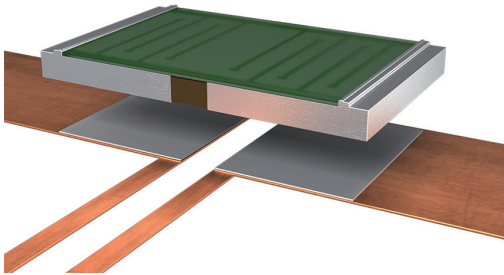


## ISA-PLAN® // PRECISION RESISTORS

### SMP-PW // Size 2010



#### Features

- 1 W permanent power at 130 °C
- Constant current up to 24 A (5 mΩm)
- Excellent long-term stability
- High pulse power rating
- Mounting: Reflow-, and IR-soldering
- *Detail specification ESCC 4001/027*
- SnPb tinned terminals

#### Applications

- Aerospace



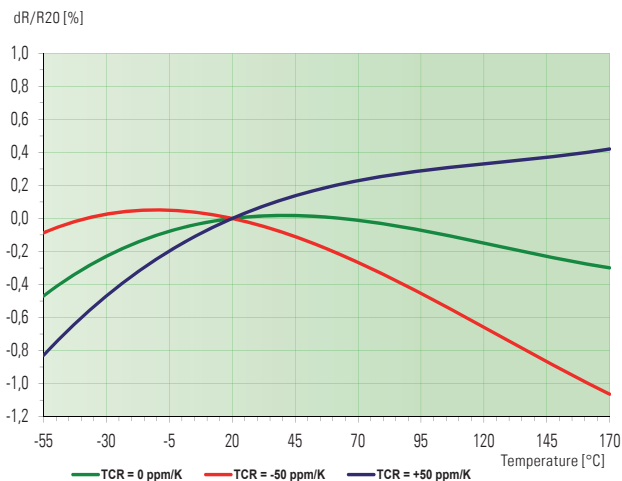
#### Technical data

|  |              |                                |                |
|--|--------------|--------------------------------|----------------|
| Resistance values  | <b>Ωm</b>    | 0.005 to 1 *                   |                |
| Tolerance  | <b>%</b>     | 0.5 / 1 *                      |                |
| Temperature coefficient  | <b>ppm/K</b> | <b>&lt;10 mΩm</b>              | <b>≥10 mΩm</b> |
| -55 °C to +22 °C   |              | -140, +0                       | -100, +0       |
| +22 °C to +170 °C  |              | ±100                           | ±60            |
| +22 °C to +60 °C   |              | ±100                           | ±50            |
| Applicable temperature range   | <b>°C</b>    | -55 to +170                    |                |
| Power rating   | <b>W</b>     | 1                              |                |
| Stability (nominal load) deviation after 2000h, acc. to ESCC Generic Specification |              | ±0.2% (T <sub>K</sub> =130 °C) |                |

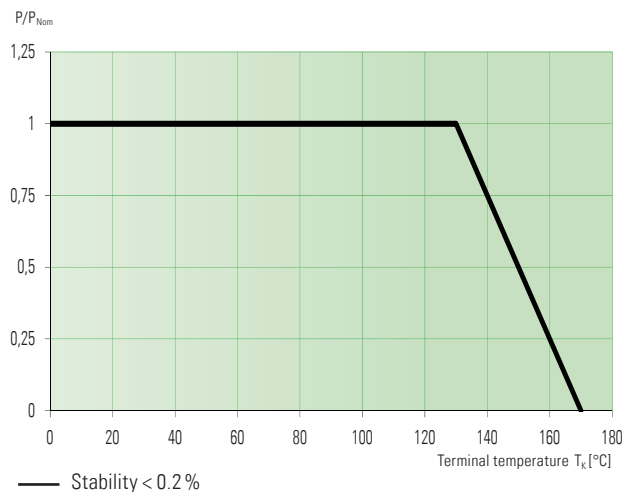
\* For detailed information see table on page 2

