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# SAW Mobile Communications

## Series/Type: **B7740**

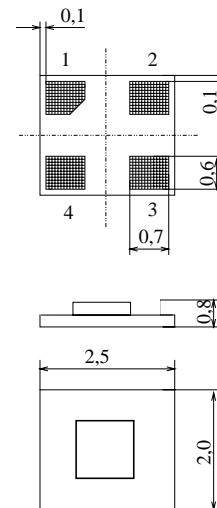
The following products presented in this data sheet are being withdrawn.

| Ordering Code   | Substitute Product | Date of Withdrawal | Deadline Last Orders | Last Shipments |
|-----------------|--------------------|--------------------|----------------------|----------------|
| B39202B7740C810 | B39202B9008E610    | 06.07.2007         | 31.01.2008           | 30.04.2008     |

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**Chip Sized SAW Package DCS4D**
**Features**

- RF filter for mobile telephone PCS systems, receive path
- Low insertion loss, low amplitude ripple
- Usable passband 60 MHz
- Suitable for GPRS class 1 to 12
- Package for Surface Mounted Technology (SMT)



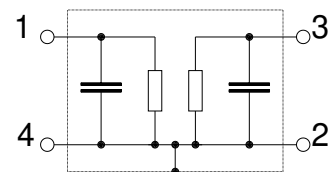
Dimensions in mm, approx. weight 0,012 g

**Terminals**

- Gold-plated Ni

**Pin configuration**

- |     |        |
|-----|--------|
| 1   | Input  |
| 3   | Output |
| 2,4 | Ground |



| Type  | Ordering code     | Marking and Package according to | Packing according to |
|-------|-------------------|----------------------------------|----------------------|
| B7740 | B39202-B7740-C810 | C61157-A7-A89                    | F61074-V8125-Z000    |

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

|                             |           |           |     |  |
|-----------------------------|-----------|-----------|-----|--|
| Operating temperature range | $T$       | - 10/+ 80 | °C  |  |
| Storage temperature range   | $T_{stg}$ | - 40/+ 85 | °C  |  |
| DC voltage                  | $V_{DC}$  | 3         | V   |  |
| ESD voltage                 | $V_{ESD}$ | 50        | V   |  |
| Input Power at              |           |           |     |  |
| GSM850, GSM900              | $P_{IN}$  | 15        | dBm | peak power of GSM signal, duty cycle 4:8 |
| GSM1800, GSM1900            | $P_{IN}$  | 12        | dBm |  |
| tx bands                    |           |           |     |  |


**Characteristics**

|                               |                                    |
|-------------------------------|------------------------------------|
| Operating temperature range : | $T = 25\text{ °C} \pm 2\text{ °C}$ |
| Terminating source impedance: | $Z_S = 50\ \Omega$                 |
| Terminating load impedance:   | $Z_L = 50\ \Omega$                 |

|                                      |                 | min. | typ.   | max. |     |
|--------------------------------------|-----------------|------|--------|------|-----|
| <b>Center frequency</b>              | $f_C$           | —    | 1960,0 | —    | MHz |
| <b>Maximum insertion attenuation</b> | $\alpha_{\max}$ | —    | 2,8    | 3,2  | dB  |
| 1930,0... 1990,0 MHz                 |                 |      |        |      |     |
| <b>Amplitude ripple (p-p)</b>        | $\Delta\alpha$  | —    | 1,3    | 1,7  | dB  |
| 1930,0... 1990,0 MHz                 |                 |      |        |      |     |
| <b>Attenuation</b>                   | $\alpha$        |      |        |      |     |
| DC ... 1500,0 MHz                    |                 | 28   | 31     | —    | dB  |
| 1500,0.. 1830,0 MHz                  |                 | 25   | 29     | —    | dB  |
| 1830,0.. 1910,0 MHz                  |                 | 12   | 14     | —    | dB  |
| 2010,0... 2070,0 MHz                 |                 | 12   | 14     | —    | dB  |
| 2070,0... 2500,0 MHz                 |                 | 21   | 23     | —    | dB  |
| 2500,0... 3000,0 MHz                 |                 | 24   | 28     | —    | dB  |
| 3000,0... 4500,0 MHz                 |                 | 28   | 35     | —    | dB  |
| 4500,0... 5200,0 MHz                 |                 | 26   | 32     | —    | dB  |
| 5200,0... 6000,0 MHz                 |                 | 24   | 30     | —    | dB  |
| <b>Input vswr</b>                    |                 |      |        |      |     |
| 1930,0... 1990,0 MHz                 |                 | ---  | 2,2    | 2,3  |     |
| <b>Output vswr</b>                   |                 |      |        |      |     |
| 1930,0... 1990,0 MHz                 |                 | ---  | 2,2    | 2,3  |     |
| <b>Tx band suppression</b>           | $\alpha$        |      |        |      |     |
| 1830,0.. 1910,0 MHz                  |                 | 12   | 14     | —    | dB  |

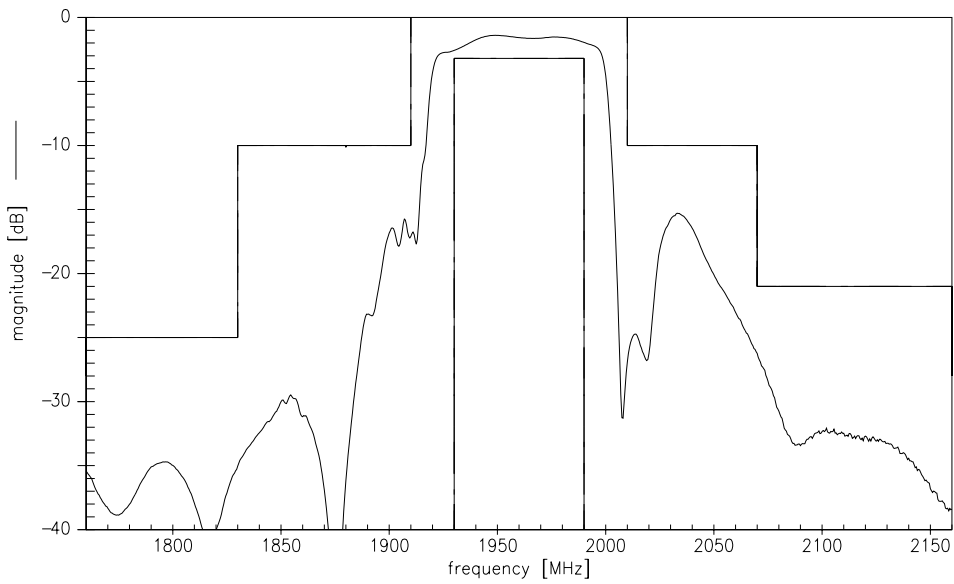

**Characteristics**

Operating temperature range :  $T = -10$  to  $+80$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$

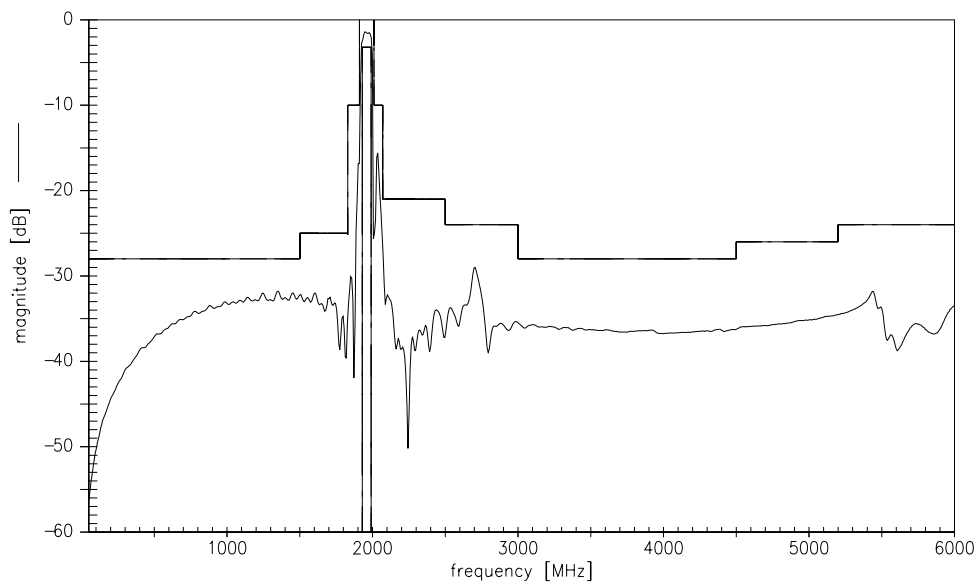
|                                      |                 | min. | typ.   | max. |     |
|--------------------------------------|-----------------|------|--------|------|-----|
| <b>Center frequency</b>              | $f_C$           | —    | 1960,0 | —    | MHz |
| <b>Maximum insertion attenuation</b> | $\alpha_{\max}$ | —    | 2,8    | 3,2  | dB  |
| 1930,0... 1990,0 MHz                 |                 |      |        |      |     |
| <b>Amplitude ripple (p-p)</b>        | $\Delta\alpha$  | —    | 1,3    | 1,7  | dB  |
| 1930,0... 1990,0 MHz                 |                 |      |        |      |     |
| <b>Attenuation</b>                   | $\alpha$        |      |        |      |     |
| DC ... 1500,0 MHz                    |                 | 28   | 31     | —    | dB  |
| 1500,0.. 1830,0 MHz                  |                 | 25   | 29     | —    | dB  |
| 1830,0.. 1910,0 MHz                  |                 | 10   | 13     | —    | dB  |
| 2010,0... 2070,0 MHz                 |                 | 10   | 13     | —    | dB  |
| 2070,0... 2500,0 MHz                 |                 | 21   | 23     | —    | dB  |
| 2500,0... 3000,0 MHz                 |                 | 24   | 28     | —    | dB  |
| 3000,0... 4500,0 MHz                 |                 | 28   | 35     | —    | dB  |
| 4500,0... 5200,0 MHz                 |                 | 26   | 32     | —    | dB  |
| 5200,0... 6000,0 MHz                 |                 | 24   | 30     | —    | dB  |
| <b>Input vswr</b>                    |                 | ---  | 2,2    | 2,3  |     |
| 1930,0... 1990,0 MHz                 |                 |      |        |      |     |
| <b>Output vswr</b>                   |                 | ---  | 2,2    | 2,3  |     |
| 1930,0... 1990,0 MHz                 |                 |      |        |      |     |
| <b>Tx band suppression</b>           | $\alpha$        | 10   | 13     | —    | dB  |
| 1830,0.. 1910,0 MHz                  |                 |      |        |      |     |



