

**VI TELEFILTER****Filter Specification****TFS 466 - 1/3****Measurement condition**

Ambient temperature: 23 °C  
 Input power level: 0 dBm  
 Input power level (impulse work): +16 dBm  
 Termination impedance:  
 Input : 50 Ω  
 Output: 50 Ω

**Construction and pin connection**

see page 2

**Remark:**

Reference level for the relative attenuation  $a_{rel}$  of the TFS 466 is the minimum of the pass band attenuation  $a_{min}$ . The minimum of the pass band attenuation  $a_{min}$  is defined as the insertion loss  $a_e$ . The centre frequency  $f_0$  is the arithmetic mean value of the upper and lower frequencies at the 3 dB filter attenuation level relative to the insertion loss  $a_e$ . The nominal frequency  $f_N$  is fixed on 466,29 MHz without tolerance. The given values for the relative attenuation  $a_{rel}$  and for the group delay ripple have to be reached at the frequencies given below also if the centre frequency  $f_0$  is shifted due to the temperature coefficient of frequency  $TC_f$  in the operating temperature range and due to a production tolerance for the centre frequency  $f_0$ .

**Characteristics**

| <b>D a t a</b>                                |                | <b>typ. value</b>   | <b>Variation/ Limitation</b> |
|-----------------------------------------------|----------------|---------------------|------------------------------|
| <b>Insertion loss</b><br>(Reference level)    | $a_e = a_{mi}$ | -                   | max. 3,5 dB                  |
| <b>Nominal frequency</b>                      | $f_N$          | -                   | 466,29 MHz                   |
| <b>Center frequency</b>                       | $f_0$          | 466,29 MHz          | -                            |
| <b>3 dB - bandwidth</b>                       | BW             | 8,5 MHz             | -                            |
| <b>Ripple in pass band</b><br>$f_N \pm 2$ MHz |                | -                   | max. 3 dB                    |
| <b>Relative attenuation</b>                   | $a_{rel}$      |                     |                              |
| 266.29 MHz ... 418 MHz                        |                | -                   | min. 65 dB                   |
| 418 MHz ... 441.29 MHz                        |                | -                   | min. 40 dB                   |
| 491.29 MHz ... 504 MHz                        |                | -                   | min. 40 dB                   |
| 504 MHz ... 666.29 MHz                        |                | -                   | min. 65 dB                   |
| $f_N - 11,5$ MHz                              |                | -                   | min. 60 dB                   |
| <b>Temperature coefficient of frequency</b>   | $TC_f$         | -32 ppm/K           | -                            |
| <b>Operating temperature range</b>            |                | - 20 °C ... + 75 °C |                              |

**Generated:** \_\_\_\_\_

**Checked / approved:** \_\_\_\_\_

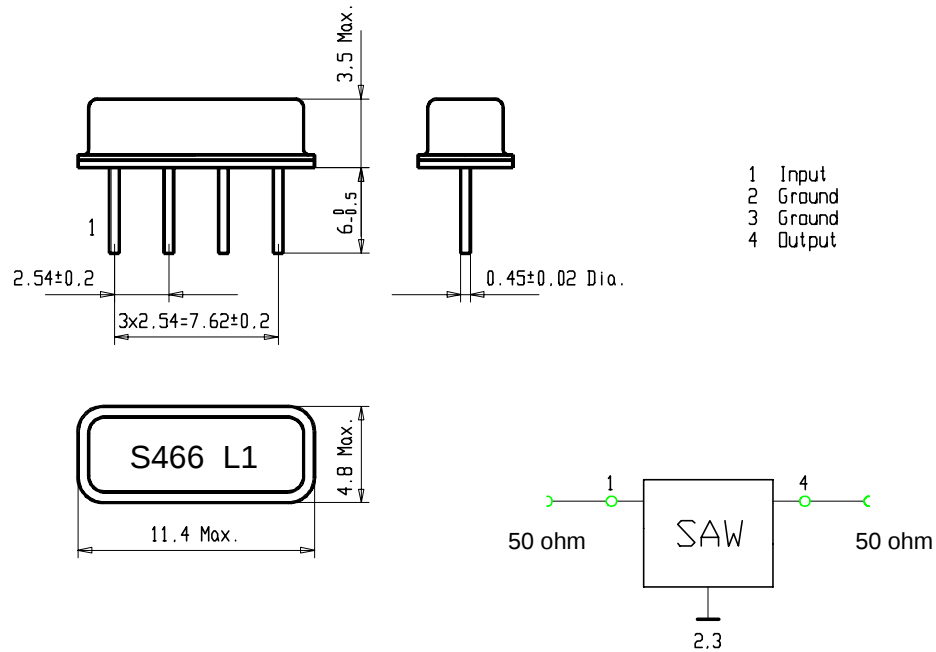
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**VI TELEFILTER****Filter Specification****TFS 466 - 2/3****Construction, pin connection and 50  $\Omega$  matching network**

