# SAW Components

## SAW filter

RF Base Station

| | |
|---|---|
| **Series/type:** | **B5118** |
| **Ordering code:** | **B39801B5118U410** |
| Date: | January 12, 2010 |
| Version: | 2.0 |

EPCOS

| SAW Components | B5118 |
|---|---|
| **SAW filter** | **796.50 MHz** |

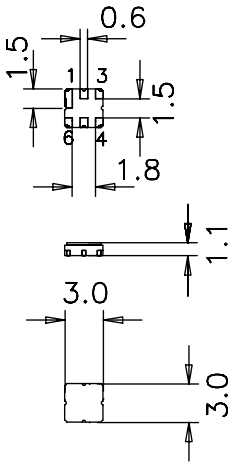
**Datasheet** SMD

### Application

- RF filter for Base station
- Unbalanced to Unbalanced operation
- Low amplitude ripple
- Usable passband 17 MHz

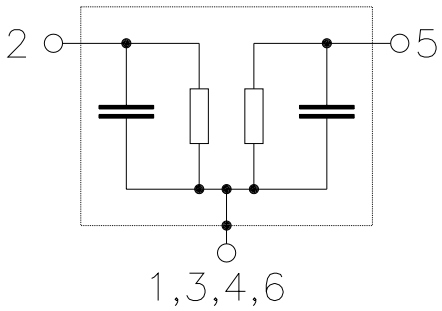

### Features

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



Datasheet SMD

## Characteristics

Temperature range for specification: T = -25 ˚C to +85 ˚C
Terminating source impedance: $Z_S$ = 50 Ω
Terminating load impedance: $Z_L$ = 50 Ω

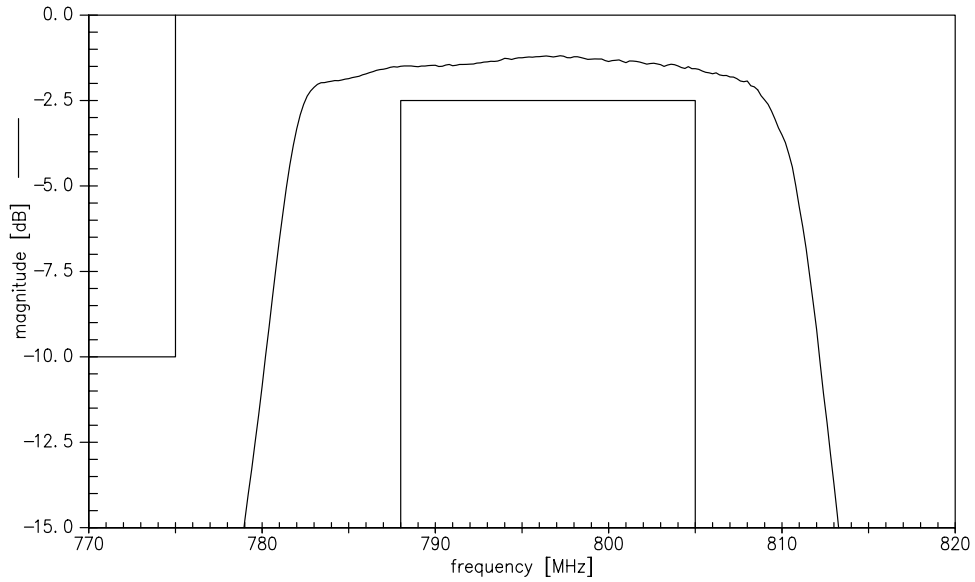
| | | min. | typ. @ 25 ˚C | max. | |
|---|---|---|---|---|---|
| **Center frequency** | $f_C$ | — | 796.5 | — | MHz |
| **Maximum insertion attenuation** | $\alpha_{max}$ | | | | |
| 788.0 ... 805.0 MHz | | — | 1.8 | 2.5 | dB |
| **Amplitude ripple** (p-p) | $\Delta\alpha$ | | | | |
| 788.0 ... 805.0 MHz | | — | 0.5 | 1.2 | dB |
| **Return loss** | | | | | |
| 788.0 ... 805.0 MHz | | 10.0 | 16.0 | — | dB |
| **Attenuation** | $\alpha$ | | | | |
| 746.0 ... 757.0 MHz | | 40 | 48 | — | dB |
| 758.0 ... 775.0 MHz | | 10 | 32 | — | dB |
| 851.0 ... 894.0 MHz | | 40 | 52 | — | dB |