**Transfer function**  
**narrow band**



**wide band**

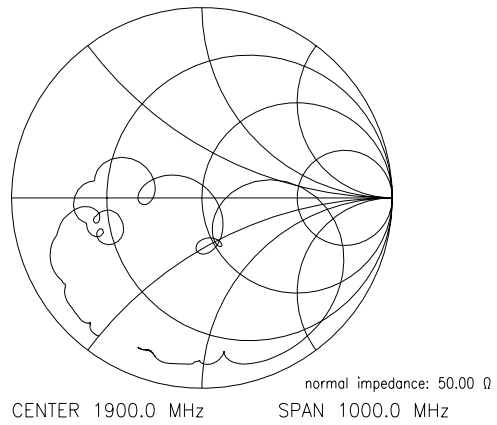
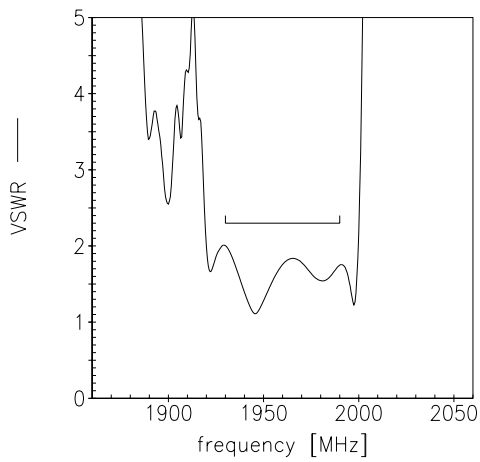




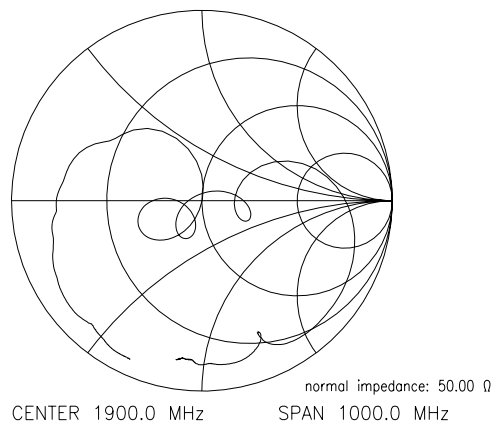
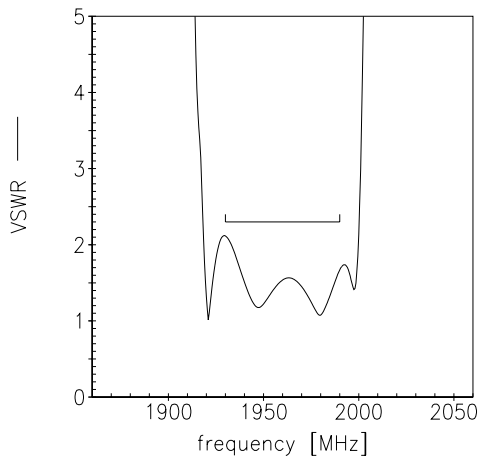


Reflection functions

$S_{11}$



$S_{22}$



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