Innovative Service Around the Globe YAGEO

DATA SHEET

MOLDED RESISTORS

Low Ohmic, Current Sense
LCR Series

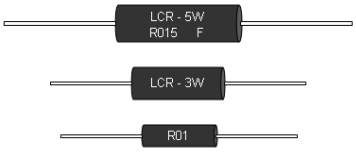
±1%, ±2%, ±3%, ±5%

1W to 10W

RoHS compliant & Halogen Free

YAGEO

Product specification – September 27, 2023 V.1



ORDERING INFORMATION

Part number of the low ohmic, current sense type molded resistor are identified by the series, power rating, tolerance, packing, temperature coefficient and resistance value.

APPLICATIONS

- RF Power Amplifier, snubber circuit
- Switching mode power supply
- Low power impulse loading

FEATURES

- Low resistance
- Low inductance
- Small package size
- Excellent load life stability
- RoHS compliant & halogen-free

PART NUMBER

LCR	**100**	**F**	**B**	**-**	**0R015**
(1)	(2)	(3)	(4)	(5)	(6)

(1) SERIES NAME

LCR Series

(2) POWER RATING

100= 1W	500 = 5W
300 = 3W	10A = 10W

(3) TOLERANCE

F = ±1%	H= ±3%
G = ±2%	J = ±5%

(4) PACKAGING

B = Bulk

(5) TEMPERATURE COEFFICIENT OF RESISTANCE

- = Based on spec.

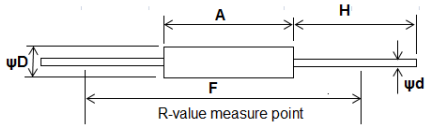
(6) RESISTANCE VALUE

Example:

0R005 = 0.005Ω, 0R01 = 0.01Ω, 0R1 = 0.1Ω

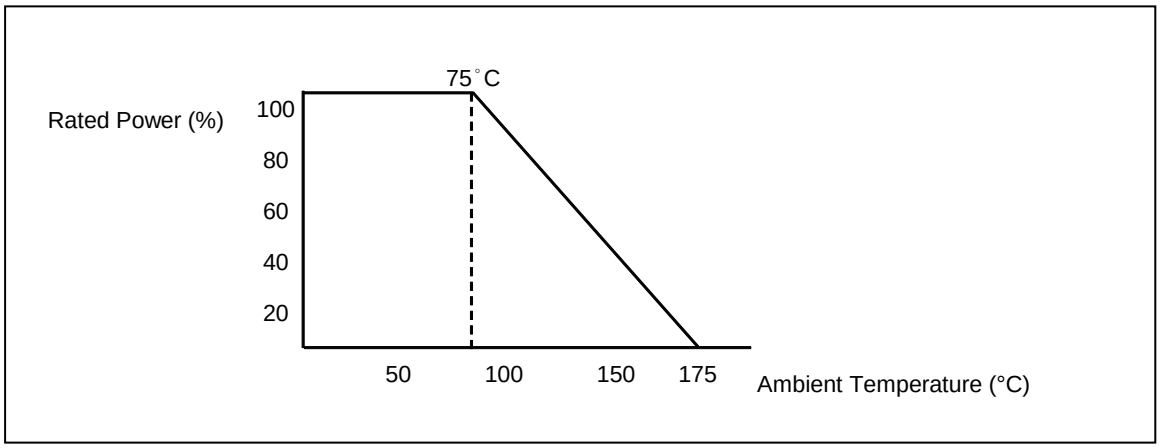
DIMENSIONS

Unit: mm



Normal	A	ψD	ψd	H	F
LCR100	11.0±1.0	3.0 ± 0.5	0.6 ± 0.05	33 ± 3.0	31 ± 2.0
LCR300	14.0±1.0	5.2 ± 0.5	0.8 ± 0.05	30 ± 3.0	34 ± 2.0
LCR500	24.0±1.0	8.4 ± 0.5	1.0 ± 0.05	30 ± 3.0	44 ± 2.0
LCR10A	46.5±1.0	10.0 ± 0.5	1.0 ± 0.05	36 ± 3.0	66 ± 2.0

DERATING CURVE



ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	LCR100	LCR300	LCR500	LCR10A
Power Rating at 75 °C	1W	3W	5W	10W
Operating Temp. Range	0.02Ω~0.8Ω	0.005Ω~0.8Ω	0.01Ω~0.8Ω	0.01Ω~0.8Ω
Voltage Proof on Insulation	500V	500V	500V	500V
Maximum Working Voltage	√(P X R)			
Operating Temp. Range	- 55°C to +175°C			
Temperature Coefficient	≦200ppm/°C			

Note: For resistance value out of above range is by request.

TEST AND REQUIRMENTS

TEST	TEST METHOD	PROCEDURE	APPRAISE
Short Time Overload	IEC 60115-1 4.13	At 5 times of the rated power for 5 sec	±(0.5%+0.0005Ω)
Voltage Proof on Insulation	IEC 60115-1 4.7	In V-Block for 60 sec. test voltage as above table	No Breakdown
Temperature Coefficient	IEC 60115-1 4.8	Between -55°C to +155°C	By Type
Insulation Resistance	IEC 60115-1 4.6	In V-Block for 60 sec.	>10,000MΩ
Solderability	IEC 60115-1 4.17	245±5°C for 3±0.5 Sec.	95% Min. coverage
Damp Heat Steady State	IEC 60115-1 4.24	40±2°C,90-95% RH for 1000 Hr., loaded with 0.1 times RCWV (1.5 Hr.on,0.5 Hr. off)	±(1.0%+0.0005Ω)
Endurance at 70°C	IEC 60115-1 4.25	70±2°C at RCWV(or Umax., whichever less) for 2,000 Hr.(1.5 Hr.on,0.5 Hr. off)	±(2.0%+0.0005Ω)
Temperature Cycling	IEC 60115-1 4.19	-55°C ➔ Room Temp. ➔ +125°C ➔Room Temp.(5 cycles)	±(0.2%+0.0005Ω)
Endurance at upper category temperature		275 ±3°C (+175±3°C for LCR100) for 250 hours	±(2.0%+0.0005Ω)
Endurance at lower category temperature		-65 ± 3°C for 24 hours	±(2.0%+0.0005Ω)

Note:.

RCWV (Rated Continuous Working Voltage):

The DC or AC (rms) continuous working voltage corresponding to the rated power is determined by the following formula:

$V=\sqrt{(P \times R)}$
or max. working voltage whichever is less

Where

V=Continuous rated DC or
AC (rms) working voltage (V)

P=Rated power (W)

R=Resistance value (Ω)

MARKING

Example:	
LCR	= Series
5W	= Power rating
R015	= Resistance
F	= Tolerance

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 1	Sep.5, 2023	-	- Update legal disclaimer
Version 0	Aug.11, 2021	-	- First issue of this specification

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