SAW Components

SAW filter
WCDMA/UMTS Band VII

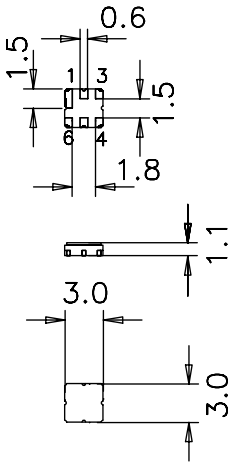
Series/type:	**B5115**
Ordering code:	**B39252B5115U410**
Date:	May 24, 2012
Version:	2.2

Application

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

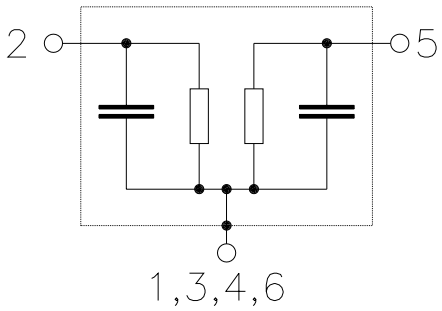
Features

- 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 Sensitivity Level 1
- Filter surface passivated



Pin configuration

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



Data Sheet SMD

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	—	2535.0	—	MHz
Maximum insertion attenuation			α_{max}				
2500	...	2570	MHz	—	2.4	3.0	dB
Amplitude ripple (p-p)			$\Delta\alpha$				
2500	...	2570	MHz	—	0.6	1.4	dB
VSWR							
Input 2500	...	2570	MHz	—	1.7:1	1.9:1	
Output 2500	...	2570	MHz	—	1.7:1	2.0:1	
Absolute Attenuation			α				
1.0	...	225.0	MHz	30	38	—	dB
225.0	...	2070.0	MHz	20	27	—	dB
2070.0	...	2170.0	MHz	33	39	—	dB
2170.0	...	2260.0	MHz	27	33	—	dB
2260.0	...	2372.0	MHz	18	23	—	dB
2372.0	...	2450.0	MHz	12	15	—	dB
2450.0	...	2465.0	MHz	6	16	—	dB
2465.0	...	2478.5	MHz	3	4.5	—	dB
2620.0	...	2810.0	MHz	29	33	—	dB
2810.0	...	2900.0	MHz	27	33	—	dB
2900.0	...	3300.0	MHz	20	25	—	dB
3300.0	...	3500.0	MHz	18	23	—	dB
3500.0	...	5000.0	MHz	4	10	—	dB

Data Sheet SMD

Characteristics

Temperature range for specification: T = -40 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

