# SAW Components

## SAW RF filter for base stations

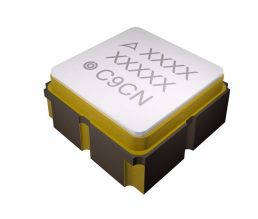
CDMA 450

| | |
|---|---|
| **Series/type:** | **B5363** |
| **Ordering code:** | **B39461B5363U510** |
| Date: | Mar 3, 2016 |
| Version: | 2.0 |

Data sheet SMD

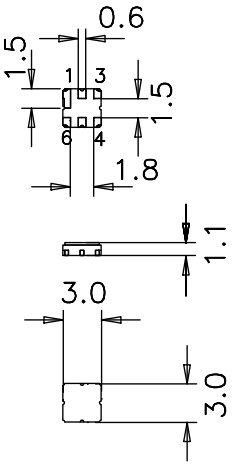
## Application

- RF filter for CDMA 450
- Unbalanced to balanced operation
- Usable passband 5 MHz
- No matching required



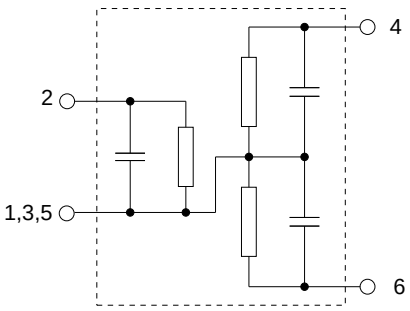

## Features

- Package size 3.0 x 3.0 x 1.1 mm$^3$
- Package code DCC6D
- 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**)
- **M**oisture **S**ensitivity **L**evel 1
- Filter surface passivated




## Pin configuration

| | | |
|---|---|---|
| ■ | 2 | Unbalanced input |
| ■ | 4, 6 | Balanced output |
| ■ | 1, 3, 5 | To be grounded |



Data sheet SMD

## Characteristics

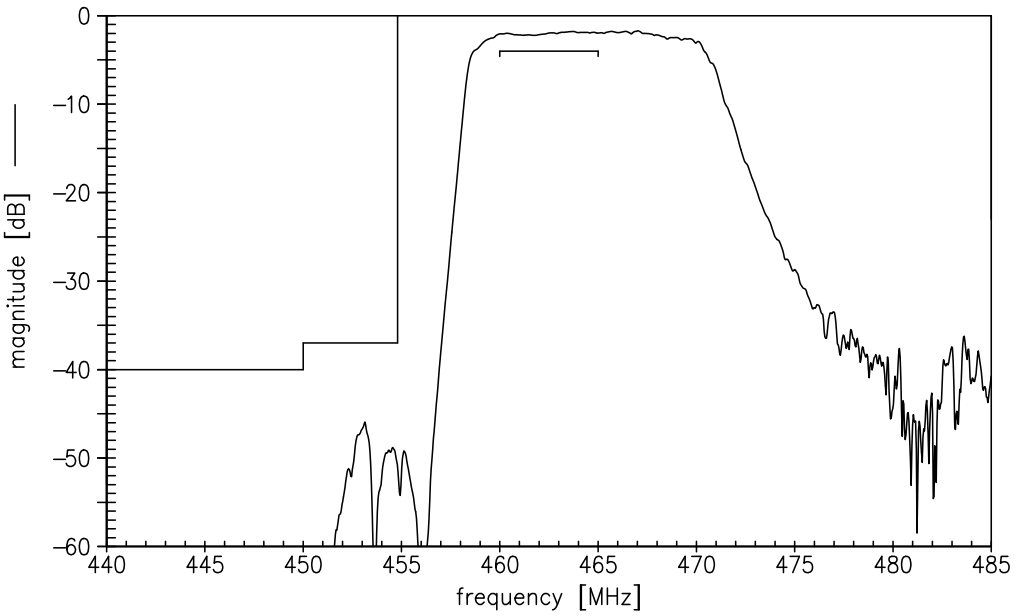
Temperature range for specification: T = –10 ˚C to +85 ˚C
Terminating source impedance: $Z_S$ = 50 Ω
Terminating load impedance: $Z_L$ = 100 Ω