## Maximum ratings

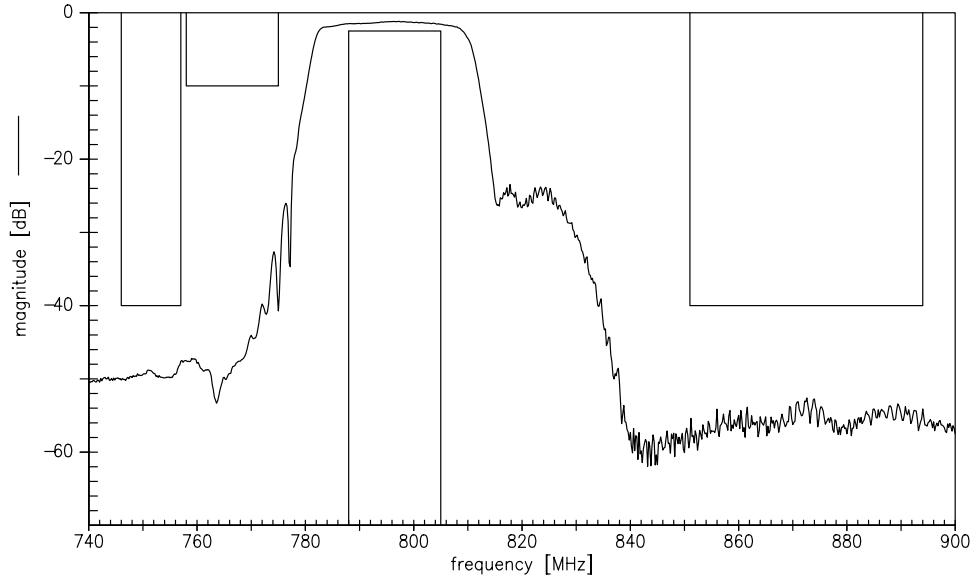
| | | | | |
|---|---|---|---|---|
| Operable temperature range | T | –40/+85 | °C | |
| Storage temperature range | $T_{stg}$ | –40/+85 | °C | |
| DC voltage | $V_{DC}$ | 5 | V | |
| ESD voltage | $V_{ESD}$ | 100[1)] | V | machine model, 1 pulse |
| Input power at | | | | |
| 788.0 ... 805.0 | $P_{IN}$ | 15 | dBm | CW |

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

**Transfer function**

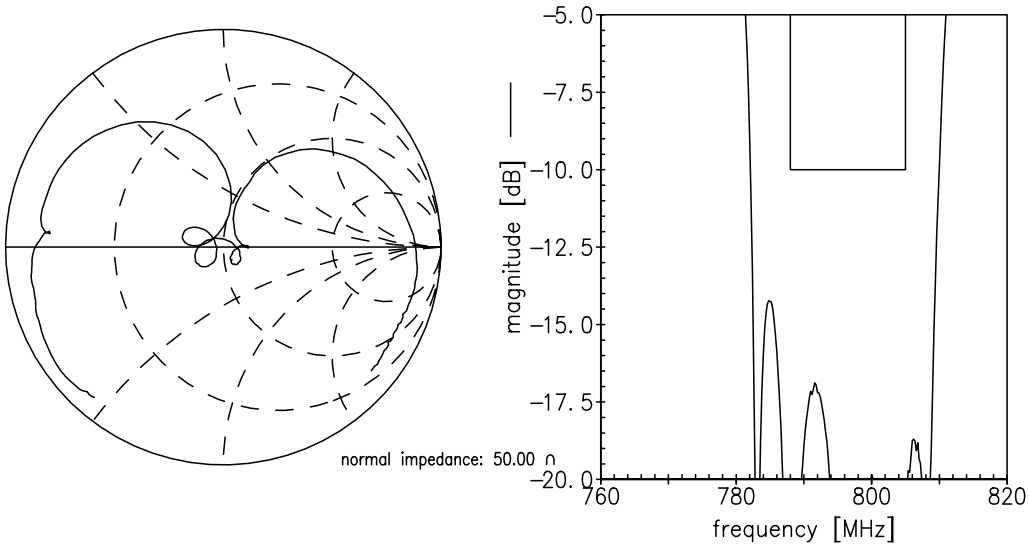



**Transfer function** (wideband)

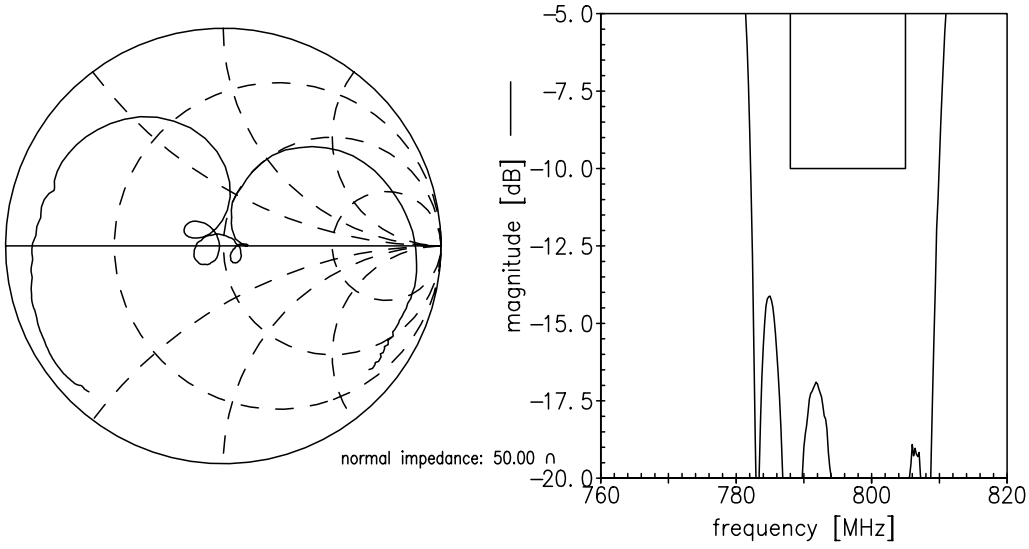


## Smith charts

### $S_{11}$ function




### $S_{22}$ function



## References

| | |
|---|---|
| **Type** | B5118 |
| **Ordering code** | B39801B5118U410 |
| **Marking and package** | C61157-A7-A67 |
| **Packaging** | F61074-V8168-Z000 |
| **Date codes** | L_1126 |
| **S-parameters** | B5118_NB.s2p<br>B5118_WB.s2p<br>See file header for port/pin assignment table |
| **Soldering profile** | S_6001 |
| **RoHS compatible** | defined as compatible with the following documents:<br>"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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