EPCOS

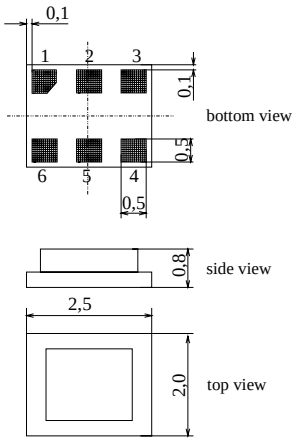
# *SAW Components*

*Data Sheet B7733*

## Features

- Low-loss RF filter for mobile telephone cellular system, receive path
- Low amplitude ripple
- Usable passband 25 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to100 Ω
- Package for **S**urface **M**ounted **T**echnology **(SMT)**

**Chip Size SAW package DCS6I**



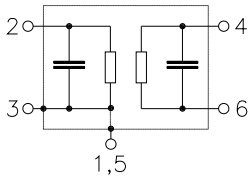

Dimensions in mm, approx. weight 0,014g

## Terminals

- Ni, gold-plated

## Pin configuration

| | |
|---|---|
| 2 | Input |
| 4 | Balanced output |
| 6 | Balanced output |
| 1,3,5 | Ground, to be grounded |




| Type | Ordering code | Marking and Package according to | Packing according to |
|---|---|---|---|
| B7733 | B39881-B7733-C610 | C61157-A7-A76 | F61074-V8153-Z000 |

**E**lectrostatic **S**ensitive **D**evice (**ESD**)

## Maximum ratings

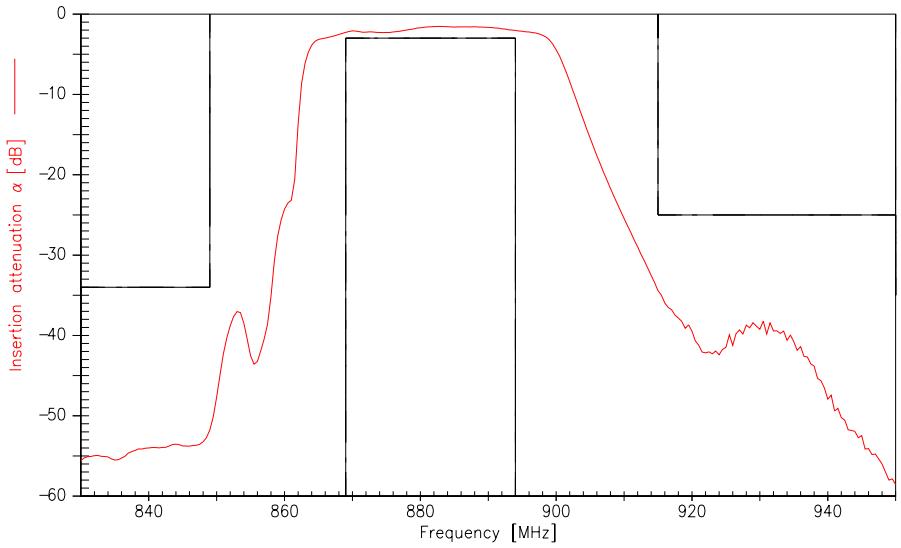
| | | | | |
|---|---|---|---|---|
| Operable temperature range | $T$ | – 40 / + 85 | ˚C | |
| Storage temperature range | $T_{stg}$ | – 40 / + 85 | ˚C | |
| DC voltage | $V_{DC}$ | 5 | V | |
| Input power max. | $P_{IN}$ | 0 | dBm | source impedance 50 Ω CDMA signal |

## Characteristics

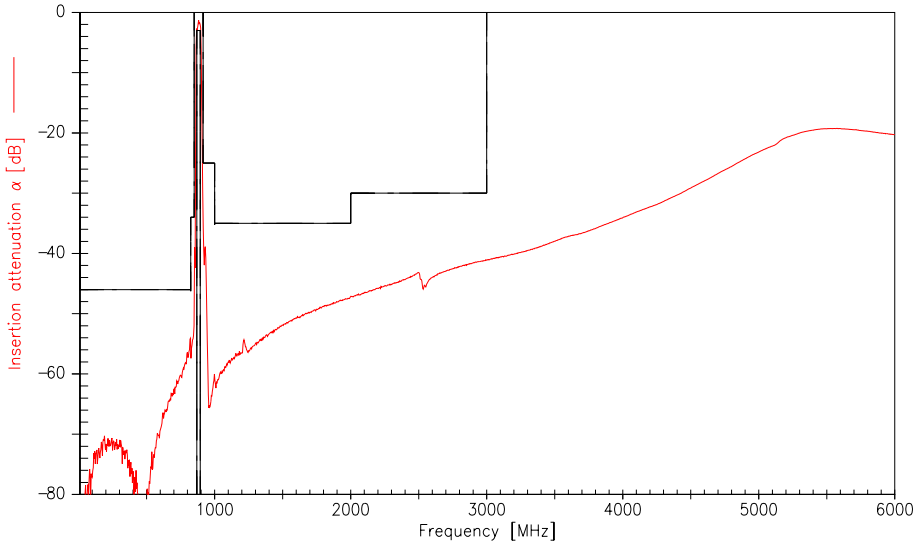
Operating temperature range: $T$ = -30 to +85 °C
Terminating source impedance: $Z_S$ = 50 Ω (unbalanced)
Terminating load impedance: $Z_L$ = 100 Ω (balanced)

