



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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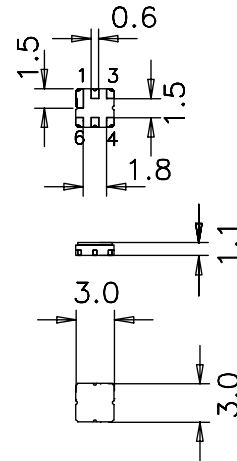
Data sheet


Application

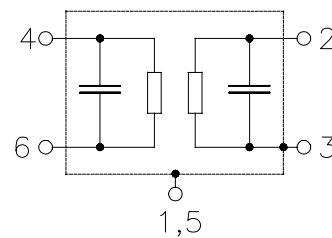
- Low-loss RF filter for digital video
- Impedance transformation from 200 Ω to 50 Ω
- Balanced to unbalanced operation
- Usable passband 60.0 MHz


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


Pin configuration

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



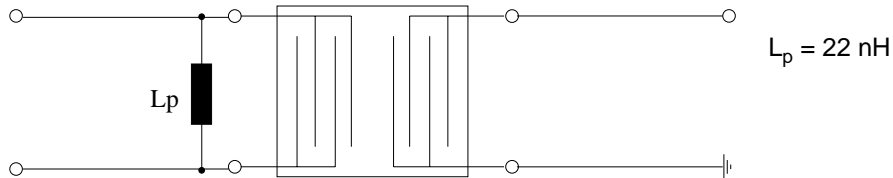
Data sheet

Characteristics

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

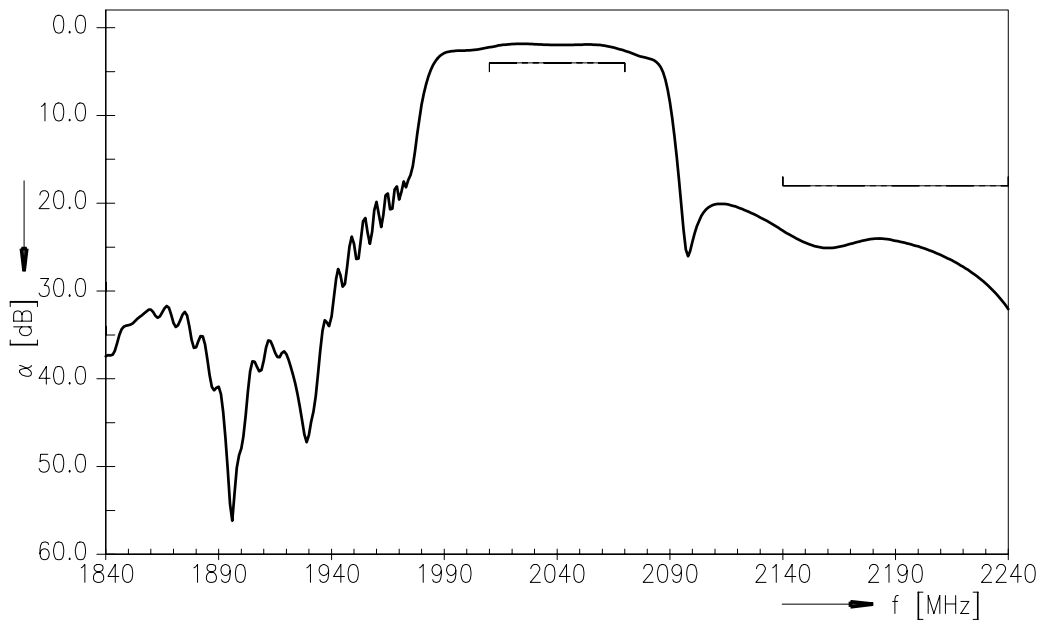
		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	2040.00	—	MHz
Maximum insertion attenuation 2010.0 ... 2070.0 MHz	α_{\max}	—	3.0	4.0	dB
Amplitude ripple in any 30MHz band (p-p) 2010.0 ... 2070.0 MHz	$\Delta\alpha$	—	1.1	2.5	dB
Amplitude ripple (p-p) 2010.0 ... 2070.0 MHz	$\Delta\alpha$	—	1.2	2.5	dB
Differential to common mode ratio ($ S_{dd21}/S_{cd21} $) 2010.0 ... 2070.0 MHz		16.0	19.0	—	dB
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) 2010.0 ... 2070.0 MHz		—	15	35	ns

Data sheet


Matching Network (element values depend on PCB layout)