T<sub>K</sub> = terminal temperature

#### Temperature dependence of the electrical resistance of MANGANIN® resistors at +22 °C to +60 °C



#### Power derating curve





## SMP-PW // Size 2010

### Available standard resistance values and tolerances \*

| Ordering code   | ESCC component number |
|-----------------|-----------------------|
| SMP-R010-0.5-PW | 400102701R010D        |
| SMP-R010-1.0-PW | 400102701R010F        |
| SMP-R015-1.0-PW | 400102701R015F        |
| SMP-R018-1.0-PW | 400102701R018F        |
| SMP-R020-0.5-PW | 400102701R020D        |
| SMP-R020-1.0-PW | 400102701R020F        |
| SMP-R025-0.5-PW | 400102701R025D        |
| SMP-R025-1.0-PW | 400102701R025F        |
| SMP-R027-0.5-PW | 400102701R027D        |
| SMP-R027-1.0-PW | 400102701R027F        |
| SMP-R033-0.5-PW | 400102701R033D        |
| SMP-R033-1.0-PW | 400102701R033F        |
| SMP-R039-1.0-PW | 400102701R039F        |
| SMP-R047-0.5-PW | 400102701R047D        |
| SMP-R047-1.0-PW | 400102701R047F        |
| SMP-R050-0.5-PW | 400102701R050D        |
| SMP-R050-1.0-PW | 400102701R050F        |
| SMP-R056-0.5-PW | 400102701R056D        |
| SMP-R056-1.0-PW | 400102701R056F        |
| SMP-R082-1.0-PW | 400102701R082F        |
| SMP-R100-0.5-PW | 400102701R100D        |
| SMP-R100-1.0-PW | 400102701R100F        |
| SMP-R180-1.0-PW | 400102701R180F        |
| SMP-R200-0.5-PW | 400102701R200D        |
| SMP-R200-1.0-PW | 400102701R200F        |
| SMP-R220-0.5-PW | 400102701R220D        |
| SMP-R220-1.0-PW | 400102701R220F        |
| SMP-R330-0.5-PW | 400102701R330D        |
| SMP-R330-1.0-PW | 400102701R330F        |
| SMP-R390-0.5-PW | 400102701R390D        |
| SMP-R390-1.0-PW | 400102701R390F        |
| SMP-R470-0.5-PW | 400102701R470D        |
| SMP-R470-1.0-PW | 400102701R470F        |
| SMP-R500-0.5-PW | 400102701R500D        |
| SMP-R560-1.0-PW | 400102701R560F        |
| SMP-1R00-0.5-PW | 4001027011R00D        |
| SMP-1R00-1.0-PW | 4001027011R00F        |

\* other resistance values on request

### Ordering code

SMP - R010 - 1.0 - PW

|       |   |
|-------|---|
| ..... | ESCC 4001/027 version, SnPb tinned contacts           |
| ..... | Tolerance   |
| ..... | Resistance value [Ohm] / „R“ represents decimal point |
| ..... | Type  |



## SMP-PW // Size 2010

### Recommended solder profile

|                          |     |      |     |     |
|--------------------------|-----|------|-----|-----|
| Reflow- and IR-soldering |     |      |     |     |
| Temperature              | °C  | 260  | 255 | 217 |
| Time                     | sec | peak | 40  | 90  |

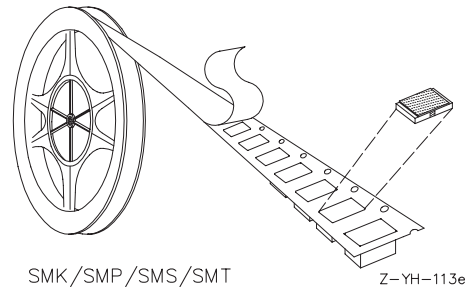
### Packaging information

|               |                |    |  |  |
|---------------|----------------|----|--|--|
| Specification | DIN EN 60286-3 |    |  |  |
| Tape width    | mm             | 12 |  |  |
| Reel size     | inch           | 13 |  |  |

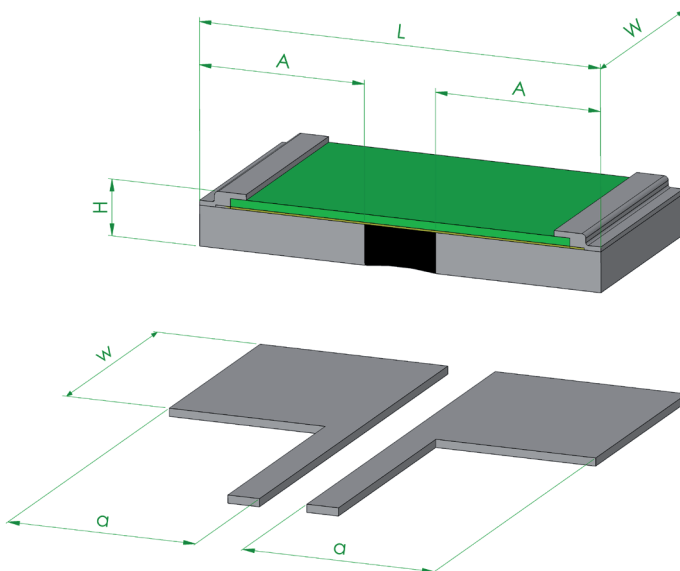
### Form of delivery

|               |     |           |  |  |
|---------------|-----|-----------|--|--|
| Tape          | pcs | up to 500 |  |  |
| Tape and reel | pcs | >500      |  |  |

Slight deformations during soldering do not affect technical properties of the component.



### Mechanical dimensions and pcb-layout proposal (Reflow-soldering) [mm] // Z-YE-651a



| type: | L          | W          | A      | H         |
|-------|------------|------------|--------|-----------|
| SMP   | 5.08 ± 0.1 | 2.54 ± 0.1 | (2.14) | 0.7 ± 0.2 |

| solder pad type: | l   | w   | a   |
|------------------|-----|-----|-----|
| SMP              | 5.4 | 2.8 | 2.4 |

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