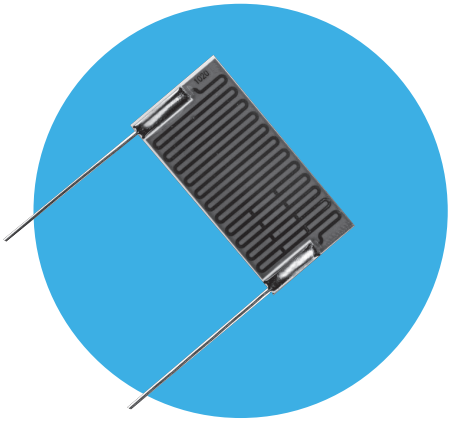
Resistors

Capacitor Discharge Resistors



CDR Series

- Excellent reliability
- Suitable for immersion in capacitor dielectric fluid
- Voltage ratings up to 20kV
- Excellent overload capability
- Robust terminations
- Resistance values up to 10M
- RoHS compliant

All parts are Pb-free and comply with EU Directive 2011/65/EU (RoHS2)

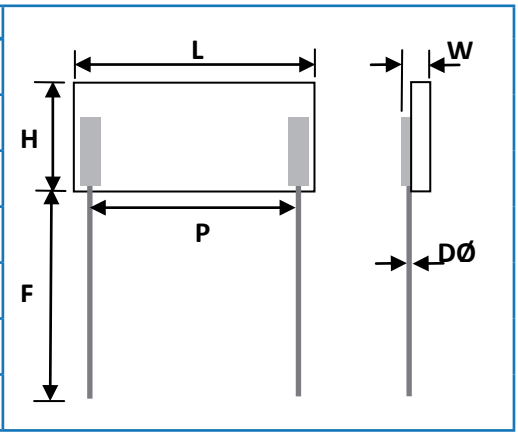
Electrical Data

		CDR01	CDR02	CDR03	CDR04	CDR05	CDR06
Power rating at 70°C (in air)	watts	0.63	1	1.75	2.5	3.75	5
Power rating at 70°C (in dielectric fluid)	watts	1.25	2	3.5	5	7.5	10
Limiting element voltage		not applicable [1]					
Overload power (90s at 25°C in dielectric fluid)	watts	20	30	50	75	100	150
Overload voltage (90s in dielectric fluid)	kV [2]	6	6	10	10	20	20
Resistance range	ohms	100K to 10M					
Resistance tolerance	%	10					
Values		E6 preferred					
Ambient temperature range	°C	-55 to 155					

Note 1: No LEV applies to CDR; the maximum operating voltage (dc or ac rms) is given by √(Pr.R), where Pr is the relevant power rating for air or fluid and R is the resistance value.
Note 2: Overload voltages are dc or ac peak values.

Physical Data

Dimensions (mm) and weight (g)							
Type	L ±1	H ±1	W ±0.5	D Ø ±0.05	P [1] ±1.0	F ±5	Weight
CDR01	25.4	12.7	2.25	0.8	20.3	50	2
CDR02	25.4	12.7	2.75	0.8	20.3	50	2.5
CDR03	33.9	20.33	2.25	0.8	30.5	60	3.5
CDR04	33.9	20.33	2.75	0.8	30.5	60	5
CDR05	50.8	25.4	2.25	0.8	45.7	60	5.8
CDR06	50.8	25.4	2.75	0.8	45.7	60	8.2



