

# TERMINATION, HIGH RELIABILITY CVD DIAMOND 20 WATT, FORMED TAB



DATA SHEET

PART SERIES: HMXCT0505DTB

SHEET 1 OF 2  
Dwg 1013055

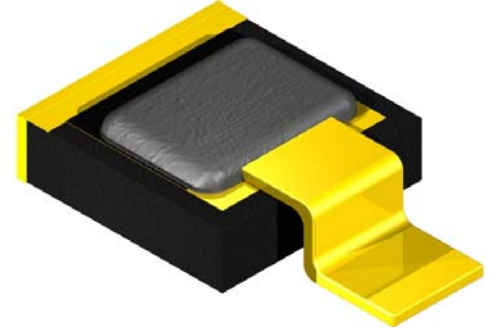
EN 14-0982  
Revision A

## 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:

HMXCT0505DTB  
└ Group A, B, or C Testing

## SPECIFICATIONS

### 1.0 ELECTRICAL

Nominal Impedance:	50 $\Omega$ $\pm$ 5%
Frequency Range:	DC – 10 GHz
Input Power:	20 Watts
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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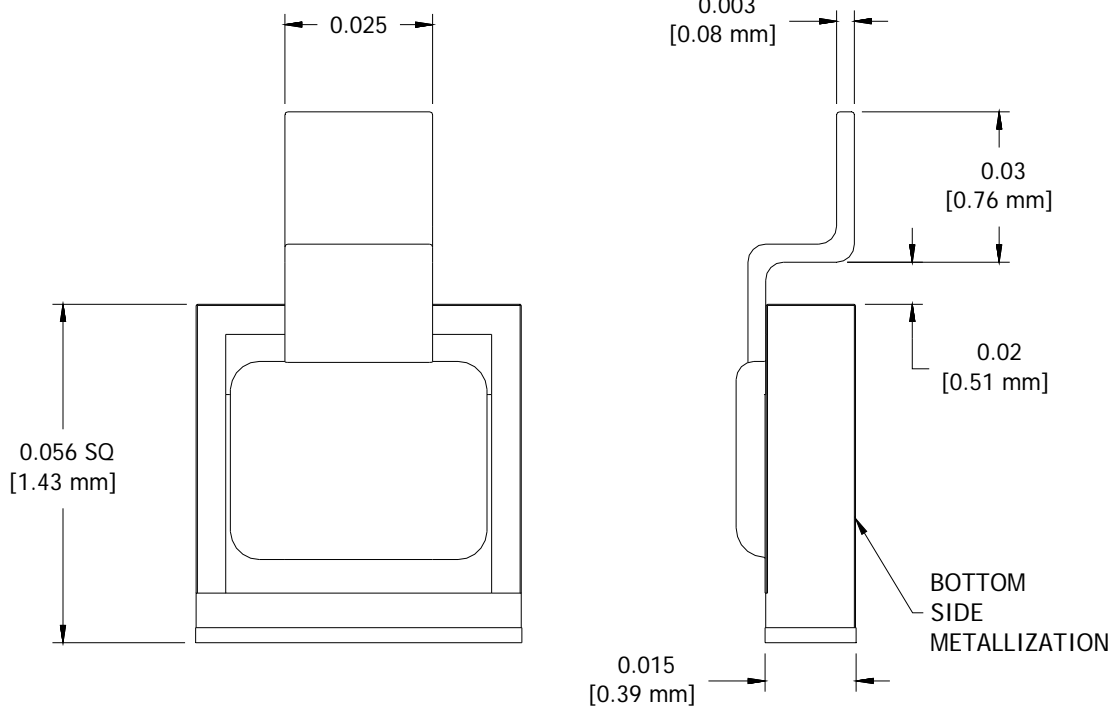
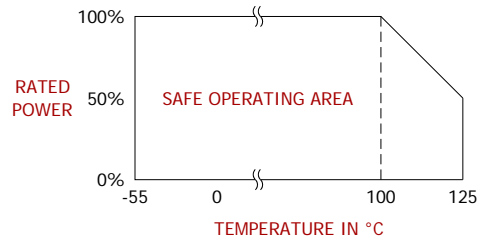
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## 6.0 MECHANICAL

Substrate Material:	CVD Diamond
Resistive Element:	Passivated TaN
Metallization: Bottom Side:	Platinum (1200 Angstroms Nominal) Gold (1500 Angstroms Nominal)
Tabs:	Gold Plated
Metric Dimensions:	Provided for reference only



Unless Otherwise Specified: TOLERANCE: X.XX = ± 0.01 X.XXX = ± 0.005