



SAW Components

SAW filter

RF Base Station

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



SAW Components	B5114
SAW filter	781.50 MHz

Data sheet



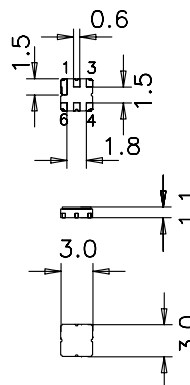
Application

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



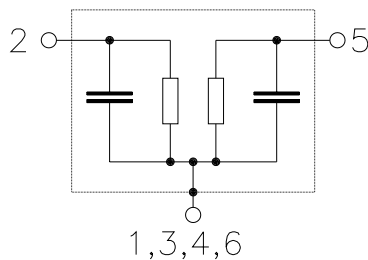
Features

- 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	$\alpha_{\max}$				
	$f_C \pm 5.5\text{ MHz}$	—	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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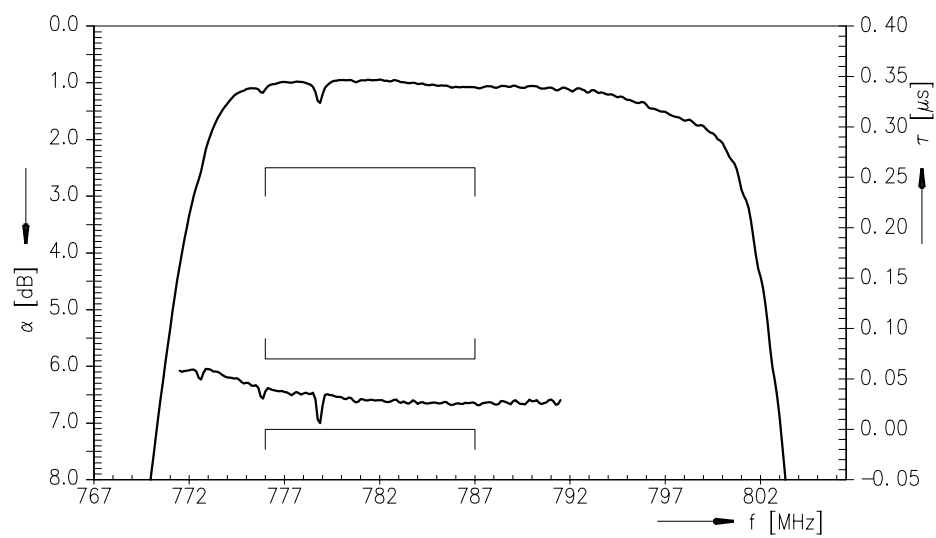
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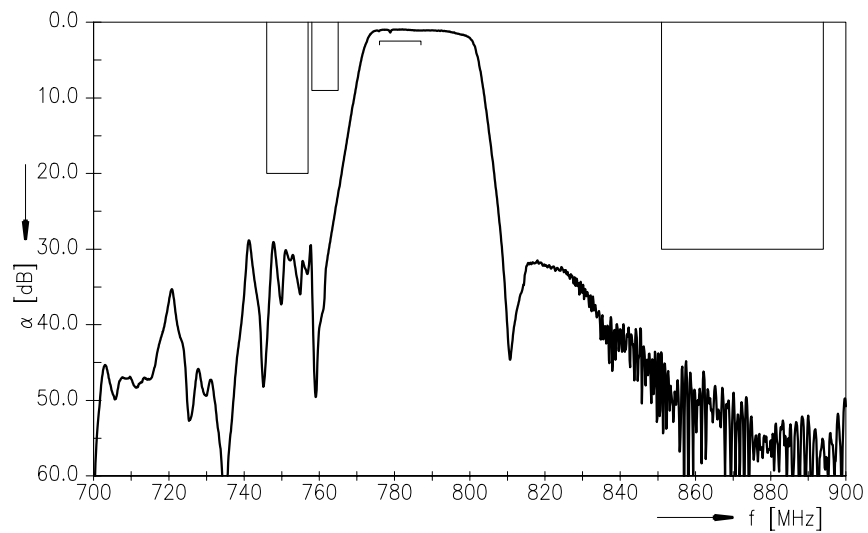
Data sheet



Transfer function



Transfer function (wideband)



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SAW filter

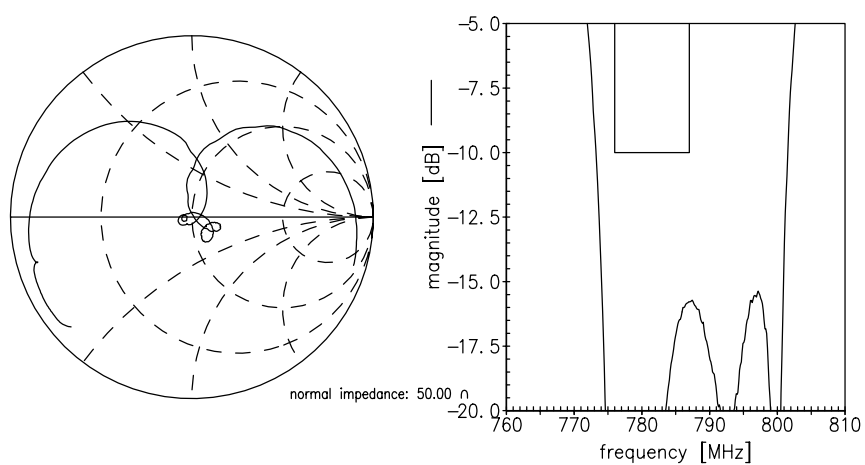
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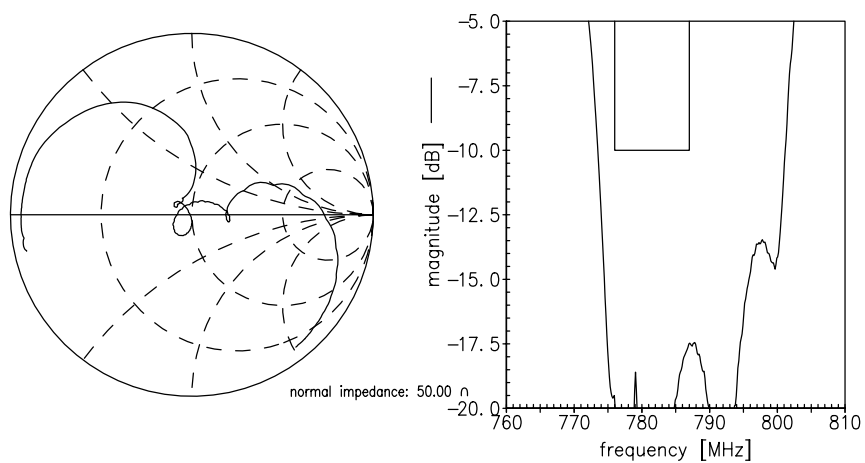


Smith charts

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



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