| | | B5363 | | | |
|---|---|---|---|---|---|
| | | min. | typ. @ 25 ˚C | max. | |
| **Center frequency** | $f_C$ | — | 462.5 | — | MHz |
| **Maximum insertion attenuation** | $\alpha_{max}$ | | | | |
| 460.0 ... 465.0 MHz | | — | 2.4 | 4.0 | dB |
| **Amplitude ripple** (p-p) | $\Delta\alpha$ | | | | |
| 460.0 ... 465.0 MHz | | — | 1.1 | 2.3 | dB |
| **Input return loss** | | | | | |
| 460.0 ... 465.0 MHz | | 7.0 | 10.2 | — | dB |
| **Output return loss** | | | | | |
| 460.0 ... 465.0 MHz | | 7.0 | 10.5 | — | dB |
| **Absolute attenuation** | $\alpha_{abs}$ | | | | |
| 10.0 ... 440.0 MHz | | 53 | 63 | — | dB |
| 440.0 ... 450.0 MHz | | 40 | 64 | — | dB |
| 450.0 ... 454.8 MHz | | 37 | 48 | — | dB |
| 485.0 ... 495.0 MHz | | 23 | 39 | — | dB |
| 495.0 ... 530.0 MHz | | 42 | 55 | — | dB |
| 530.0 ... 1200.0 MHz | | 48 | 59 | — | dB |
| 1200.0 ... 1500.0 MHz | | 40 | 56 | — | dB |
| 1500.0 ... 2200.0 MHz | | 30 | 50 | — | dB |
| 2200.0 ... 3000.0 MHz | | 18 | 46 | — | dB |

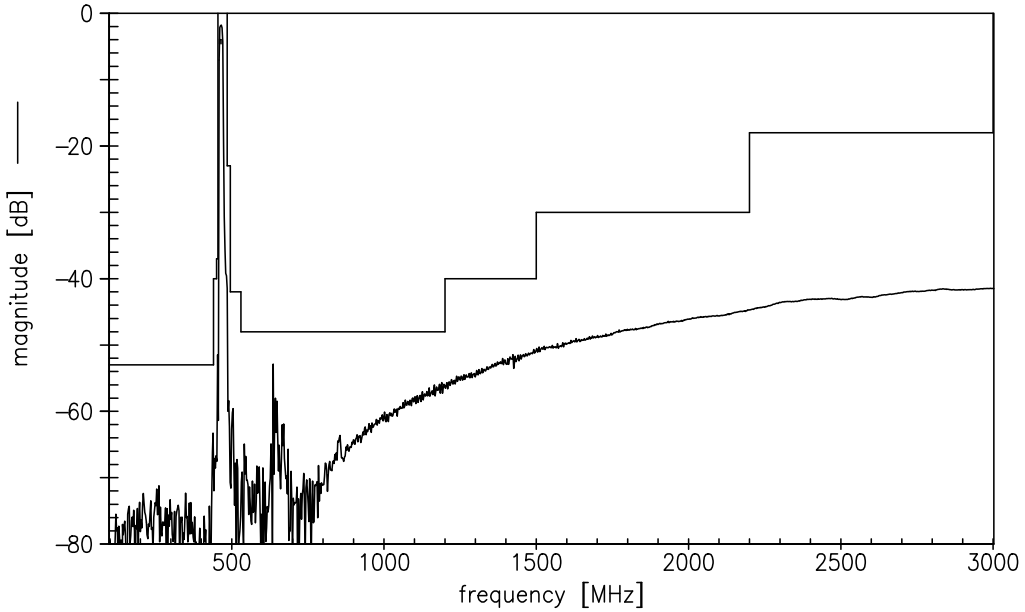
**Maximum ratings**

| | | | | |
|---|---|---|---|---|
| Operable temperature range | T | –45/+125 | ˚C | |
| Storage temperature range | $T_{stg}$ | –45/+125 | ˚C | |
| DC voltage | $V_{DC}$ | 5 | V | |
| Input power | $P_{IN}$ | | | |
| 450.0 ... 455.0 MHz | | 29 | dBm | cw, 5000 h, 55 ˚C |
| 460.0 ... 465.0 MHz | | 30 | dBm | cw, 5000 h, 55 ˚C |