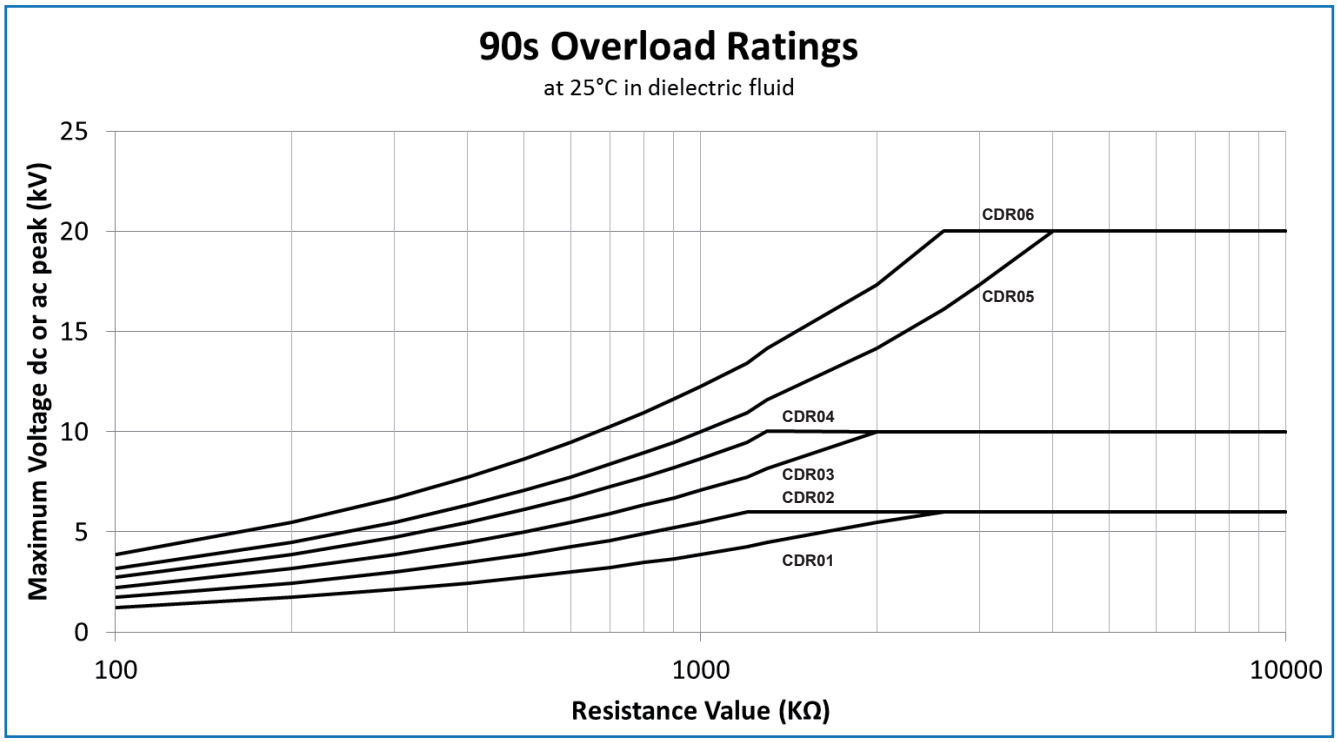
Note 1: Termination pitch dimension P is measured between the lead centres at 1mm from the resistor body.

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

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Overload Performance



Construction

CDR is a high voltage planar style resistor. Pd/Ag terminations are printed and fired onto the front face of a 96% alumina substrate. A resistor material is printed with a high voltage design between the terminations and after firing gives an excellent high voltage performance. This is then laser adjusted to target value before being coated in a glass material. Hot tin dipped copper wire terminations are then fitted using Sn/Ag/Cu solder. The product is 100% measured for resistance value. It is cleaned of all flux residues and ionic contamination in order to ensure compatibility with capacitor dielectric fluid applications.

Marking

Type and resistance value are legend marked on the front of the component.

Termination Lead Pull Strength

Each termination lead shall withstand a tensile load of 1kg at an angle of 90° to the plane of the resistor, with no mechanical failure admitted, such as breaking of the resistor substrate or shearing of the termination lead wire or solder.

Solderability

The terminations meet the requirements of IEC 115-1 Clause 4.17.3.2

Performance Data

		Requirement	Typical
Load at rated power in air (1000 hours at 70°C)	ΔR%	≤1	<0.25
Load at rated power in fluid (1000 hours at 70°C)	ΔR%	≤1	<0.25
Derating from power at 70°C		Zero at 155°C	
Vibration (9-200Hz @ 5mm / 50ms^{-2}, 10 sweeps @ 1 octave / min, 3 axes)	ΔR%	≤1	<0.25
Termination pull strength (applied at 90° to plane of body, no damage visible)	kg	≥1	>4
Overload in dielectric fluid (90s at 25°C, see Overload Ratings graph)	ΔR%	≤0.5	<0.1

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Bi technologies IRC Welwyn

www.ttelectronicsresistors.com

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CDR Series

Ordering Procedure

Part Number: CDR04-680KKB01 (CDR04, 680 kilohms ±10%, bulk packed)

C	D	R	0	4	-	6	8	0	K	K	B	0	1
1						2				3	4		

1 Type	2 Value	3 Tolerance	4 Packing		
CDR01	E6 = 3/4 characters	K = ±10%	B01	all sizes	100/box
CDR02	K = kilohms				
CDR03	M = megohms				
CDR04					
CDR05					
CDR06					

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