SAW Components

SAW filter

RF Base Station

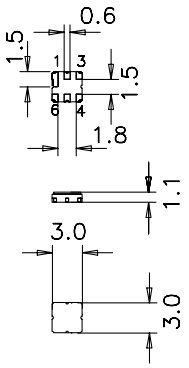
Series/type:	**B5114**
Ordering code:	**B39781B5114U410**
Date:	Mar 19, 2009
Version:	2.0

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

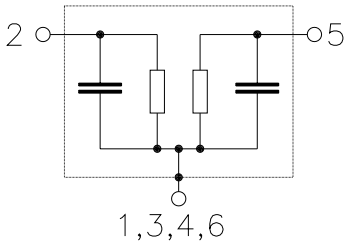
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



Pin configuration

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



Data sheet SMD

Characteristics

Temperature range for specification: T = –40 to 85 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	781.50	—	MHz
Maximum insertion attenuation	α_{max}				
f_C ± 5.5 MHz		—	1.6	2.5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
f_C ± 5.5 MHz		—	0.6	1.5	dB
Group delay ripple (p-p)	$\Delta\tau$				
f_C ± 5.5 MHz		—	48	70	ns
Mean value of absolute group delay	$\bar{\tau}$				
f_C ± 5.5 MHz		0	35	70	ns
Return loss					
f_C ± 5.5 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

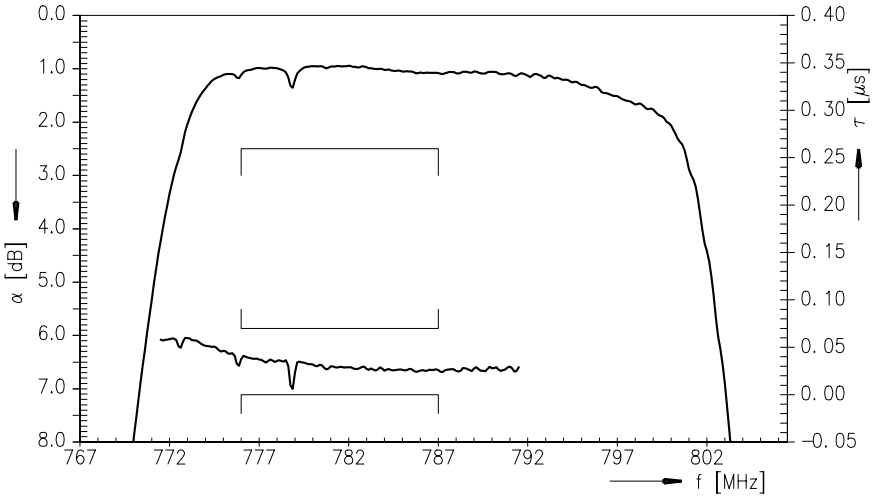
Maximum ratings

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}	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

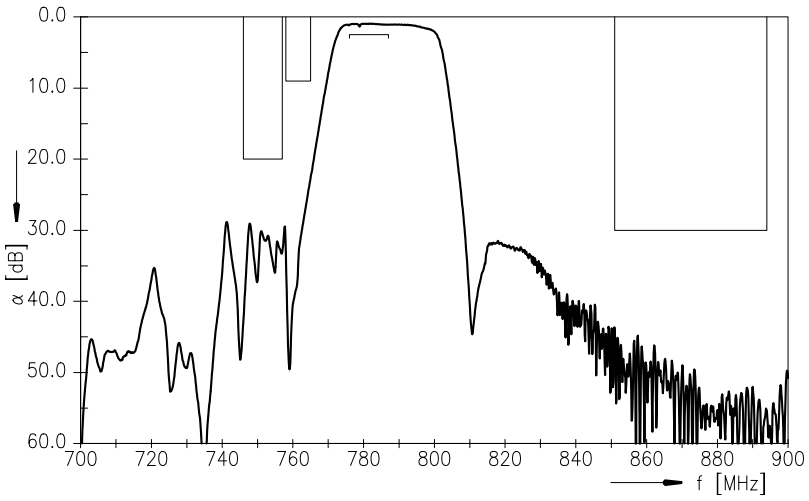
1) acc. to JESD22-A0115A (machine model), 1 negativa & a positive pulse.

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

Transfer function

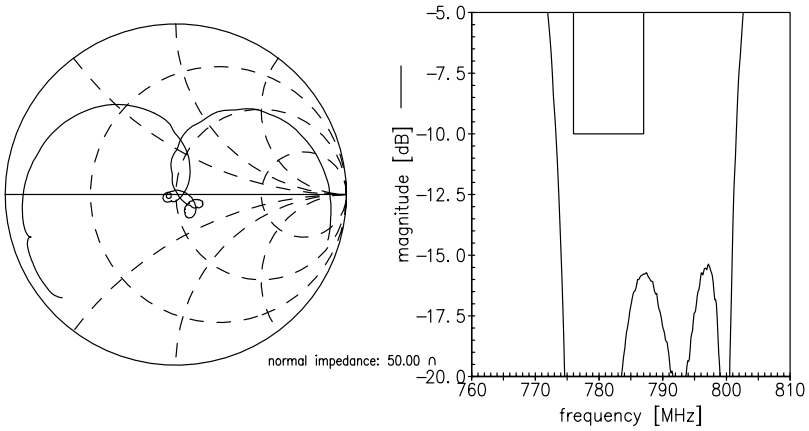


Transfer function (wideband)

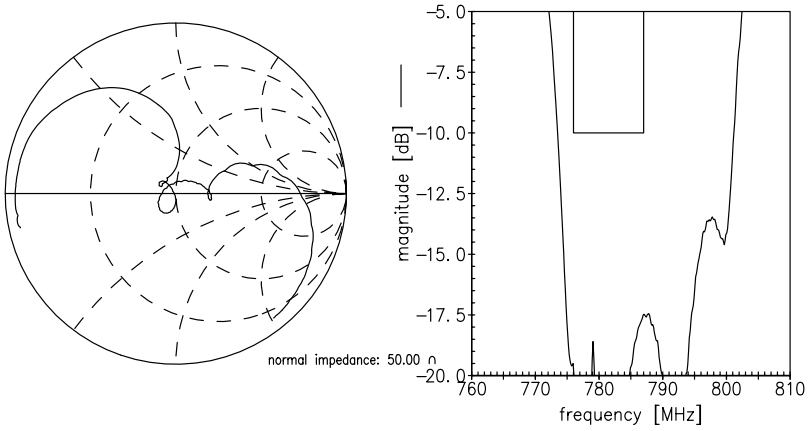


Smith charts

S_{11} function



S_{22} function



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."

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