



SAW Components

SAW filter

WCDMA/UMTS Band VII

Series/type:	B5115
Ordering code:	B39252B5115U410
Date:	June 01, 2009
Version:	2.1



Data sheet



Application

- Low-loss RF filter for WCDMA/UMTS band VII base-station
- Low amplitude ripple
- No matching required for operation at 50Ω
- Usable passband 70 MHz



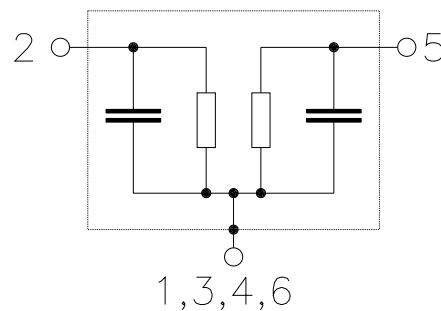
Features

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



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



Data sheet



Characteristics

Temperature range for specification: T = -10 °C 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	—	2535.00	—	MHz
Maximum insertion attenuation	α _{max}	—	2.4	3.0	dB
2500 ... 2570 MHz					
Amplitude ripple (p-p)	Δα	—	0.6	1.4	dB
2500 ... 2570 MHz					
VSWR					
Input	2500 ... 2570 MHz	—	1.7:1	1.9:1	
Output	2500 ... 2570 MHz	—	1.7:1	2.0:1	
Attenuation	α				
	1 ... 225 MHz	30	38	—	dB
	225 ... 2070 MHz	20	27	—	dB
	2070 ... 2170 MHz	33	39	—	dB
	2170 ... 2260 MHz	27	33	—	dB
	2260 ... 2372 MHz	18	23	—	dB
	2372 ... 2450 MHz	12	15	—	dB
	2620 ... 2810 MHz	29	33	—	dB
	2810 ... 2900 MHz	27	33	—	dB
	2900 ... 3300 MHz	20	25	—	dB
	3300 ... 3500 MHz	18	23	—	dB



Data sheet



Characteristics

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

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	2535.00	—	MHz
Maximum insertion attenuation	α_{max}	—	2.4	3.3	dB
2500 ... 2570 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.6	1.6	dB
2500 ... 2570 MHz					
VSWR					
Input	2500 ... 2570 MHz	—	1.7:1	2.0:1	
Output	2500 ... 2570 MHz	—	1.7:1	2.0:1	
Attenuation	α				
1 ... 225 MHz		30	38	—	dB
225 ... 2070 MHz		20	27	—	dB
2070 ... 2170 MHz		33	39	—	dB
2170 ... 2260 MHz		27	33	—	dB
2260 ... 2372 MHz		18	23	—	dB
2372 ... 2450 MHz		12	15	—	dB
2620 ... 2810 MHz		29	33	—	dB
2810 ... 2900 MHz		27	33	—	dB
2900 ... 3300 MHz		20	25	—	dB
3300 ... 3500 MHz		18	23	—	dB



SAW Components **B5115**

SAW filter **2535.00 MHz**

Data sheet



Maximum ratings

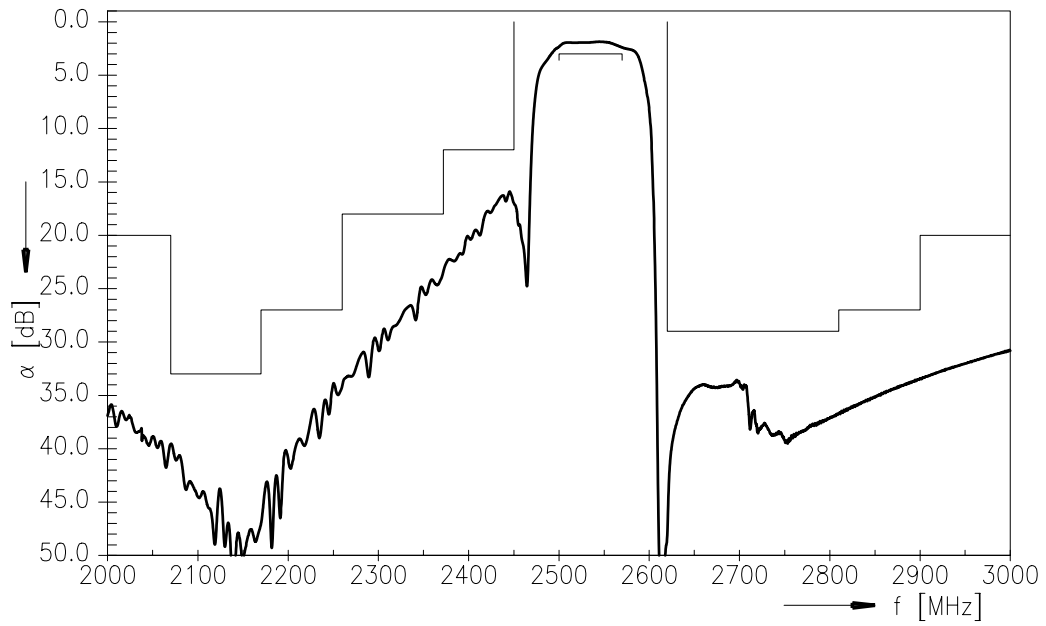
Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 1 pulse
		150 ²⁾	V	human body model, 1 pulse
Input power				
2500 ... 2570 MHz	P _{IN}	10	dBm	CW

