

Thin film series – Power variant

Type: CMP

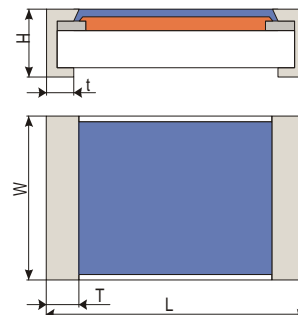
Sizes: 0402, 0603, 0805, 1206

Characteristics:

- Chip resistors in thin film technology
- High-precision resistor layers
- Resistance area coated with surface passivation
- Highest stability and reliability
- Very tight tolerances ($\geq 0,05\%$) - low temperature coefficient ($\geq 10\text{ppm/K}$)
- Low current noise, good pulse strength
- R-Value-Matching available
- RoHS-conform
- Order quantities from 1000 pieces for <1% and <TCR 50 available by extra charge
- Customer specific barcodes available - also in 2D
- All sizes can be manufactured with the following contact variants
 - ⇒ Electroplated alloy resistant tinned
 - ⇒ Contact with low rest permeability -N, suitable only for reflow soldering method
 - ⇒ Epoxy bondable contact -K

Dimensions (in mm):

| Size | L Length | | W Width | | H Depth | | t Contact back | | T Contact Front | |
|-------------|-------------|------|------------|------|------------|------|-------------------|------|--------------------|------|
| | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| 0402 | 0,95 | 1,10 | 0,45 | 0,60 | 0,25 | 0,40 | 0,10 | 0,35 | 0,05 | 0,35 |
| 0603 | 1,50 | 1,70 | 0,75 | 0,95 | 0,35 | 0,55 | 0,10 | 0,50 | 0,10 | 0,50 |
| 0805 | 1,85 | 2,15 | 1,10 | 1,40 | 0,35 | 0,65 | 0,15 | 0,60 | 0,15 | 0,60 |
| 1206 | 2,90 | 3,35 | 1,45 | 1,75 | 0,35 | 0,65 | 0,25 | 0,75 | 0,15 | 0,75 |



Packaging units:

| Reel Ø | Card tape acc. EN 60286-3 |
|--------------------------------------|-------------------------------------|
| 180 mm | 5 T pcs. 10 T pcs. for size 0402 |
| 330 mm | 10 T pcs. 20 T pcs. |
| Samples possible up to 50 pcs./value | |

Ordering information:

| CMP | - N | 0603 | 10k | 0,1% | 10ppm/K | K | P | 5 (optional) |
|------|--|------------------------------|---------------------------|---------------------------------|----------------------|---|-------------------------|------------------------------------|
| Type | Contact | Size | R-Value | ± Tolerance | ± TCR | Marking | Packaging | pcs. / Reel (T pcs.) |
| CMP | Standard (without add.) -N (non magnetic) | 0402 . to . 1206 | 1R . to . 4M7 | 0,05 0,1 0,25 0,5 1 | 10 15 25 50 | K- with (from size 0603) N- without (only size 0402) | P- Card tape S- Bulk | Depends on size and packaging unit |

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Technical data – depending on size:

| Type | U _{max} (V) | P ₇₀ (W) | R-Range | R-Tolerance (± %) | TCR (± ppm/K) | Packaging | | |
|------|-------------------------|------------------------|--------------------------|-----------------------------|------------------|-----------|---|---|
| | | | | | | P | B | S |
| 0402 | 50 | 0,100 | 100R – 47k0 | 0,1 / 0,25 / 0,5 / 1 | 15 ³⁾ | x | | x |
| | | | 100R – 221k | 0,1 / 0,25 / 0,5 / 1 | 25 | x | | x |
| | | | 100R – 511k | 0,1 / 0,25 / 0,5 / 1 | 50 | x | | x |
| | | | 10R0 - 1M00 | 1 | 50 | x | | x |
| 0603 | 75 | 0,125 | 1R00 - 10R0 | 0,5 / 1 | 50 | x | | x |
| | | | 10R0 - 100R | 0,1 / 0,25 / 0,5 / 1 | 25 | x | | x |
| | | | 100R – 332k | 0,05 / 0,1 / 0,25 / 0,5 / 1 | 10 ²⁾ | x | | x |
| | | | 332k – 511k | 0,05 / 0,1 / 0,25 / 0,5 / 1 | 25 | x | | x |
| | | | 511k - 1M50 | 0,05 / 0,1 / 0,25 / 0,5 / 1 | 50 | x | | x |
| 0805 | 150 | 0,200 | 1R00 - 10R0 | 0,5 / 1 | 50 | x | | x |
| | | | 10R0 - 100R | 0,1 / 0,25 / 0,5 / 1 | 25 | x | | x |
| | | | 100R – 511k | 0,05 / 0,1 / 0,25 / 0,5 / 1 | 10 ²⁾ | x | | x |
| | | | 511k - 1M00 | 0,05 / 0,1 / 0,25 / 0,5 / 1 | 25 | x | | x |
| | | | 1M00 - 2M00 | 0,05 / 0,1 / 0,25 / 0,5 / 1 | 50 | x | | x |
| 1206 | 200 | 0,400 | 1R00 - 10R0 | 0,5 / 1 | 50 | x | | x |
| | | | 10R0 - 100R | 0,1 / 0,25 / 0,5 / 1 | 25 | x | | x |
| | | | 100R - 1M00 | 0,05 / 0,1 / 0,25 / 0,5 / 1 | 10 ²⁾ | x | | x |
| | | | 1M00 - 2M00 | 0,05 / 0,1 / 0,25 / 0,5 / 1 | 25 | x | | x |
| | | | 2M00 - 4M7 ¹⁾ | 0,05 / 0,1 / 0,25 / 0,5 / 1 | 50 | x | | x |

¹⁾10R – 100R from ±0,1% tolerance

²⁾TCR ±5 on request

³⁾TCR ±10 on request

Technical data - general:

| Technical data | |
|--|-------------------------------|
| Operating temperature range | -55°C ... +155°C |
| Climatic category acc. EN 60068 | 55 / 155 / 56 |
| Solderability acc. EN 60068-2-58 | 245°C 3s |
| Soldering heat resistance acc. EN 60068-2-58 | ± (0,05% +0,01R) at 260°C 10s |
| Long time stability | |
| Storage 155°C / 1000 h | ± (0,5% +0,05R) |
| Endurance P ₇₀ / 70°C / 1000 h | ± (0,5% +0,05R) |
| Damp heat, steady state (56d / 40°C / 96%) | ± (0,5% +0,05R) |

Data, unless specified, acc. EN 140401-801.