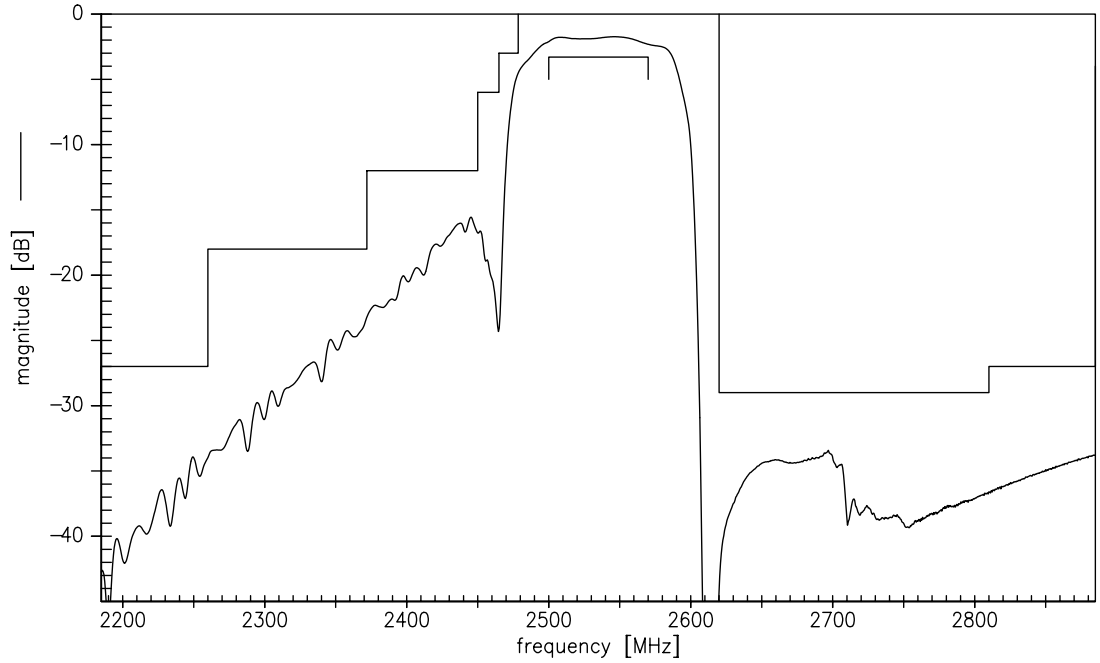
				min.	typ. @ 25 ˚C	max.	
Center frequency			f_C	—	2535.0	—	MHz
Maximum insertion attenuation			α_{max}				
2500	...	2570	MHz	—	2.4	3.3	dB
Amplitude ripple (p-p)			$\Delta\alpha$				
2500	...	2570	MHz	—	0.6	1.6	dB
VSWR							
Input 2500	...	2570	MHz	—	1.7:1	2.0:1	
Output 2500	...	2570	MHz	—	1.7:1	2.0:1	
Absolute Attenuation			α				
1.0	...	225.0	MHz	30	38	—	dB
225.0	...	2070.0	MHz	20	27	—	dB
2070.0	...	2170.0	MHz	33	39	—	dB
2170.0	...	2260.0	MHz	27	33	—	dB
2260.0	...	2372.0	MHz	18	23	—	dB
2372.0	...	2450.0	MHz	12	15	—	dB
2450.0	...	2465.0	MHz	6	16	—	dB
2465.0	...	2478.5	MHz	3	4.5	—	dB
2620.0	...	2810.0	MHz	29	33	—	dB
2810.0	...	2900.0	MHz	27	33	—	dB
2900.0	...	3300.0	MHz	20	25	—	dB
3300.0	...	3500.0	MHz	18	23	—	dB
3500.0	...	5000.0	MHz	4	10	—	dB

Maximum ratings

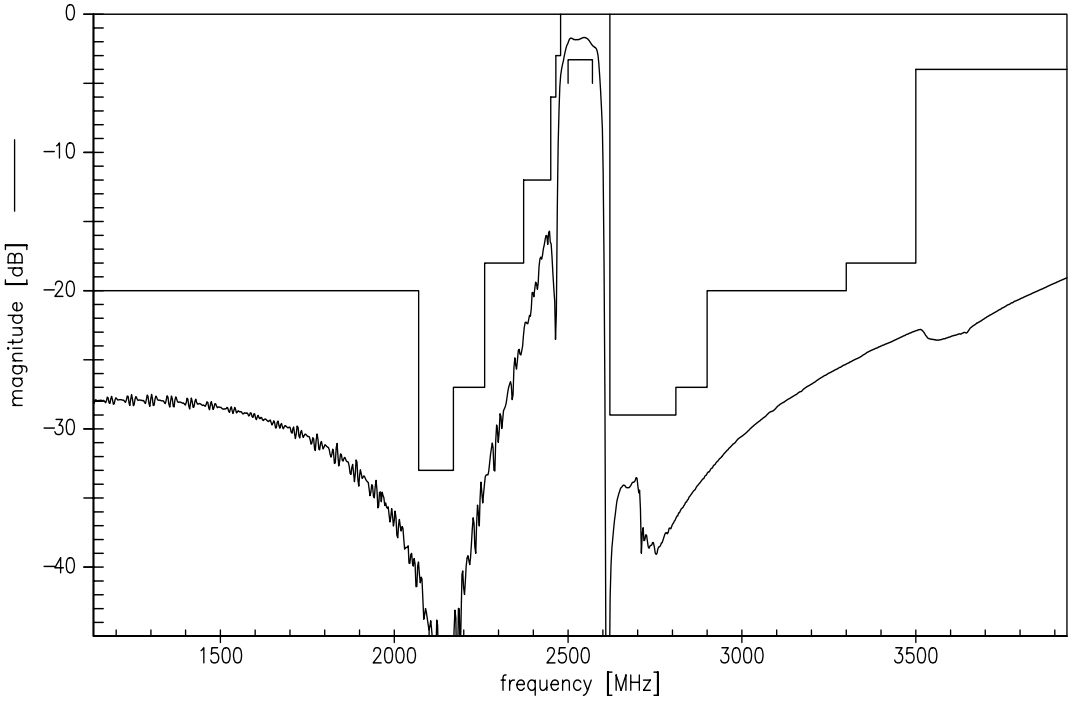
Operable temperature range	T	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	0	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 1 pulse
	V_{ESD}	150[2)]	V	human body model, 1 pulse
Input power at				
2500.0 ... 2570.0	P_{IN}	10	dBm	CW