(All dimensions in mm)



**VI TELEFILTER****Filter Specification****TFS 466 - 3/3****Air reflow temperature conditions**

## 1st and 2nd air reflow profile

|                     |                     |                      |                  |
|---------------------|---------------------|----------------------|------------------|
| <b>Name:</b>        | pre-heating periods | main-heating periods | peak temperature |
| <b>Temperature:</b> | 150 °C - 170 °C     | over 200 °C          | 255 °C ± 5 °C    |
| <b>Time:</b>        | 60 sec. - 90 sec.   | 20 sec. - 25 sec.    |                  |

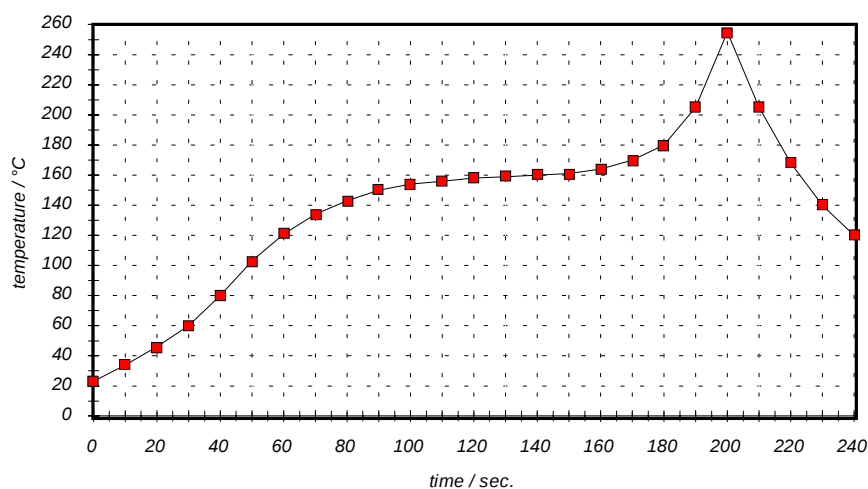
**Chip-mount air reflow profile**

Table for temperature vs. time during the air reflow process

Tolerance of temperatures: ± 5 °C

| time / sec. | temperature / °C | time / sec. | temperature / °C |
|-------------|------------------|-------------|------------------|
| 0           | 23               | 140         | 160              |
| 10          | 34               | 150         | 161              |
| 20          | 46               | 160         | 164              |
| 30          | 60               | 170         | 170              |
| 40          | 80               | 180         | 180              |
| 50          | 103              | 190         | 205              |
| 60          | 121              | 195         | 230              |
| 70          | 134              | 200         | 255              |
| 80          | 143              | 205         | 230              |
| 90          | 150              | 210         | 205              |
| 100         | 154              | 215         | 180              |
| 110         | 156              | 220         | 165              |
| 120         | 158              | 230         | 140              |
| 130         | 159              | 240         | 120              |