

### Thin film series – Power variant

**Type: CMP**

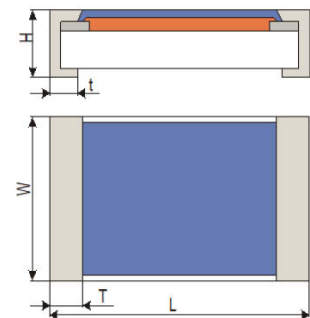
**Sizes: 0402, 0603, 0805, 1206**

#### 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 and Halogen-free according to IEC 61249-2-21 / IPC 4101B
- Sulfur resistance verified according to ASTM B 809
- 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 pure tin
  - ⇒ Contact with low rest permeability -N, suitable only for reflow soldering method (The recommended storage time should not exceed 1 year after date code)
  - ⇒ 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
<b>0402</b>	0,95	1,05	0,45	0,55	0,25	0,40	0,10	0,35	0,05	0,35
<b>0603</b>	1,50	1,70	0,75	0,95	0,35	0,55	0,10	0,50	0,10	0,50
<b>0805</b>	1,85	2,15	1,10	1,40	0,35	0,65	0,15	0,60	0,15	0,60
<b>1206</b>	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
<b>180 mm</b>	5 T pcs. 10 T pcs. for size 0402
<b>330 mm</b>	10 T pcs. 20 T pcs.
Samples on request	

#### 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 <sub>max</sub> (V)	P <sub>70</sub> <sup>3)</sup> (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 <sup>5)</sup>	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	100R – 332k	0,05 / 0,1 / 0,25 / 0,5 / 1	10 / 15 <sup>4)</sup>	x		x
			10R0 – 511k <sup>1)</sup>	0,05 / 0,1 / 0,25 / 0,5 / 1	25	x		x
			1R00 – 1M50 <sup>1) 2) 6)</sup>	0,05 / 0,1 / 0,25 / 0,5 / 1	50	x		x
0805	150	0,200	100R – 511k	0,05 / 0,1 / 0,25 / 0,5 / 1	10 / 15 <sup>4)</sup>	x		x
			10R0 – 1M00 <sup>1)</sup>	0,05 / 0,1 / 0,25 / 0,5 / 1	25	x		x
			1R00 – 2M00 <sup>1) 2) 6)</sup>	0,05 / 0,1 / 0,25 / 0,5 / 1	50	x		x
1206	200	0,400	100R – 1M00	0,05 / 0,1 / 0,25 / 0,5 / 1	10 / 15 <sup>4)</sup>	x		x
			10R0 – 2M00 <sup>1) 6)</sup>	0,05 / 0,1 / 0,25 / 0,5 / 1	25	x		x
			1R00 – 4M70 <sup>1) 2) 6)</sup>	0,05 / 0,1 / 0,25 / 0,5 / 1	50	x		x

<sup>1)</sup> 10R – 100R from ± 0,1% tolerance    <sup>2)</sup> 1R – 10R from ± 0,5% tolerance    <sup>3)</sup> For continuous operation sufficient heat dissipation must be ensured

<sup>4)</sup> TCR ± 5 on request

<sup>5)</sup> TCR ± 10 on request

<sup>6)</sup> > 1M from ± 0,1% tolerance

**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 <sub>70</sub> / 70°C / 1000 h	± (0,5% +0,05R)
Damp heat, steady state (56d / 40°C / 93%)	± (0,5% +0,05R)

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