

# TERMINATION

## CVD DIAMOND 50 WATTS, BENT TAB



DATA SHEET

PART SERIES: CT0505DTB

SHEET 1 OF 2  
Dwg 1013175

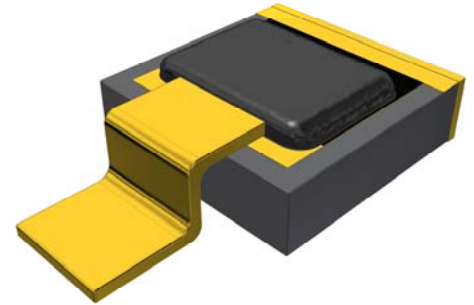
EN 14-1228  
Revision A

### FEATURES

- 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

### APPLICATIONS

- Broadcast
- High Power Filters
- High Power Amplifiers
- Instrumentation
- Isolators
- Military
- Satellite Communications
- Phased Array Radar



### GENERAL DESCRIPTION

CVD Diamond Terminations offer extremely high power ratings and smallest size watt-per-watt of any termination on the planet. These terminations are ideal for military and space applications because of their high power capability, broad frequency response and small, light-weight 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 out-gassing requirements for space applications.

### ORDERING INFORMATION

**Part Identifier:** CT0505DTB

### SPECIFICATIONS

#### 1.0 ELECTRICAL

Nominal Impedance:	50 $\Omega$ $\pm$ 5%
Frequency Range:	DC – 20 GHz
Input Power:	50 Watts
Peak Power:	500 Watts (1 $\mu$ s pulse width/1% duty cycle)
VSWR:	1.6:1 Max

#### 2.0 ENVIRONMENTAL

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

#### 3.0 MARKING

Unit Marking:	None
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#### 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

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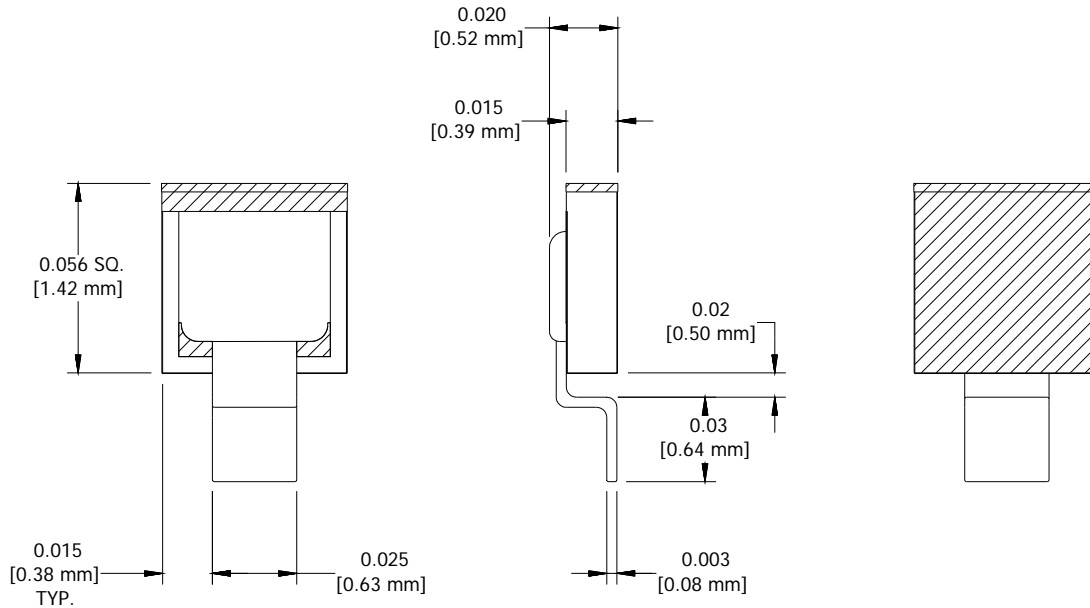
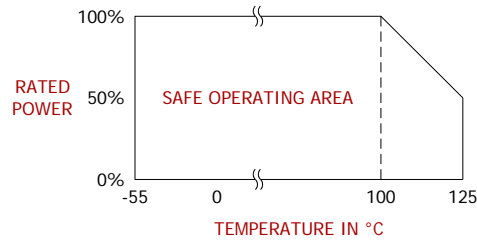
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### 6.0 MECHANICAL

Substrate Material:	CVD Diamond
Resistive Element:	Passivated TaN
Ground Plane Metallization:	Gold over Platinum
Terminal Metallization:	Gold over Nickel
Tabs:	Beryllium Copper; Gold Plated
Metric Dimensions:	Provided for reference only



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