



SAW Components

SAW RF low loss filter

Satellite CSS

Series/type:	B1668
Ordering code:	B39212-B1668-U510
Date:	October 01, 2010
Version:	2.0



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B1668

SAW RF low loss filter

2040.00 MHz

Data sheet



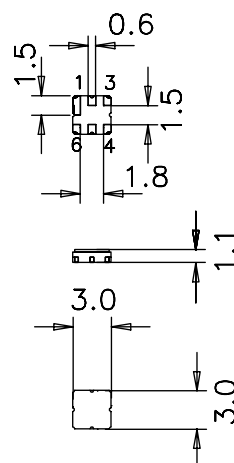
Application

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



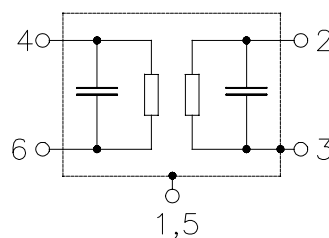
Features

- 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
- AEC-Q200 qualified component family
- **Electrostatic Sensitive Device (ESD)**



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	—	2040.00	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	3.0	4.0	dB
2010.0 ... 2070.0 MHz					
Amplitude ripple in any 30MHz band (p-p)	$\Delta\alpha$	—	1.1	2.5	dB
2010.0 ... 2070.0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1.2	2.5	dB
2010.0 ... 2070.0 MHz					
Differential to common mode ratio ($ S_{dd21}/S_{cd21} $)		16.0	19.0	—	dB
2010.0 ... 2070.0 MHz					
Input return loss		6.0	8.0	—	dB
Output return loss		6.0	9.0	—	dB
Attenuation	α				
50.0 ... 900.0 MHz		35	45	—	dB
1180.0 ... 1650.0 MHz		30	40	—	dB
1650.0 ... 1710.0 MHz		30	35	—	dB
2140.0 ... 5000.0 MHz		16	20	—	dB
Group delay ripple (p-p)		—	15	35	ns
2010.0 ... 2070.0 MHz					



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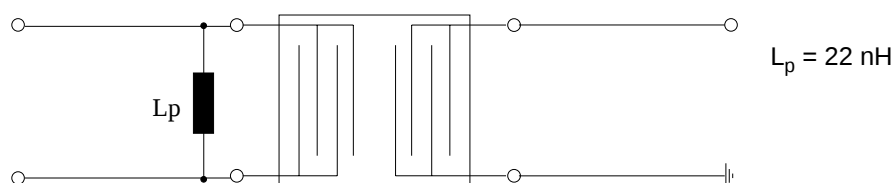
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Matching Network (element values depend on PCB layout)

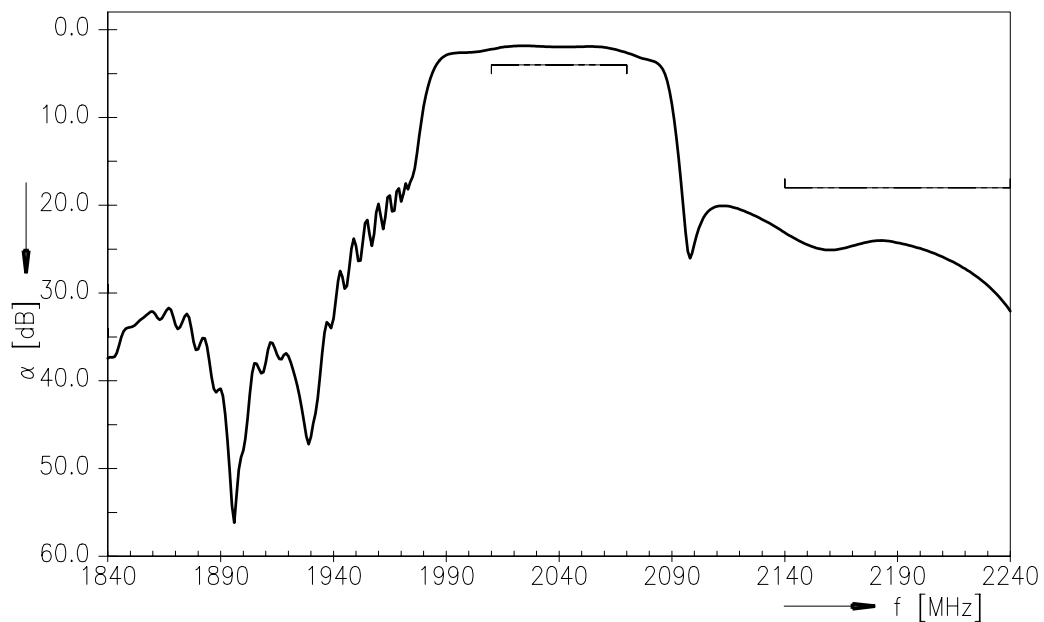


Maximum ratings

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 2010.0 ... 2070.0 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.



