



SAW Components

SAW filter

UMTS RF Filter

Series/type:	B3669
Ordering code:	B39212B3669U410

Date:	June 15, 2012
Version:	2.2

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SAW Components

B3669

SAW filter

2140.00 MHz

Data sheet



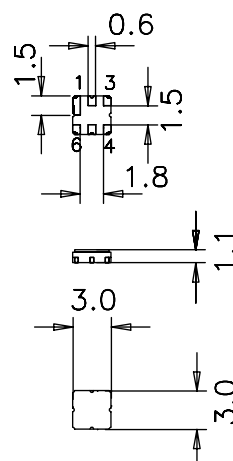
Application

- Low-loss RF filter for UMTS system
- Unbalanced to Unbalanced operation
- Usable passband of 60 MHz
- No matching required for operation at 50Ω



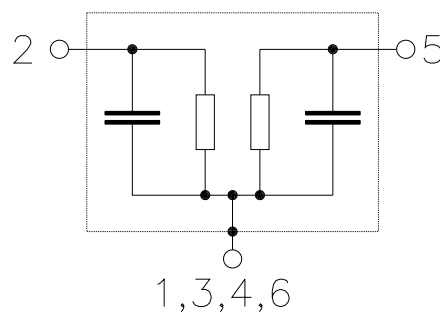
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitive Level 1**
- Filter surface passivated



Pin configuration

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



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Characteristics

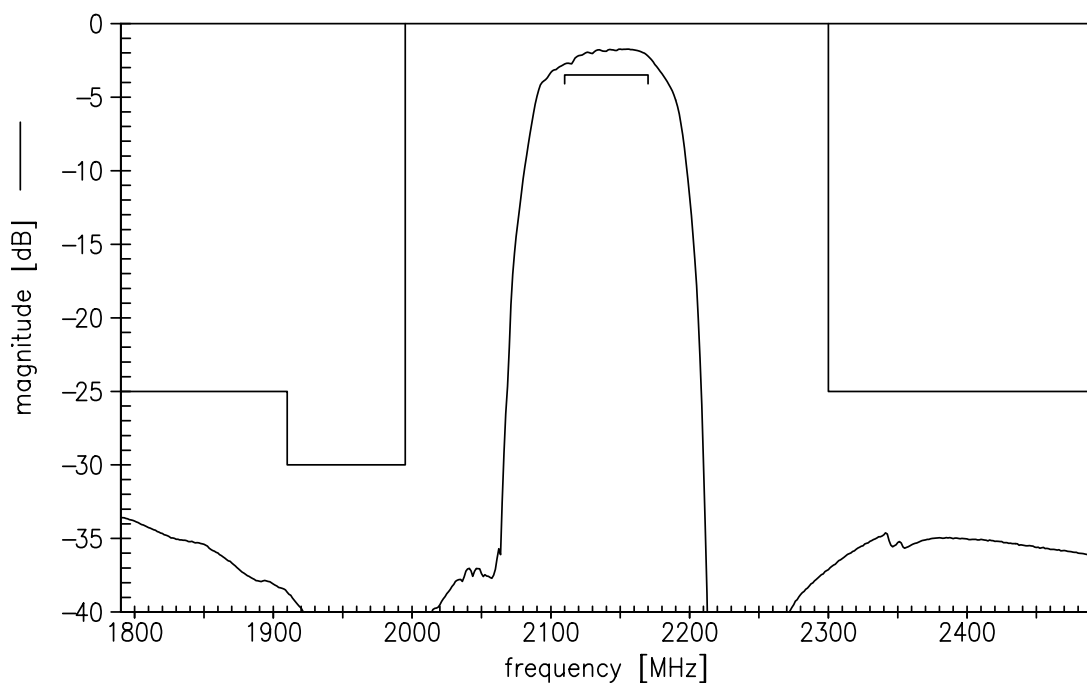
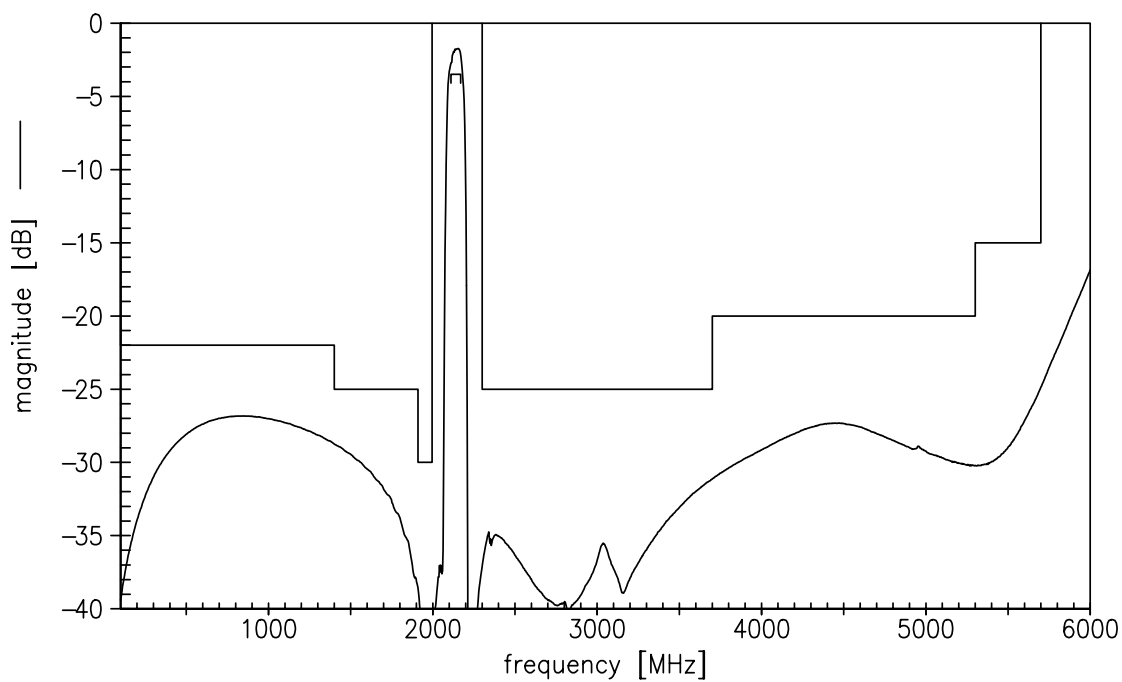
Temperature range for specification: $T = -40\text{ }^{\circ}\text{C to }+95\text{ }^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
Centre frequency	f_C	—	2140.00	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	3.0	3.5	dB
2110.0 ... 2170.0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1.0	1.5	dB
2110.0 ... 2170.0 MHz					
Return loss					
Input 2110.0 ... 2170.0 MHz		9.0	11.0	—	dB
Output 2110.0 ... 2170.0 MHz		9.0	11.0	—	dB
Relative attenuation	α				
50.0 ... 1400.0 MHz		22.0	27.0	—	dB
1400.0 ... 1910.0 MHz		25.0	28.0	—	dB
1910.0 ... 1995.0 MHz		30.0	38.0	—	dB
2300.0 ... 3700.0 MHz		25.0	30.0	—	dB
3700.0 ... 5300.0 MHz		20.0	25.0	—	dB
5300.0 ... 5700.0 MHz		15.0	18.0	—	dB


Maximum ratings

Operable temperature range	T	−40/+95	°C	
Storage temperature range	T _{stg}	−40/+95	°C	
DC voltage	V _{DC}	0	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 1 pulse
Input power				
2110.0 ... 2170.0 MHz	P _{IN}	24.5	dBm	continuous wave, 2 hrs, 85°C
2110.0 ... 2170.0 MHz	P _{IN}	18.0	dBm	continuous wave, 1000 hrs, 85°C
2110.0 ... 2170.0 MHz	P _{IN}	13.0	dBm	continuous wave, 100000 hrs, 85°C
2110.0 ... 2170.0 MHz	P _{IN}	24.0	dBm	continuous wave, 2 hrs, 95°C
2110.0 ... 2170.0 MHz	P _{IN}	17.0	dBm	continuous wave, 1000 hrs, 95°C
2110.0 ... 2170.0 MHz	P _{IN}	12.0	dBm	continuous wave, 100000 hrs, 95°C

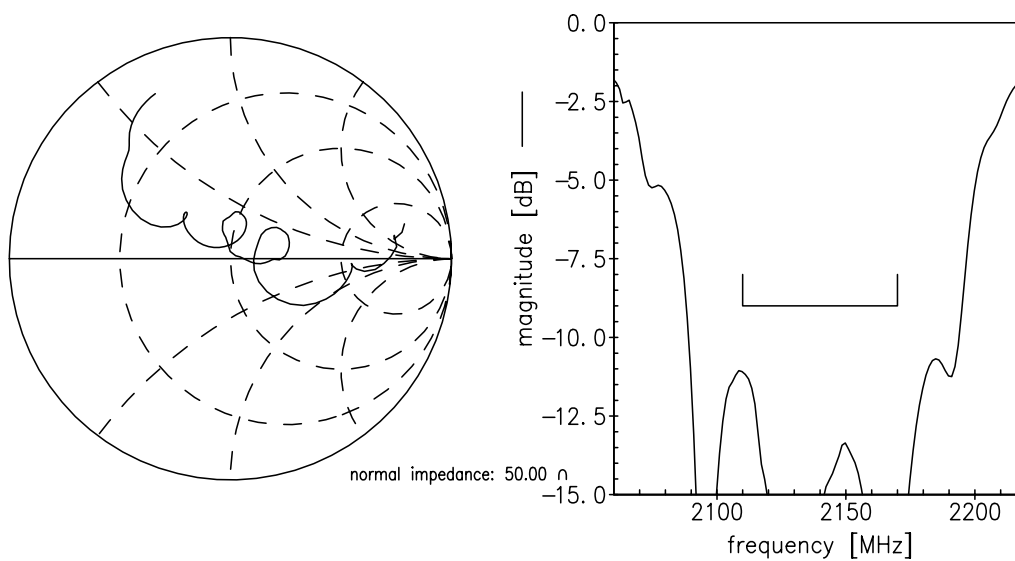
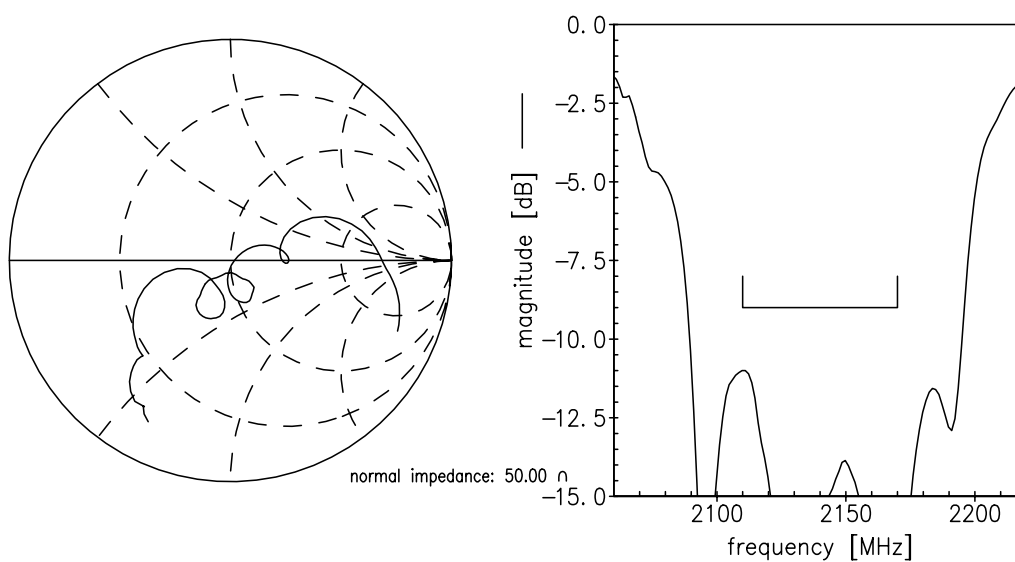
¹⁾ acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.

Transfer function

Transfer function (wideband)


Data sheet



Smith charts

 S_{11} function

 S_{22} function


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2140.00 MHz

Data sheet


References

Type	B3669
Ordering code	B39212B3669U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B3669_NB.s2p, B3669_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."
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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