| | | min. | typ. | max. | |
|---|---|---|---|---|---|
| **Center frequency** | $f_C$ | — | 881,5 | — | MHz |
| **Maximum insertion attenuation** | $\alpha_{max}$ | | | | |
| 869,0 ... 894,0 MHz | | — | 2,7 | 3,0 | dB |
| **Amplitude ripple** (p-p) | $\Delta\alpha$ | | | | |
| 869,0 ... 894,0 MHz | | — | 1,2 | 1,5 | dB |
| **Input VSWR** | | | | | |
| 869,0 ... 894,0 MHz | | — | 2,0 | 2,1 | |
| **Output VSWR** | | | | | |
| 869,0 ... 894,0 MHz | | — | 2,0 | 2,1 | |
| **Output amplitude imbalance** ($\|S_{31}/S_{21}\|$) | | | | | |
| 869,0 ... 894,0 MHz | | -1,5 | — | 2,0 | dB |
| **Output phase imbalance** ($\phi(S_{31})-\phi(S_{21})+180°$) | | | | | |
| 869,0 ... 894,0 MHz | | -5,0 | — | 7,0 | degree |
| **Attenuation** | $\alpha$ | | | | |
| 0,0 ... 824,0 MHz | | 46,0 | 53,0 | — | dB |
| 824,0 ... 849,0 MHz | | 34,0 | 41,0 | — | dB |
| 915,0 ...1000,0 MHz | | 25,0 | 30,0 | — | dB |
| 1000,0 ...2000,0 MHz | | 35,0 | 47,0 | — | dB |
| 2000,0 ...3000,0 MHz | | 30,0 | 40,0 | — | dB |

