

### Pulse proof series

Type: **CDI / CLI**

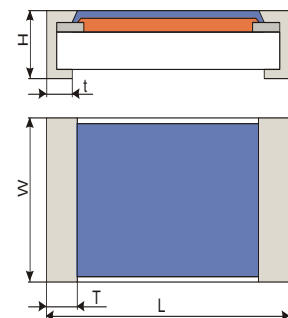
Sizes: **0402, 0603, 0805, 1206, 1210, 1218, 2010, 2512**

#### Characteristics:

- Chip resistors in thick film technology
- Specially pulse proof resistor layers
- Resistance area coated with glass and varnish passivation
- High stability and reliability
- RoHS-conform
- 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 delivery)
  - ⇒ Sticky contact -K
  - ⇒ Special corrosive gas resistant contact -S, Sulfur resistance verified according to ASTM B 809

#### 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	1,10	0,45	0,60	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
<b>1210</b>	3,00	3,30	2,35	2,65	0,50	0,75	0,35	0,85	0,25	0,85
<b>1218</b>	3,00	3,30	4,50	4,80	0,50	0,75	0,35	0,85	0,25	0,85
<b>2010</b>	4,80	5,20	2,30	2,70	0,50	0,75	0,35	0,85	0,25	0,85
<b>2512</b>	6,10	6,50	3,00	3,30	0,50	0,75	0,35	0,85	0,25	0,85



#### Packaging units:

Reel Ø	Card tape acc. EN 60286-3	Blister tape
<b>180 mm</b>	5 T pcs. 10 T pcs. for size 0402	4 T pcs.
<b>330 mm</b>	10 T pcs. 20 T pcs.	8 T pcs. 16 T pcs.
Samples on request		

#### Ordering information:

CLI	- N	1210	10k	5%	50ppm/K	N	P	10 (optional)
Type	Contact	Size	R- Value	± Tolerance	± TCR	Marking	Packaging	pcs. / Reel (T pcs.)
CDI CLI	Standard (without add.) -N (non magnetic) -K (epoxy bondable) -S (corrosive gas resistant)	0402 to 2512	1R to 10M	5 10 20	50 100	N- only without	P- Card tape B- Blister tape S- Bulk	Depends on size and packaging unit

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### Technical data – depending on size:

Size	Nominal voltage $U_{max}$ (V)	Load $P_{70}$ (W)	R-Range	R-Tolerance ( $\pm$ %)	TCR ( $\pm$ ppm/K)	Packaging		
						P	B	S
<b>CDI</b>								
0402	50	0,063	1R - 10M	5 / 10 / 20	50 / 100	x		x
0603	75	0,100	1R - 10M	5 / 10 / 20	50 / 100	x		x
0805	150	0,125	1R - 10M	5 / 10 / 20	50 / 100	x		x
1206	200	0,250	1R - 10M	5 / 10 / 20	50 / 100	x		x
<b>CLI</b>								
1210	200	0,500	1R - 10M	5 / 10 / 20	50 / 100	x		x
1218	200	1,000	1R - 10M	5 / 10 / 20	50 / 100		x	x
2010	300	0,500	1R - 10M	5 / 10 / 20	50 / 100		x	x
2512	500	1,000	1R - 10M	5 / 10 / 20	50 / 100		x	x

### 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	$\pm( 0,5\% + 0,05R )$ at 260°C 10s
<b>Long time stability</b>	
Storage 155°C / 1000h	$\pm( 1,0\% + 0,05R )$
Endurance $P_{70}$ / 70°C / 1000h	$\pm( 0,5\% + 0,05R )$
Damp heat, steady state (56d / 40°C / 93%)	$\pm( 1,0\% + 0,05R )$

Data, unless specified, acc. EN 140401-802.

### Behavior of pulse proof chip resistors (CDI / CLI ) under pulse load:

