



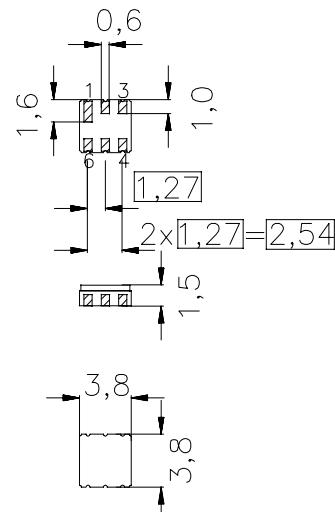
SAW Components

Data Sheet B4690

Data Sheet

SAW Components
B4690
Low-Loss Filter
836,50 MHz
Data Sheet
Features

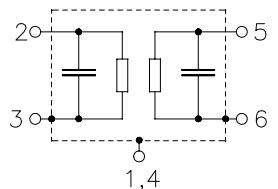
- Low-loss RF filter for basestations (IS-54), receive path
- Low amplitude ripple
- Usable passband 25 MHz
- No matching network required for operation at 50 Ω
- Ceramic package for **Surface Mounted Technology (SMT)**

Ceramic package DCC6


Dim. in mm, approx. weight 0,07 g

Terminals

- Ni, gold-plated


Pin configuration

| | |
|------|-----------------|
| 2 | Input |
| 3 | Input - ground |
| 5 | Output |
| 6 | Output - ground |
| 1, 4 | To be grounded |

| Type | Ordering code | Marking and Package according to | Packing according to |
|-------|-------------------|----------------------------------|----------------------|
| B4690 | B39841-B4690-Z610 | C61157-A7-A41 | F61064-V8030-Z000 |

Electrostatic Sensitive Device (ESD)
Maximum ratings

| | | | | |
|----------------------------|-----------|---------|-----|------------------------------|
| Operable temperature range | T | -30/+85 | °C | |
| Storage temperature range | T_{stg} | -40/+85 | °C | |
| DC voltage | V_{DC} | 0 | V | |
| Source power | P_s | 10 | dBm | source impedance 50 Ω |

**SAW Components****B4690****Low-Loss Filter****836,50 MHz****Data Sheet****Characteristics**Operating temperature range: $T = -30$ to $+85$ °CTerminating source impedance: $Z_S = 50 \Omega$ Terminating load impedance: $Z_L = 50 \Omega$

| | | | min. | typ. | max. | |
|--------------------------------------|-------------------|-----------------|-------------|-------------|-------------|-----|
| Center frequency | | f_c | — | 836,50 | — | MHz |
| Maximum insertion attenuation | | α_{\max} | — | 3,0 | 3,5 | dB |
| | 824,0 ... 849,0 | MHz | — | 3,0 | 3,5 | dB |
| Amplitude ripple (p-p) | | $\Delta\alpha$ | — | 1,0 | 1,7 | dB |
| | 824,0 ... 849,0 | MHz | — | 1,0 | 1,7 | dB |
| VSWR | | | — | 1,9 | 2,0 | |
| | 824,0 ... 849,0 | MHz | — | 1,9 | 2,0 | |
| Attenuation | | α | 60 | 70 | — | dB |
| | 0,0 ... 600,0 | MHz | 55 | 65 | — | dB |
| | 600,0 ... 700,0 | MHz | 50 | 60 | — | dB |
| | 700,0 ... 750,0 | MHz | 40 | 60 | — | dB |
| | 750,0 ... 800,0 | MHz | 25 | 35 | — | dB |
| | 869,0 ... 910,0 | MHz | 50 | 58 | — | dB |
| | 910,0 ... 1100,0 | MHz | 40 | 50 | — | dB |
| | 1100,0 ... 1500,0 | MHz | 30 | 50 | — | dB |
| | 2000,0 ... 2500,0 | MHz | 20 | 30 | — | dB |
| | 2500,0 ... 3000,0 | MHz | 12 | 15 | — | dB |

