TERMINATION CVD DIAMOND CHIP 50 WATTS



DATA SHEET PART SERIES: CT0603D SHEET 1 OF 2 Dwg 1011535

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: CT0603D

SPECIFICATIONS

1.0 ELECTRICAL

Nominal Impedance: $50 \Omega \pm 5\%$ DC - 28 GHz Frequency Range: Input Power CW: 50 Watts

Peak Power: 500 Watts (1 µs pulse width/1% duty cycle)

VSWR: 1.6:1 Max

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

None Unit Marking:

4.0 QUALITY ASSURANCE

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

Smiths microwave Form 423F125 Rev A 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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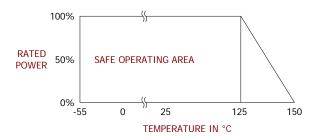
EN 13-3904 Revision -

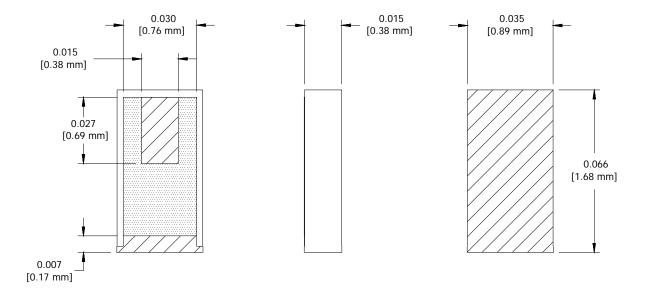
6.0 MECHANICAL

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: $X.XX = \pm 0.01$ $X.XXX = \pm 0.005$