



SAW Components

SAW filter

RF Base Station

Series/type:	B5114
Ordering code:	B39781B5114U410
Date:	Mar 19, 2009
Version:	2.0



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B5114

SAW filter

781.50 MHz

Data sheet



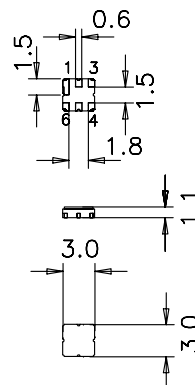
Application

- RF filter for base-station
- Unbalanced to unbalanced operation
- Low amplitude ripple
- Usable passband 11 MHz
- No matching required for operation at 50 Ω



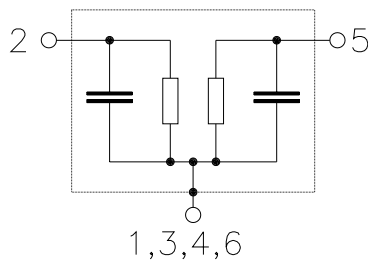
Features

- 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)**



Pin configuration

- 2 Input
- 5 Output
- 1,3,4,6 Case grounded



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



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Characteristics

Temperature range for specification: $T = -40$ to $85\text{ }^{\circ}\text{C}$
Terminating source impedance: $Z_S = 50\ \Omega$
Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	781.50	—	MHz
Maximum insertion attenuation	α_{\max}				
	$f_C \pm 5.5\text{ MHz}$	—	1.6	2.5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	$f_C \pm 5.5\text{ MHz}$	—	0.6	1.5	dB
Group delay ripple (p-p)	$\Delta\tau$				
	$f_C \pm 5.5\text{ MHz}$	—	48	70	ns
Mean value of absolute group delay	$\bar{\tau}$				
	$f_C \pm 5.5\text{ MHz}$	0	35	70	ns
Return loss					
	$f_C \pm 5.5\text{ MHz}$	10	16	—	dB
Attenuation	α				
	746 MHz ... 757 MHz	20	28	—	dB
	758 MHz ... 765 MHz	9	23	—	dB
	851 MHz ... 894 MHz	30	44	—	dB



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Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{sta}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
ESD voltage	V _{ESD}	100 ¹⁾	V	machine model, 1 pulse
	V _{ESD}	275 ²⁾	V	human machine model, 1 pulse
Input power				
746.0 ... 757.0	P _{IN}	15	dBm	CW

¹⁾ acc. to JESD22-A0115A (machine model), 1 negative & a positive pulse.

²⁾ acc. to JESD22-A0114B (human body model), 1 negative & positive pulse.



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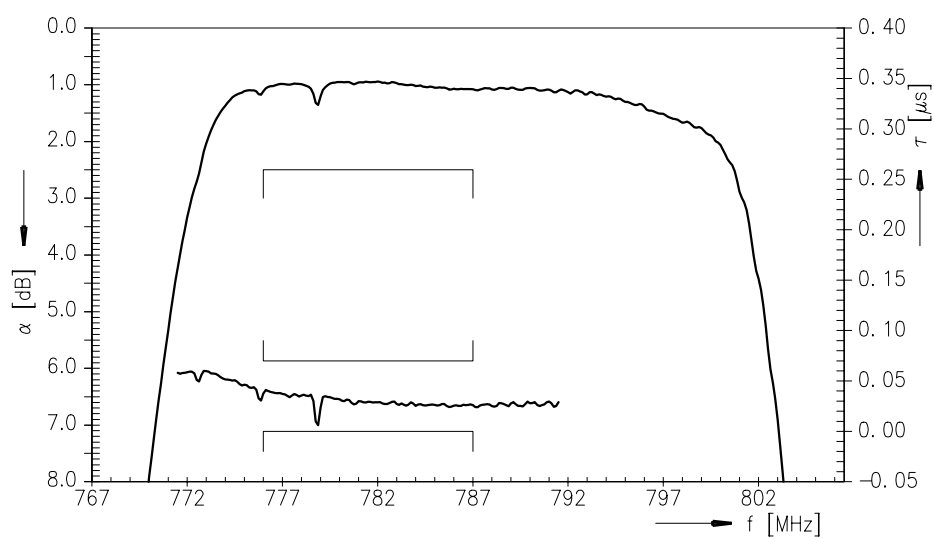
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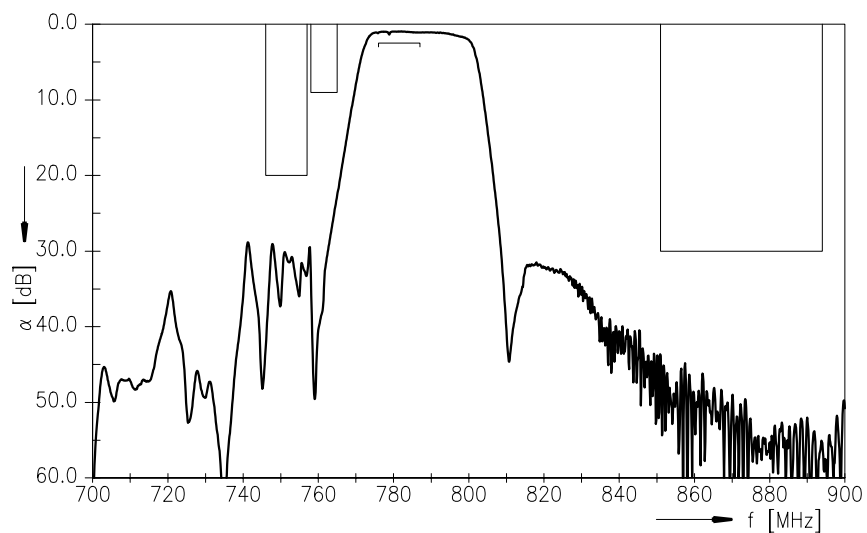
Data sheet



