

20W 0.5Ω BeO Chip Resistor w/ Isolated Center Pad

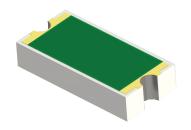
RYC2010JA-R500JN-99

Actual Size

RYC2010JA-R500JN-99 Features:

- Wraparound w/ Isolated Center Pad Configuration
- · Wirebond or Epoxy Attachment
- · Customer Defined Testing Available
- · Non-Magnetic

- RoHS Compliant
- Tape & Reel or Waffle Pack Available (Standard is bulk)
- 5% Resistor Tolerance



RYC2010JA-R500JN-99 Parameters:

Resistance: $0.5\Omega \pm 5\%$ (see page two for methodology)

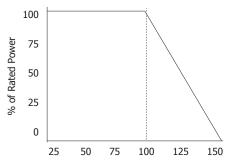
Rated Power: 20W*

Construction: Thick Film on 0.040" BeO

Terminal Metallization: Gold over Platinum Palladium Gold

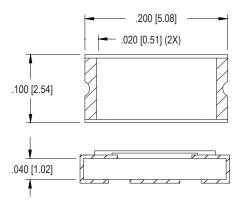
Operating Temperature: -55 to +150°C

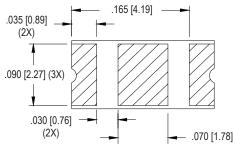
RYC2010JA-R500JN-99 Power Derating Curve



Baseplate Temperature °C

RYC2010JA-R500JN-99 Dimensions:

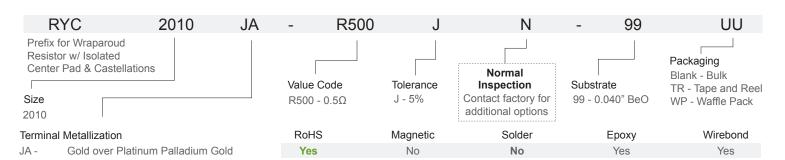






Dimensions in inches [mm]
Tolerance is ± 0.005 [0.13]
unless otherwise stated

Ordering Information:



Barry Industries reserves the right to change part number and/or process without notification.



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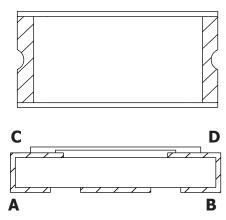
^{*} Rating based on ≤100°C constant baseplate temperature



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RYC2010JA-R500JN-99 DC Resistance Testing Methodology:



The expected application of this device is current measurement. In this application the device would be mounted to a circuit board with the current entering and leaving through the points marked "A" and "B" in the illustration above. The voltage used to determine the current would be measured using a device attached at points "C" and "D" with wire bonds. Since there is additional resistance between point "A" and point "C" and between point "B" and point "D", the resistance cannot be in tolerance for both sets of terminals. Given that the accuracy of the measured current depends upon the accuracy or the resistance at the point where the voltage is measured, we trim the resistance value measuring between point "C" and point "D". The maximum resistance from point "A" to point "B" has been established as 1.0 ohm.

RYC2010JA-R500JN-99 Reliability Data:

Parameter:	Test Condition:	Results:
Short Time Overload	Apply 1.1x Rated Power for 5 Seconds.	≤ 5.0% Resistance Shift
Rated Load Life	Apply 1/2 Power Under 40°C ±2°C 90 Minutes on/ 30 Minutes off. Repeat for 100 hours	≤ 5.0% Resistance Shift
Moisture Resistance	MIL-PRF-55342 para 4.8.9 95% RH, 25°C - 65°C	≤ 5.0% Resistance Shift
Resistance to Bonding Exposure	MIL-PRF-55342 Para 4.8.8.2	≤ 5.0% Resistance Shift
High Temperature Storage	125°C ±2°C for 500 Hours	1.) ≤ 5.0% Resistance Shift2.) No Significant Abnormality (Visual)
Thermal Shock	-65°C to +150°C 30 Minutes Dwell, 5 Cycles	1.) ≤ 5.0% Resistance Shift2.) No Significant Abnormality (Visual)

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