**Transfer function** (S21, narrowband)

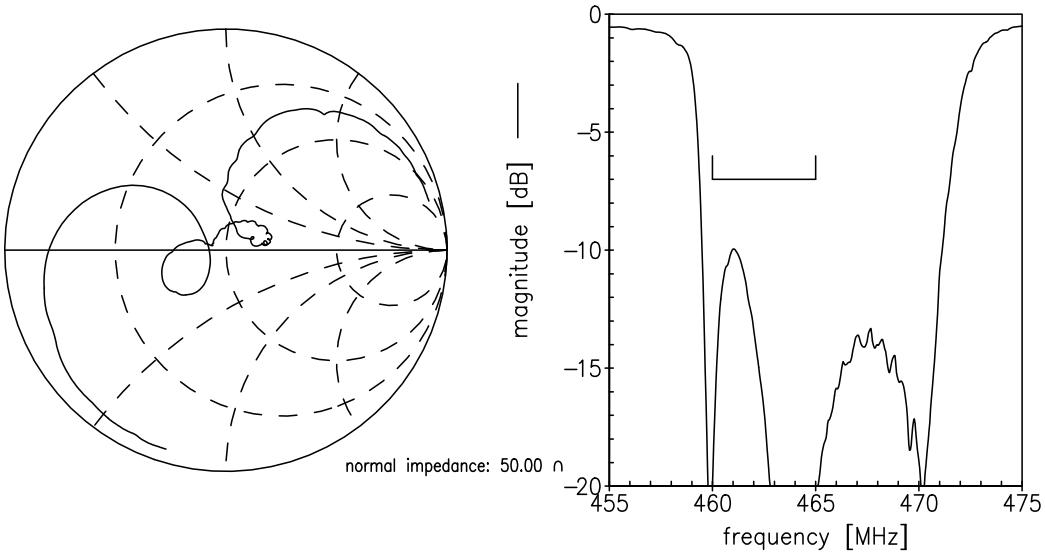



**Transfer function** (S21, wideband)

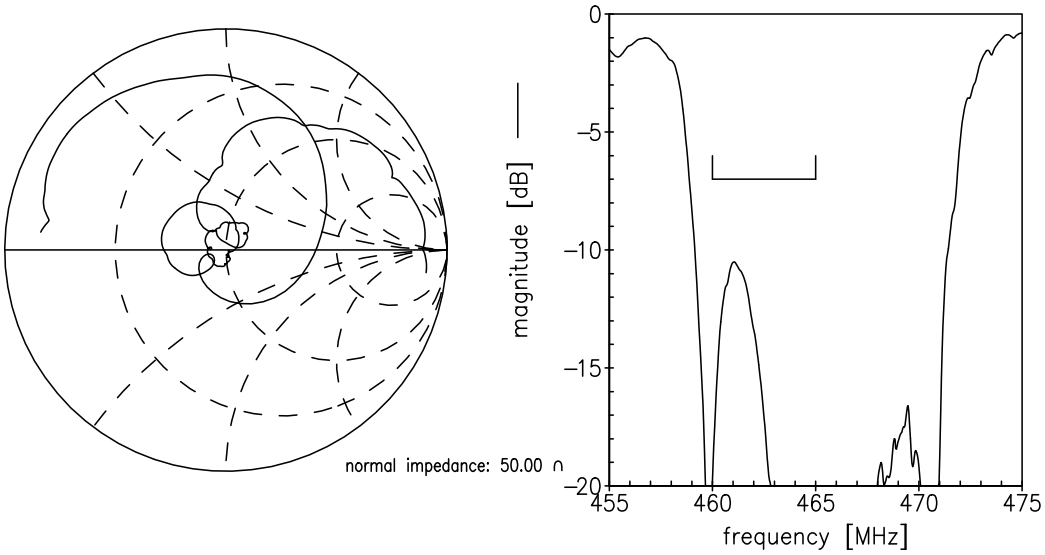


## Smith charts

### $S_{11}$ function




### $S_{22}$ function



## References

| | |
|---|---|
| **Type** | B5363 |
| **Ordering code** | B39461B5363U510 |
| **Marking and package** | C61157-A7-A68 |
| **Packaging** | F61074-V8228-Z000 |
| **Date codes** | L_1126 |
| **S-parameters** | B5363_NB.s3p<br>B5363_WB.s3p<br>see file header for port/pin assignment table |
| **Soldering profile** | S_6001 |
| **RoHS compatible** | RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8th, 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases. |
| **Matching coils** | See Inductor pdf-catalog<br>http://www.tdk.co.jp/tefe02/coil.htm#aname1<br>and Data Library for circuit simulation<br>http://www.tdk.co.jp/etvcl/index.htm<br>for a large variety of matching coils. |

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