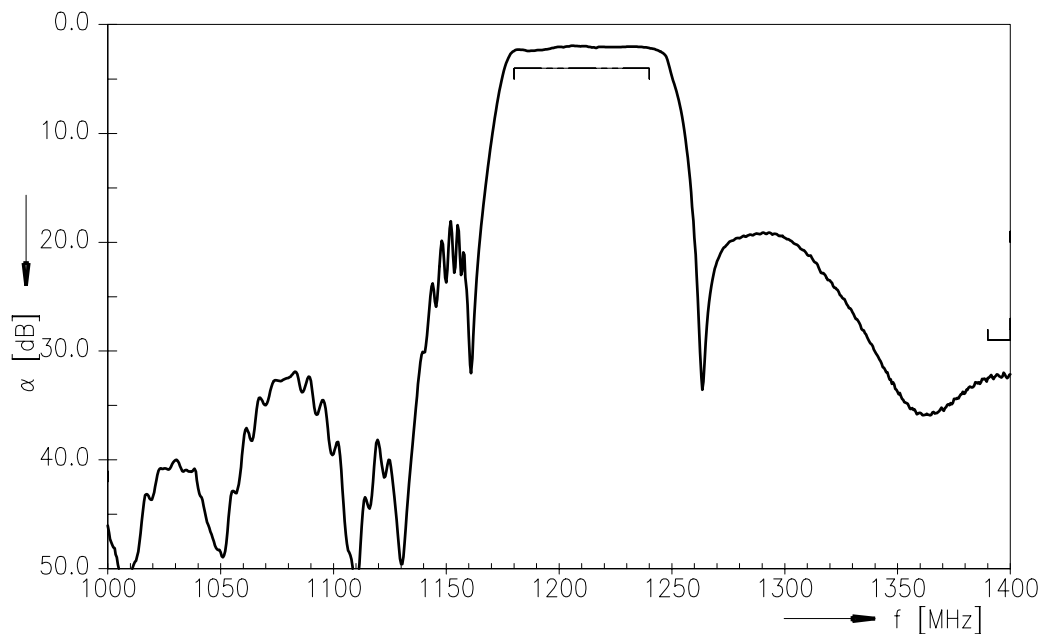


Maximum ratings

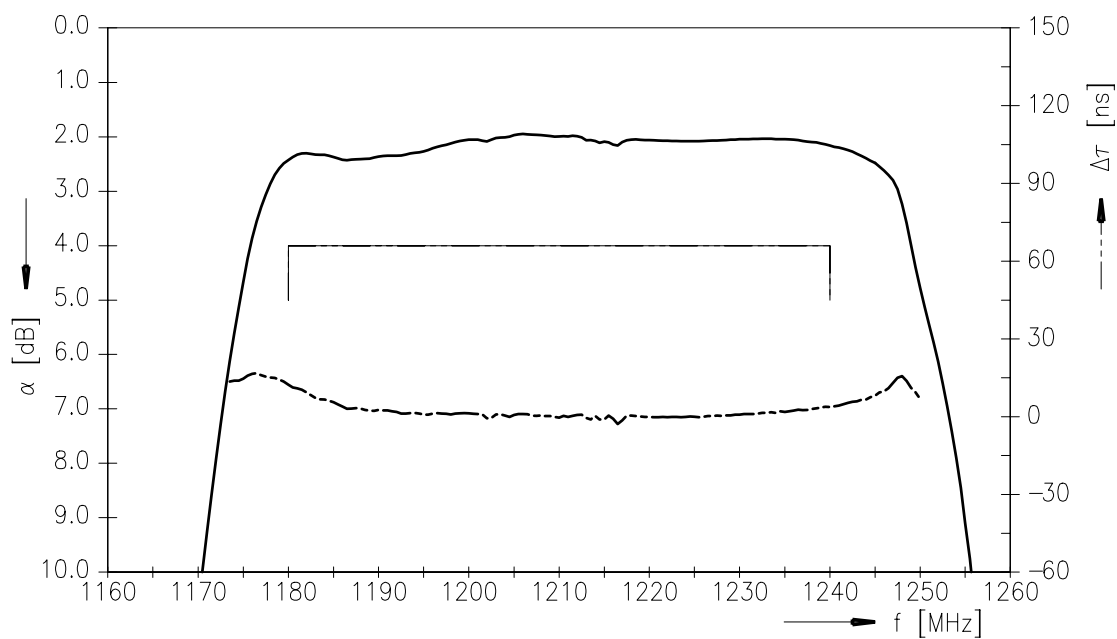
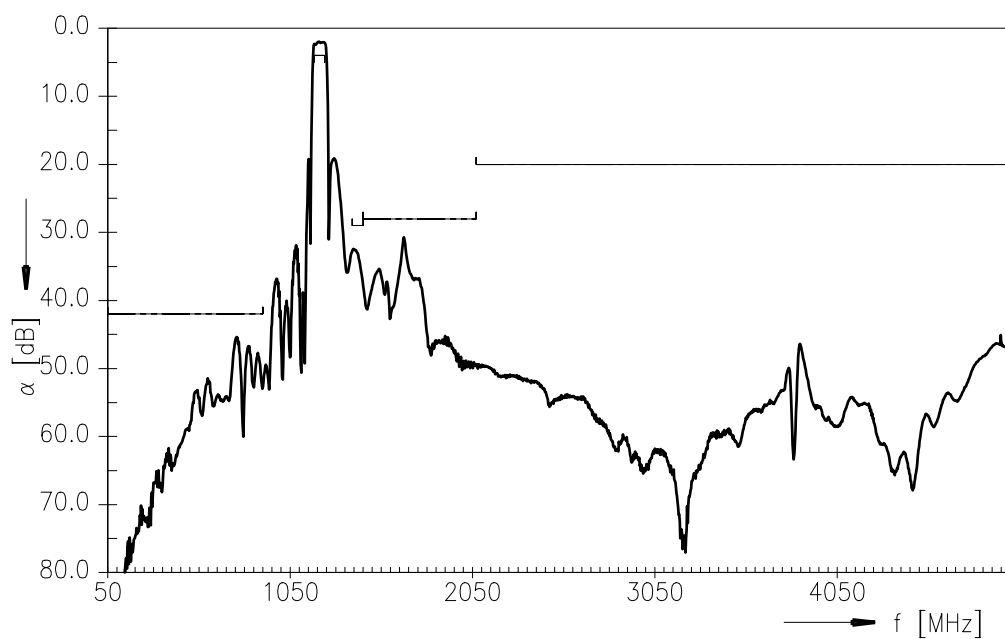
Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 1 pulse
Input power at 1180.0 MHz...1240.0 MHz	P _{IN}	0	dBm	source impedance 200 Ω

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

Transfer function



Please read *cautions and warnings* and *important notes* at the end of this document.

Transfer function (passband)

Transfer function (wideband)




SAW Components	B1665
SAW RF low loss filter	1210.00 MHz
Data sheet	SMD

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

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