**Transfer function**

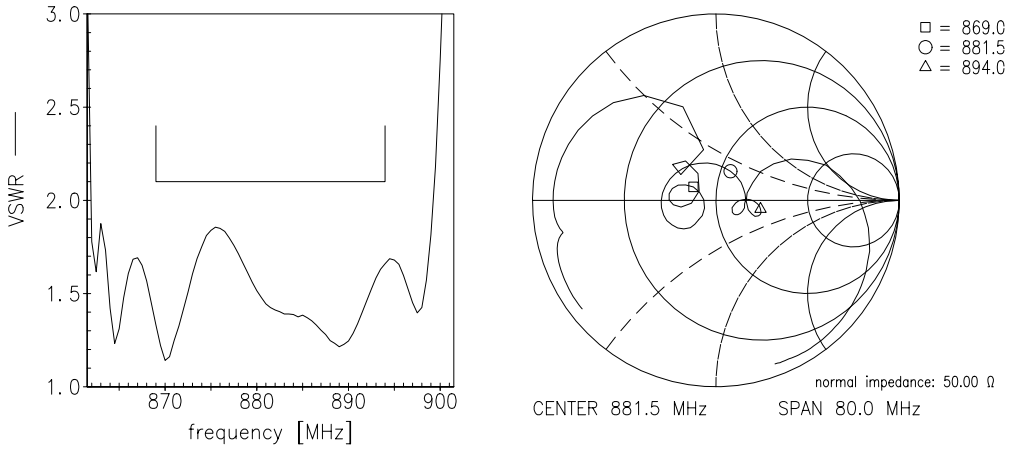



**Transfer function** (wideband)

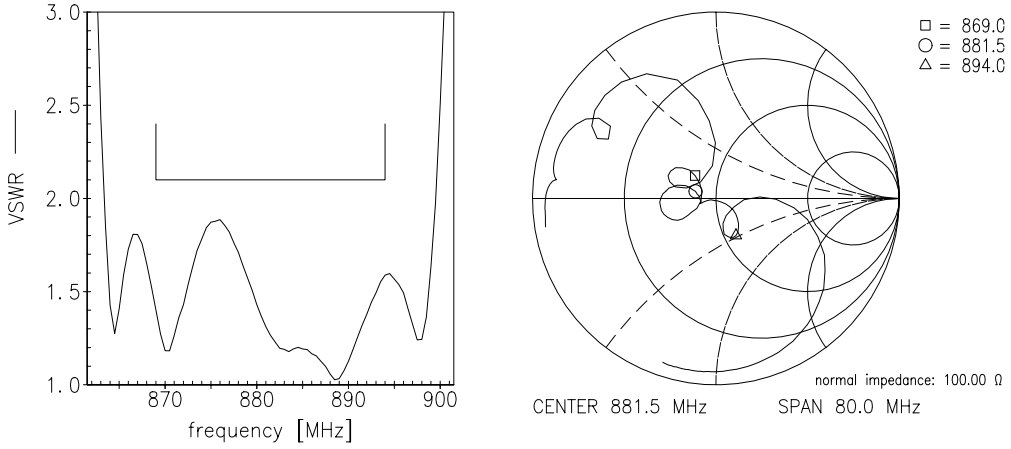


**Reflection functions**

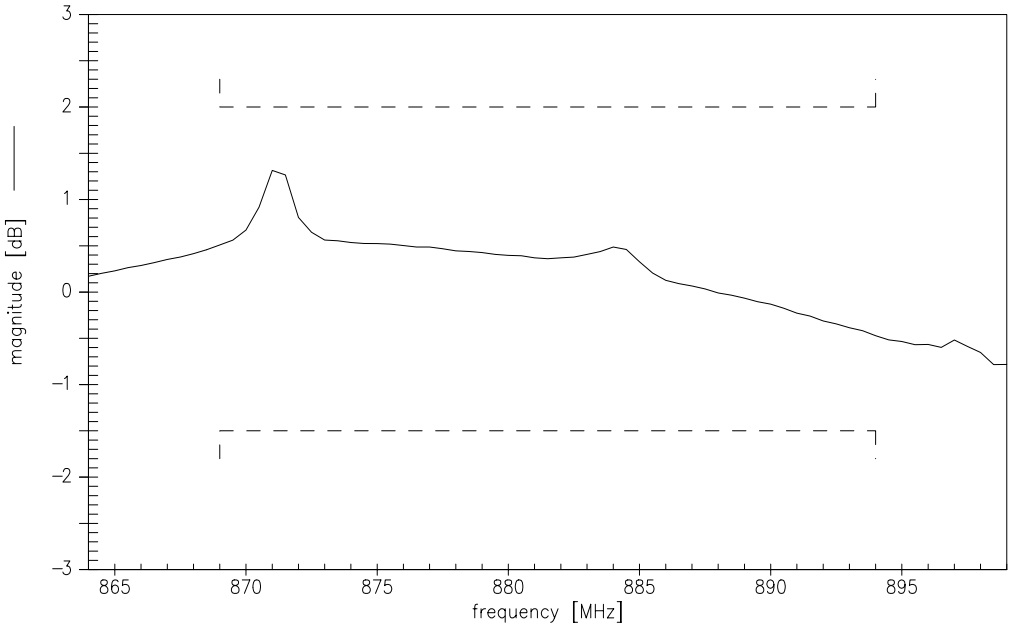
$S_{11}$



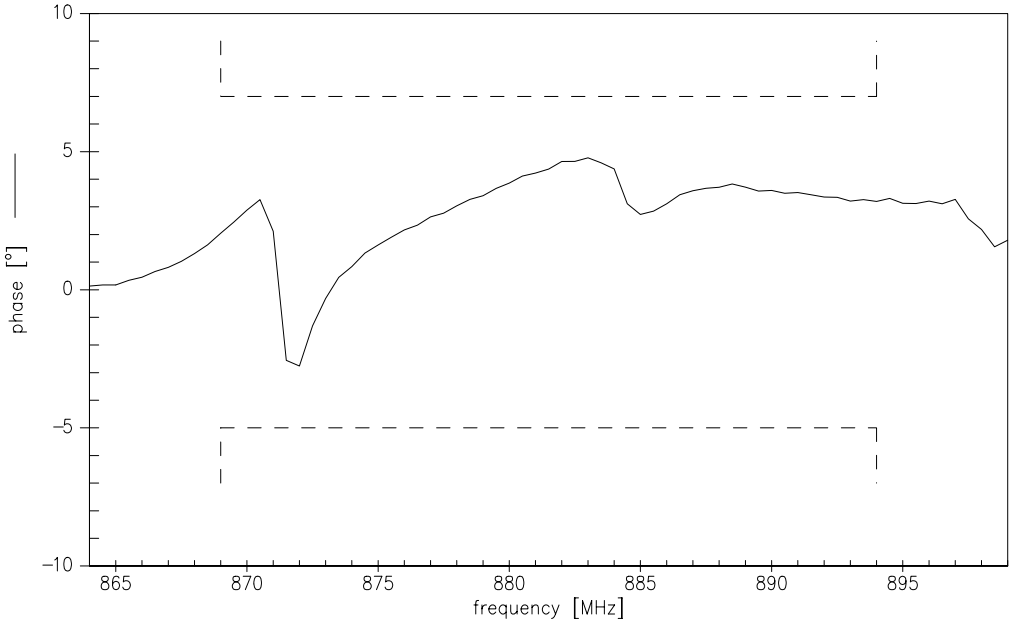

$S_{22}$



**Output amplitude balance** ($|S_{31}/S_{21}|$)




**Output phase balance** ($\phi(S_{31})-\phi(S_{21})+180^{\circ}$)



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