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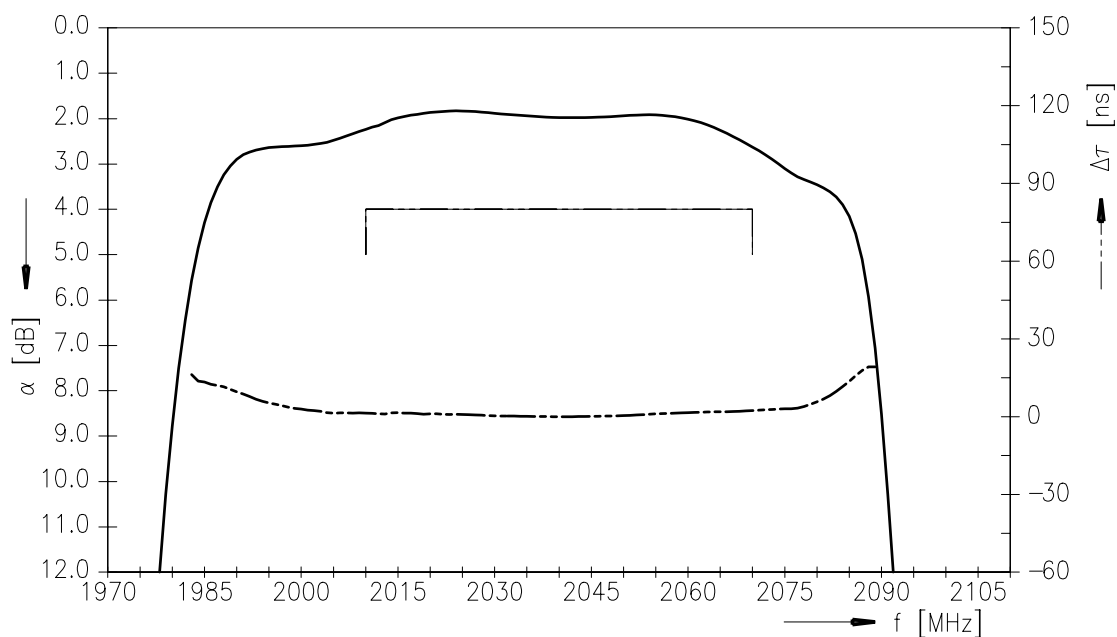
SAW RF low loss filter

2040.00 MHz

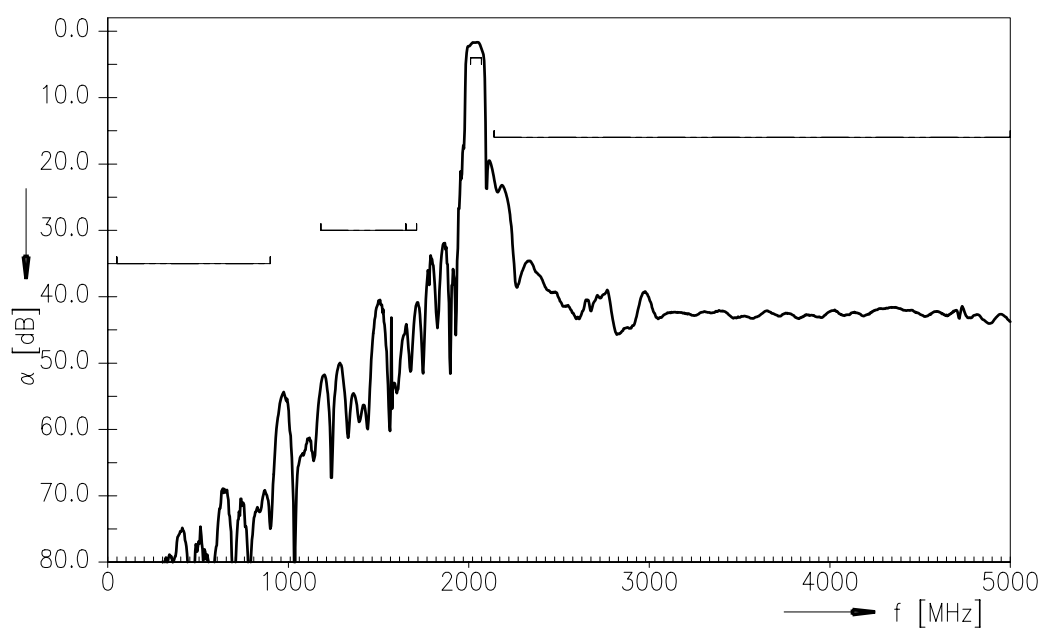
Data sheet



Transfer function (passband)



Transfer function (wideband)





SAW Components	B1668
SAW RF low loss filter	2040.00 MHz
Data sheet	SMD

References

Type	B1668
Ordering code	B39212-B1668-U510
Marking and package	C61157-A7-A68
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B1668_NB.s3p B1668_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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