RESISTOR **CVD DIAMOND 50 WATTS, BENT TAB**



DATA SHEET PART SERIES: CR0505DXXX,5TB Dwg 1013135

EN 15-0113 Revision A

FEATURES

APPLICATIONS

Small Size - Light Weight

Highest Thermal Performance Possible **Excellent Peak Power Capability**

Rugged Passivated TaN Film

Moisture Resistant Pure Gold Input Pads

Wire Bondable or Solderable

High Power

Broadcast

High Power Filters High Power Amplifiers

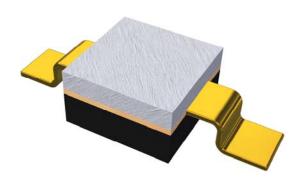
Instrumentation

Isolators

Military

Satellite Communications

Phased Array Radar



GENERAL DESCRIPTION

CVD Diamond Resistors offer extremely high power ratings and smallest size watt-per-watt of any resistor on the planet. These resistors are ideal for military and space applications because of their high power capability, broad frequency response and small, lightweight size. They are ideal for peak power applications. They are manufactured using all thin film construction and have a pure thin film gold finish that is both wire bondable and solderable. They can be supplied with or without solderable tabs. High reliability tested versions per MIL-PRF-55342 are also available. These products are lead free, RoHS compliant and S-level approved. They also meet NASA outgassing requirements for space applications.

ORDERING INFORMATION

Part Identifier:

CR0505DXXX,5TB

Attenuation Value

SPECIFICATIONS

1.0 ELECTRICAL

Nominal Impedance: $50 \& 100 \Omega \pm 5\%$ DC - 18 GHz Frequency Range: Typical Capacitance: 0.1 pF Typical Input Power: 50 Watts

Peak Power: 500 Watts (1us pulse width, 1% duty cycle)

2.0 ENVIRONMENTAL

Operating Temperature: -55°C To +125°C -55 °C To +150 °C Non-operating Temperature: Temperature Coefficient: ±200 PPM/°C Max

3.0 MARKING

Unit Marking: None

4.0 QUALITY ASSURANCE

Sample Inspect Per MIL-STD-105, Level II, 1.0% AQL. Visual and Mechanical Inspection for Conformance to Outline Drawing Measure DC Resistance Data Retention - Standard

5.0 PACKAGING

Standard: Waffle Packaging Optional: Tape and Reel

> Rev -Cage Codes: 24602 / 2Y194 www.emc-rflabs.com • +1 772-286-9300 Specifications are Subject to Change Without Notice AS 9100, ISO 9001 and 14001 Certified

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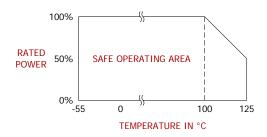
6.0 MECHANICAL

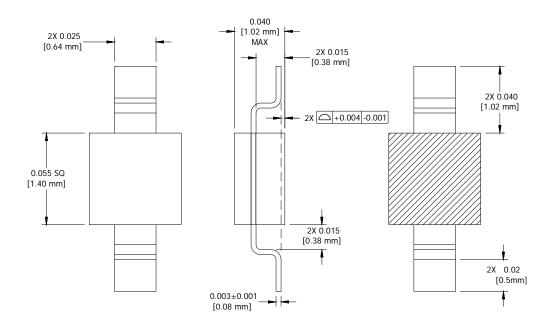
Substrate Material: **CVD** Diamond Resistive Element: Thin Film Cover Material: Alumina

Ground Plane Metallization: Gold over Platinum Terminal Metallization: Gold over Nickel

> Tabs: Beryllium Copper; Gold Plated

Provided for reference only Metric Dimensions:





TOLERANCE: $X.XX = \pm 0.01$ $X.XXX = \pm 0.005$ Unless Otherwise Specified: