TERMINATION CVD DIAMOND CHIP 10 WATT



DATA SHEET PART SERIES: CT0402D Dwg 1011105

EN 13-3904

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

Higher Power Filters

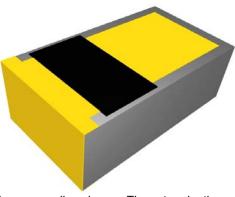
High Power Amplifiers

Instrumentation

Isolators Military

Satellite Communications

Phased Array Radar



GENERAL DESCRIPTION

CVD Diamond Chip Terminations offer a unique combination of extreme high power ratings in very small packages. These terminations may be used in applications up to 30 GHz and are ideal for applications with requirements for high power capability, broad frequency response, small footprint and light weight. The terminations are manufactured using all thin film construction and have a gold finish that it both wire bondable and solderable. This total thin film construction also makes them ideal for peak power applications. High reliability tested versions based on MIL-PRF-55342 are also available. Select from tape and eel, bulk, or waffle packaging. These products are also lead free, RoHS compliant and S-level approved.

ORDERING INFORMATION

Part Identifier: CT0402D

SPECIFICATIONS

1.0 ELECTRICAL

Nominal Impedance: $50 \Omega \pm 5\%$

Frequency Range: DC - 26.5 GHz

Input Power CW: 10 Watts

Peak Power: 100 Watts (1 µs pulse width/1% duty cycle)

VSWR: DC - 8.0 GHz 1.35:1

> 8.0 - 12.4 GHz 1.50:1 12.4 - 18.0 GHz 1.70:1 18.0 - 26.5 GHz 1.95:1

2.0 ENVIRONMENTAL

Operating Temperature: -55 °C To 150 °C -55 °C To 150 °C Storage Temperature: Temperature Coefficient: +200 PPM/°C Max

3.0 MARKING

Unit Marking: None

4.0 QUALITY ASSURANCE

Smiths microwave Form 423F125 Rev A

Sample Inspect Per ANSI/ASQC Z1.4 General Inspection, 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

> Cage Codes: 24602 / 2Y194 www.emc-rflabs.com • +1 772-286-9300 AS 9100, ISO 9001 and 14001 Certified

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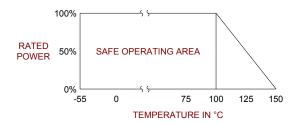
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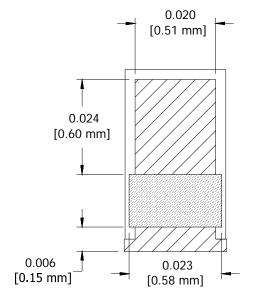
6.0 MECHANICAL

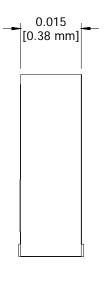
Substrate Material: **CVD** Diamond Terminal Material: Gold over Nickel Ground Plane Material: Gold over Platinum

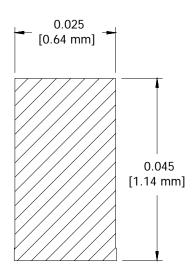
Resistive Element: Thin Film

Metric Dimensions: Provided for reference only









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