

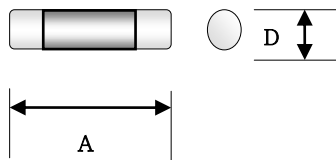
Product Specification	Part
Low Voltage Power Resistors (NON Inductive)	CQL Series

1. CQL Cylinder Resistors is Non-Inductive.  
 This type is designed to CVD-Cu / CVD-Ni / CVD-MOR / CVD-Carbon / CVD-Metal.

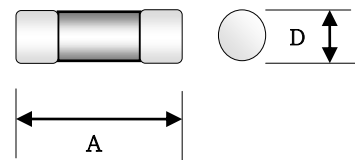
**Voltage : 400V to 1000V**

**Power : 0.1W to 10W**

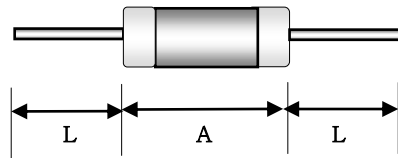
**Resistance : 0.1 ohm to 50K ohm**



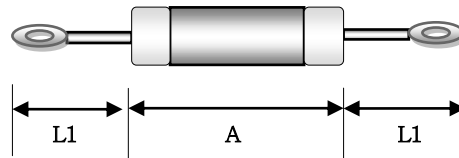
**Type A**



**Type B**



**Type B1**



**Type B2**

2. Part Type Designations (Unit : mm)

Part	Type	A	D	L	L1
CQL10A	A	2.70	1.30		
CQL10B	B B1	3.00	1.60	33.50	
CQL20A	A	5.20	1.70		
CQL20B	B B1	5.50	2.00	33.50	
CQL30A	A	10.00	3.00		
CQL30B	B B1	11.00	4.00	33.50	
CQL50A	A	16.00	5.00		
CQL50B	B B1 B2	17.00	6.00	33.50	16.50

Note: Other size and resistance values available upon request.

### 3. Ordering Information

Part No.	Type	CAP	CVD	Power	TCR	Resistance	Tolerance
CQL10A-500NI	A	Non	Ni	1/6W	C(100ppm/C)	50 ohm	+/-1%. 3%
CQL10B-500CR	B	Cap	Carbon	1/6W	C(100ppm/C)	50 ohm	+/-1%. 3%
CQL10B1-500MR	B1	Cap Lead	Metal	1/6W	C(100ppm/C)	50 ohm	+/-1%. 3%
CQL10B1-500MOR	B1	Cap Lead	MOR	1/6W	C(100ppm/C)	50 ohm	+/-1%. 3%
CQL20B-500MR	B	Cap	Metal	1/2W	C(100ppm/C)	50 ohm	+/-1%. 3%
CQL30B-500MR	B	Cap	Metal	1W	C(100ppm/C)	50 ohm	+/-1%. 3%
CQL50B-500MR	B	Cap	Metal	3W	C(100ppm/C)	50 ohm	+/-1%. 3%
CQL50B2-500MOR	B2	Lead Mount	MOR	3W	C(100ppm/C)	50 ohm	+/-1%. 3%

Note: Other size and resistance values available upon request.

### 4. Rating.

#### 4-1. Rating Power (Fig.1)

Resistors have power rating based on full load operation at terminals temperature from - 55C to + 155C. Operating power shall be derated as figure 2 in operating at excess of + 155C of terminal temperature.

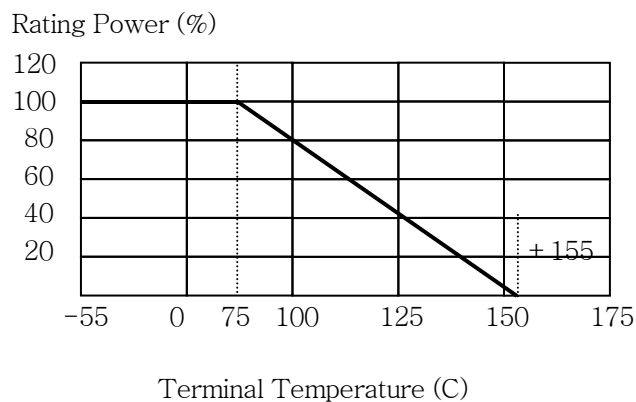


Fig.1

#### 4-2. General Electrical Specifications

Items	Specification	Condition
Part	CQL Series	
Rating Power	0.1W to 10W	4-1
Resistance Values	0.1 ohm to 50K ohm	Standard
Voltage	400V to 1000V	
VSWR(Max)	1.20 : 1	
Temp. Coefficient of Resistance.	+/-100ppm/C	-55C to + 155C
Tolerance of Resistance	+/- 1% 3%	Standard

Note: Other size and resistance values available upon request.

#### 4. Electrical and mechanical Specifications

Items	Specifications	Test Conditions
Operation Temp. Range	-55- + 155 C	
Storage Temp. Range	-55 - + 155 C	
Withstanding Voltage	1,500 Volt	60 seconds.
Load Life	+ /-(1.0 %+ 0.05 ohm)	25C, 90min.ON, 30min.OFF, 1000hours.
Humidity	+ /- (1.0 %+ 0.05 ohm)	40C, 90-95%RH, DC 0.1W, 1000hours.
Temperature Cycle	+ /- (0.25 %+ 0.05 ohm)	-55C, 30 min., + 225C 30min., 5cycles.
Soldering Heat	+ /- (0.25 %+ 0.05 ohm)	350+ /-5C, 3seconds,
Solderability	Over 3/4 of surface	230+ /-5C, 3seconds.
Insulation Resistance	Over 1000 M ohm	Between terminals and resistor body.
Vibration	+ /- (0.25 %+ 0.05 ohm)	

#### 5. Quality Assurance

Cqtel shall be assure to the CiTEL customers of the resistors quality. Receiving fault report from the customer, analyzing the cause of fault and reporting of QA to the customer shall be obligation of Cqtel, because brand of the resistor and CQL series is right of CiTEL.

#### 6. Country of Origin

The resistors are produced at main factory of CiTEL Co., Ltd.