SAW Components

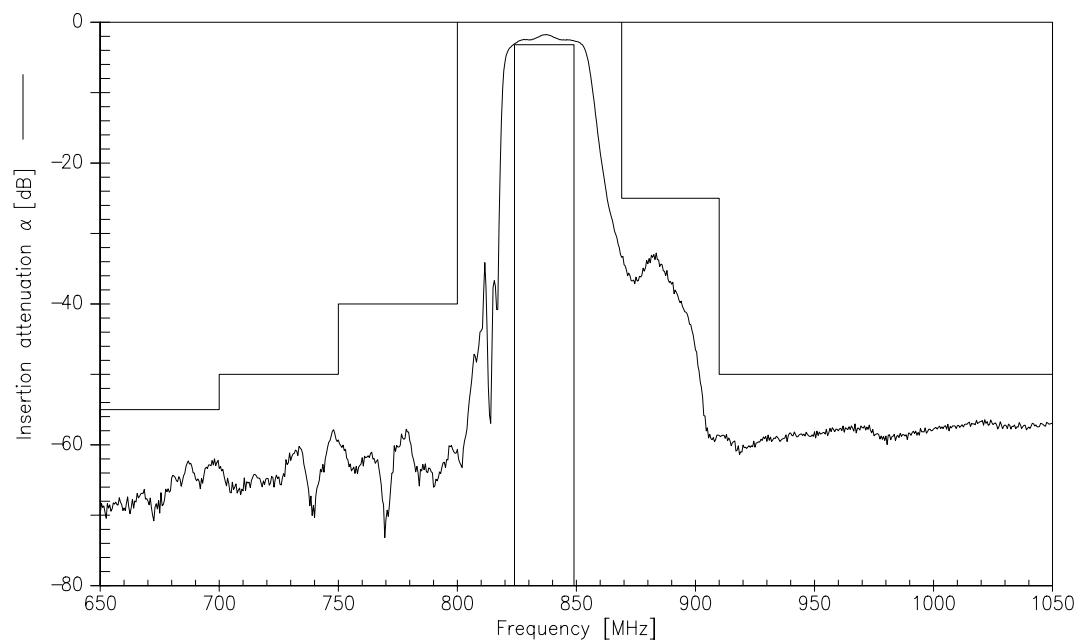
B4690

Low-Loss Filter

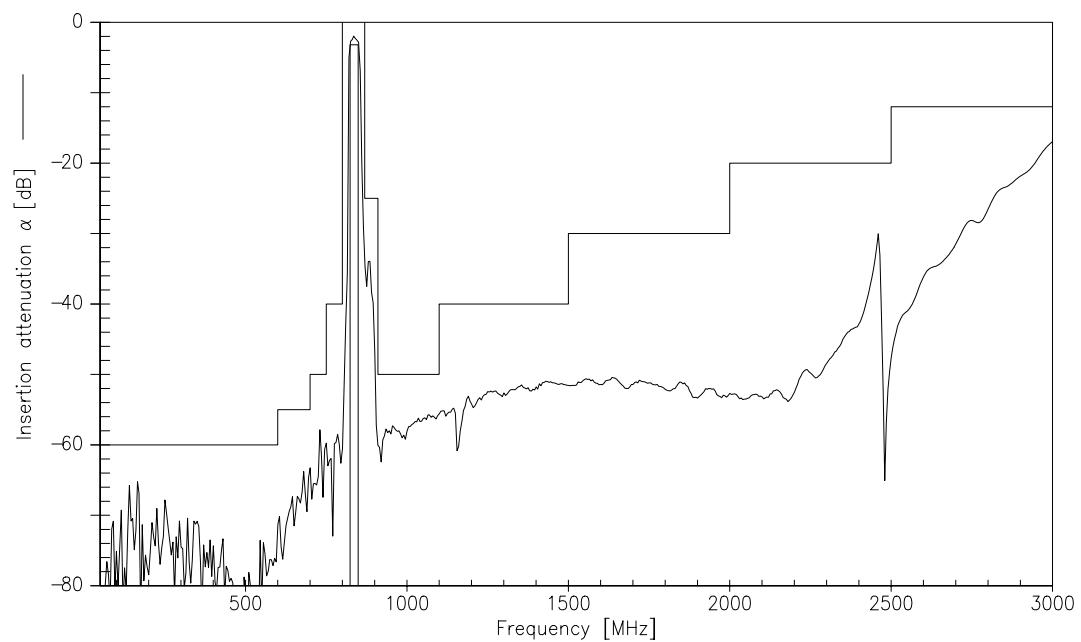
836,50 MHz

Data Sheet

Transfer function



Transfer function (wideband)