Maximum ratings

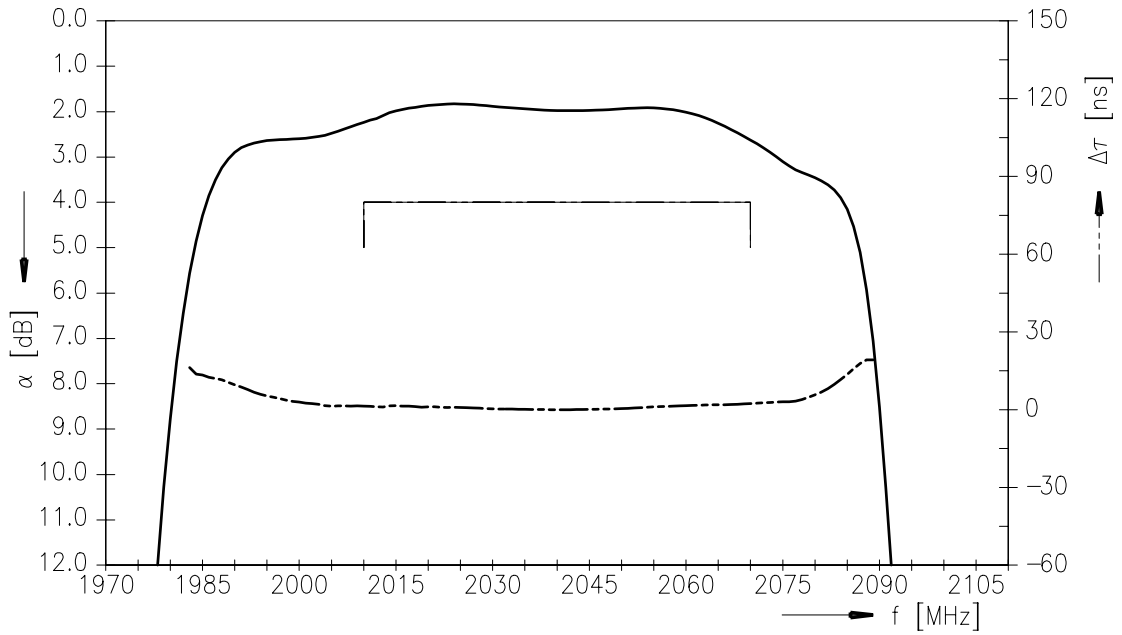
Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 1 pulse
Input power at 2010.0 ...2070.0 MHz	P _{IN}	0	dBm	source impedance 200 Ω

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

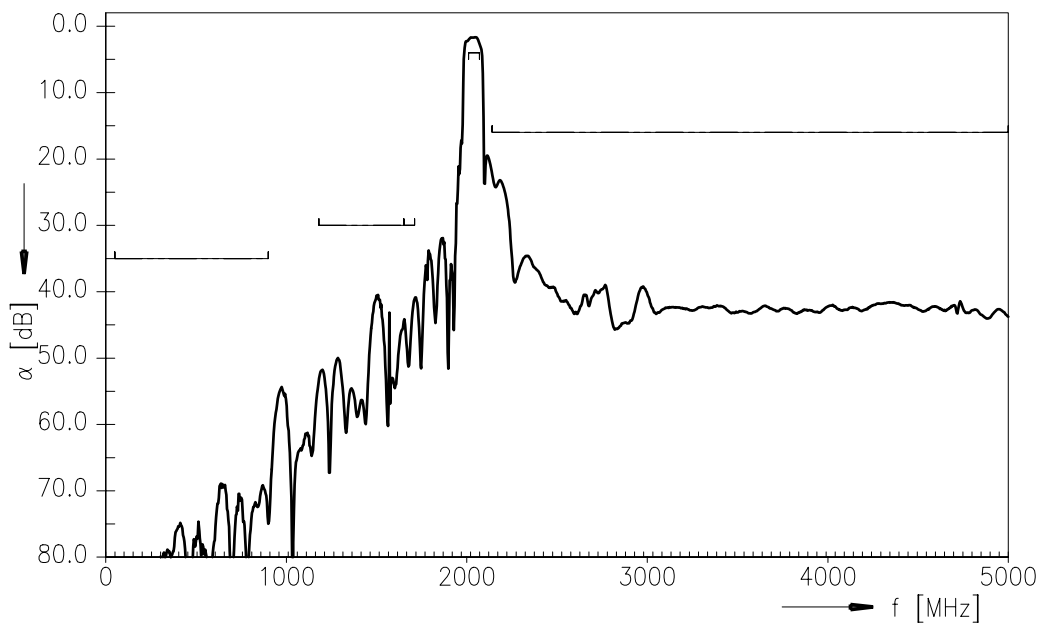
Transfer function




Transfer function (passband)



Transfer function (wideband)



SAW Components	B1668
SAW RF low loss filter	2040.00 MHz

Data sheet



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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