Transfer function



Transfer function (wideband)



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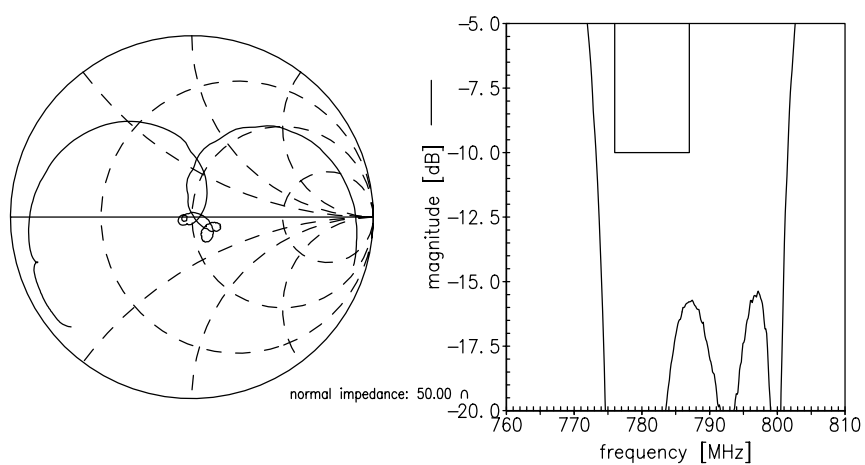
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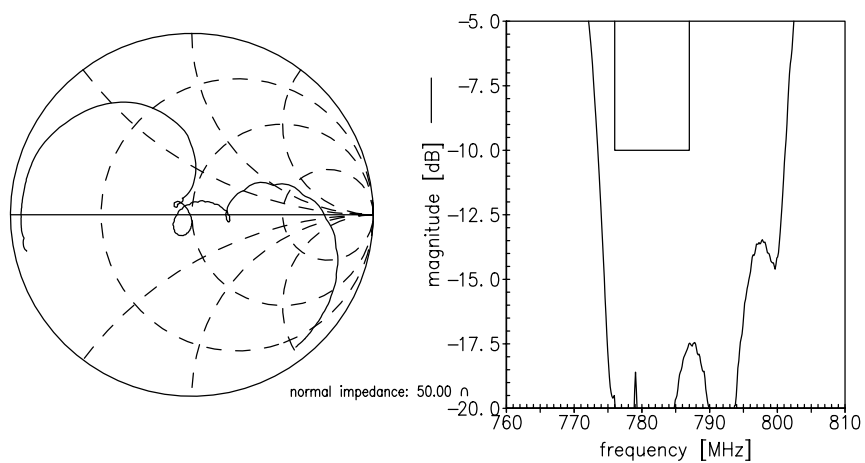


Smith charts

S_{11} function



S_{22} function



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**References**

Type	B5114
Ordering code	B39781B5114U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B5114_NB.s2p B5114_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 maxi- mum concentration values for certain hazardous substances in electrical and electronic equipment."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com.

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