SAW Components

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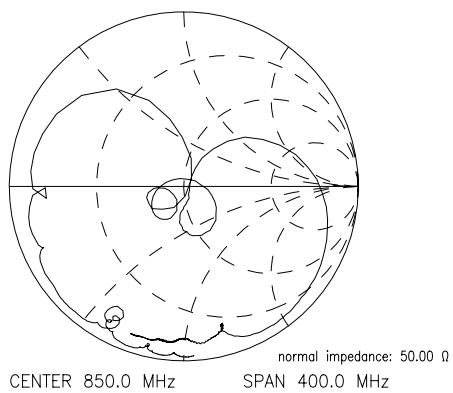
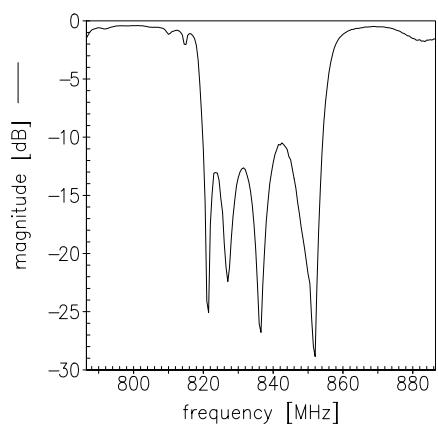
Low-Loss Filter

836,50 MHz

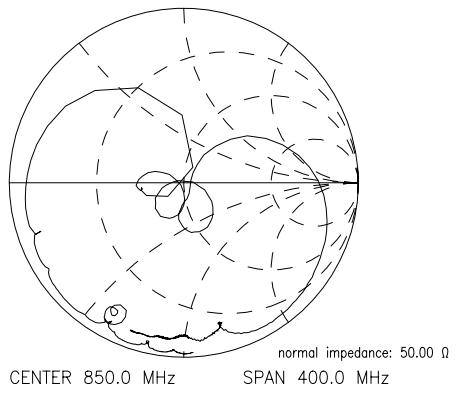
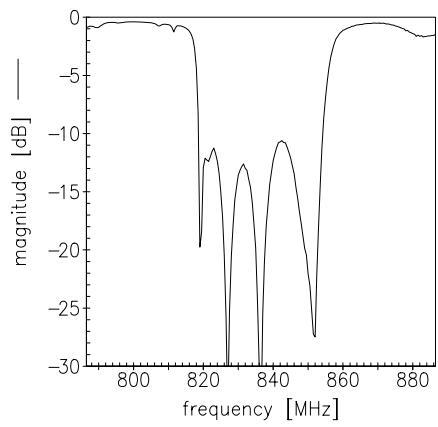
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Reflection functions

S_{11}



S_{22}





| | |
|------------------------|-------------------|
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| Low-Loss Filter | 836,50 MHz |

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Remarks on power durability of SAW filter B4690:

The power durability of SAW filter B4690 depends on ambient temperature and time. Measurements have shown that for an ambient temperature of 85°C and a CW input power $P_{in}=-1.5$ dBm at 849 MHz the filter has a TTF of more than 100 000 h. The allowed input power for other parameters is given in the following table:

| T _{amb} [°C] | TTF [h] | P _{in} [dBm] |
|-----------------------|---------|-----------------------|
| 85 | 100 000 | -1.5 |
| 55 | 100 000 | 1.9 |
| 25 | 100 000 | 5.9 |
| 85 | 10 000 | 1.8 |
| 55 | 10 000 | 5.2 |
| 25 | 10 000 | 9.1 |

TTF: time to failure (frequency shift of 1 MHz and/or increase of α_{max} by 0,5 dB)

T_{amb}: ambient temperature

These results are based on extrapolations of measured results. The statistical uncertainty is about ± 3 dB.



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Low-Loss Filter

836,50 MHz

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