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

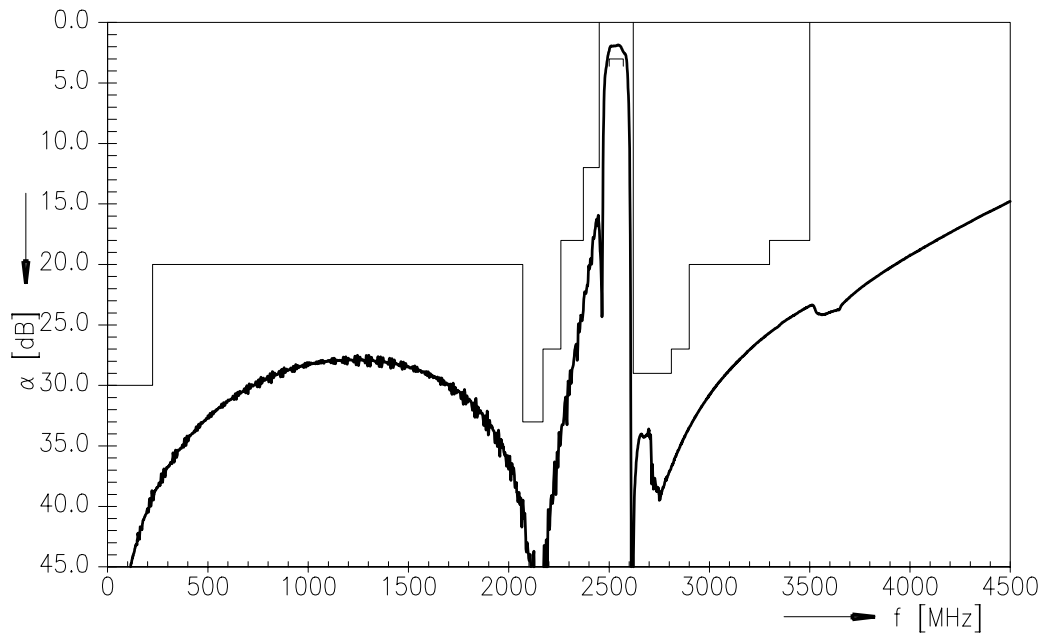
²⁾ acc. to JESD22-A114B (human body model), 1 negative & 1 positive pulse.



Transfer function



Transfer function (wideband)



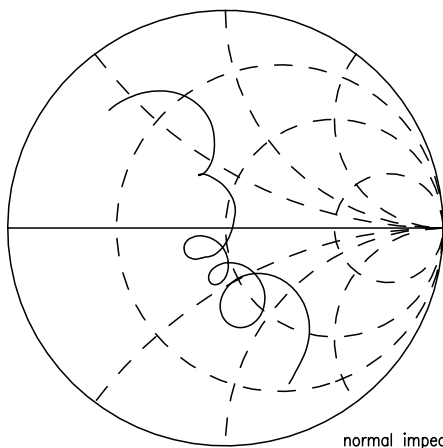


Data sheet

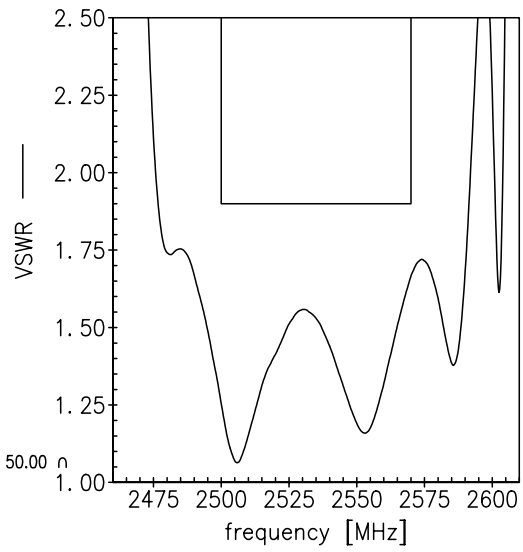


Smith charts

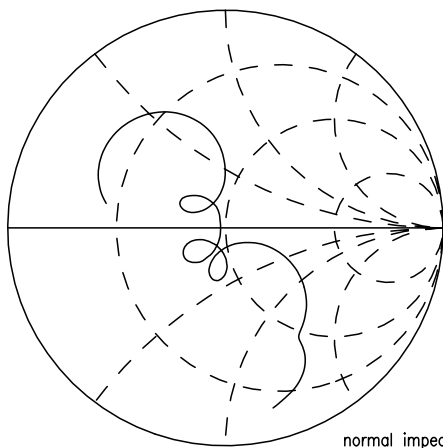
S₁₁ function



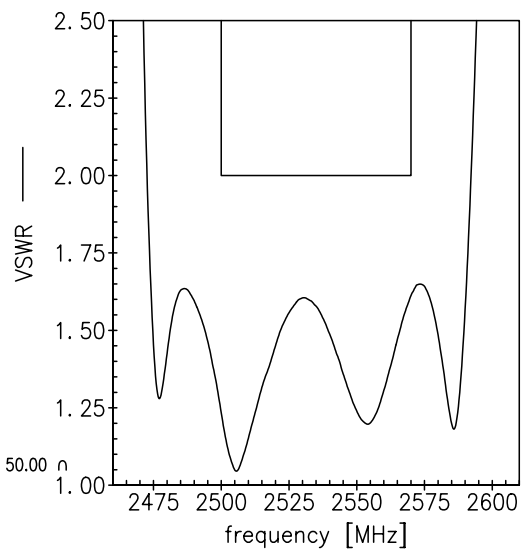
normal impedance: 50.00 Ω



S₂₂ function



normal impedance: 50.00 Ω



**SAW Components****B5115****SAW filter****2535.00 MHz**

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**References**

Type	B5115
Ordering code	B39252B5115U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B5115_NB.s2p B5115_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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