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

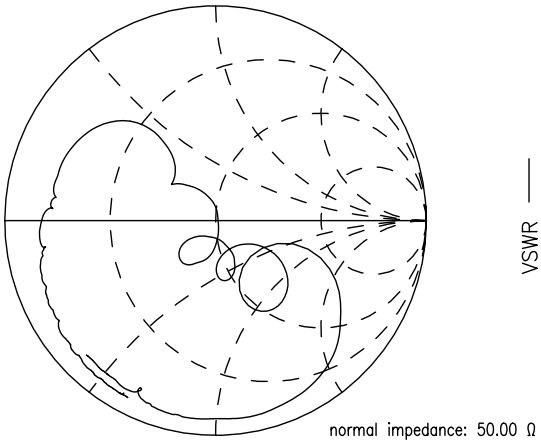


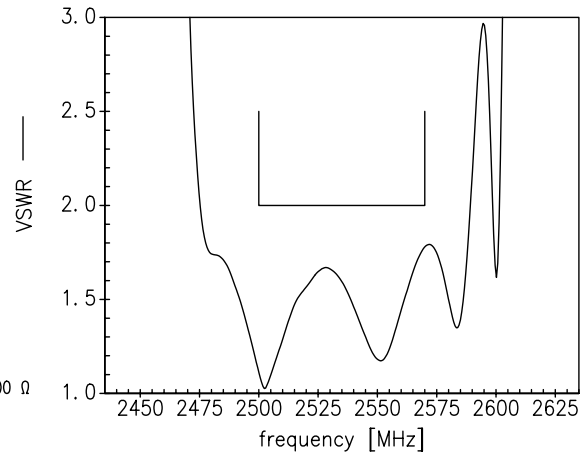
Transfer function (wideband)



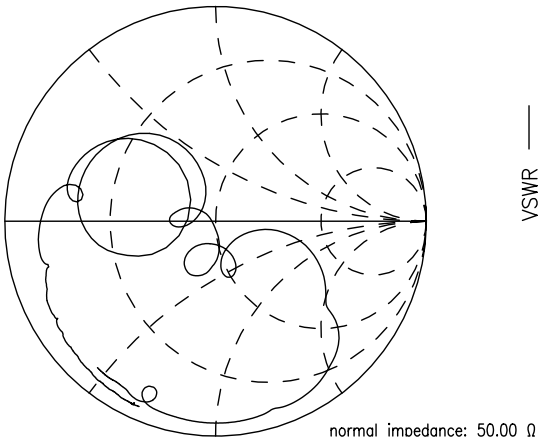
Smith charts

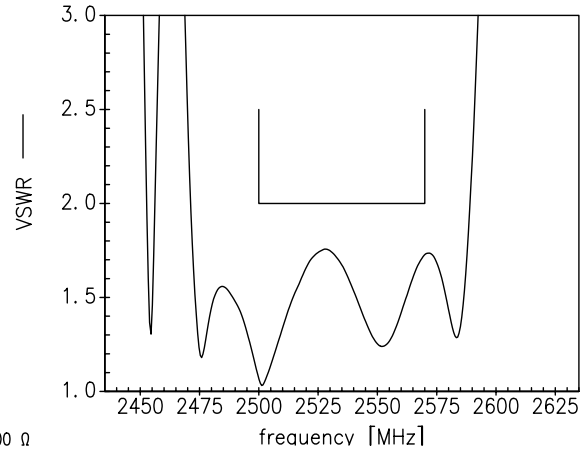
S_{11} function





S_{22} function





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."

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