

# TERMINATION

## CVD DIAMOND CHIP 70 WATTS HIGH REL



DATA SHEET

PART SERIES: HRXCT1310D

SHEET 1 OF 3  
Dwg 1012835

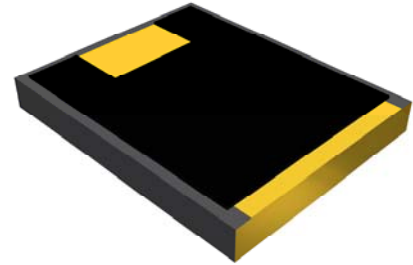
EN 14-1069  
Revision A

### 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
- 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: **HRX1310D**

X= TEST CODE GROUP A, B OR C

### SPECIFICATIONS

#### 1.0 ELECTRICAL

Nominal Impedance:	50 $\Omega$ $\pm$ 5%
Frequency Range:	DC – 14.0 GHz
Input Power CW:	70 Watts
Peak Power:	5000 W (1 $\mu$ s pulse width / 1% duty cycle)
VSWR:	1.40:1 Max

#### 2.0 ENVIRONMENTAL

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

#### 3.0 MARKING

Unit Marking:	None
---------------	------

# TERMINATION

## CVD DIAMOND CHIP 70 WATTS HIGH REL



DATA SHEET

PART SERIES: HRXCT1310D

SHEET 2 OF 3  
Dwg 1012835

EN 14-1069  
Revision A

### 4.0 QUALITY ASSURANCE

- 4.1 VERIFY 100% VISUAL PRE-CAP INSPECTION PERFORMED PER TP-9046
- 4.2 PERFORM GROUP A,B AND/OR C TESTING AS INDICATED BY THE PART NUMBER PER TP-9046
- 4.3 TEST DATA REQUIREMENTS:
  - 4.4.1 TEST DATA REQUIRED FOR CUSTOMER- SEE PARAGRAPH 6.0 OF TP-9046
  - 4.4.2 DATA RETENTION- 24 MONTHS.
  - 4.4.3 TEST SAMPLES REQUIRED FOR CUSTOMER

### 5.0 PACKAGING

Standard: Waffle Packaging

# TERMINATION

## CVD DIAMOND CHIP 70 WATTS HIGH REL



DATA SHEET

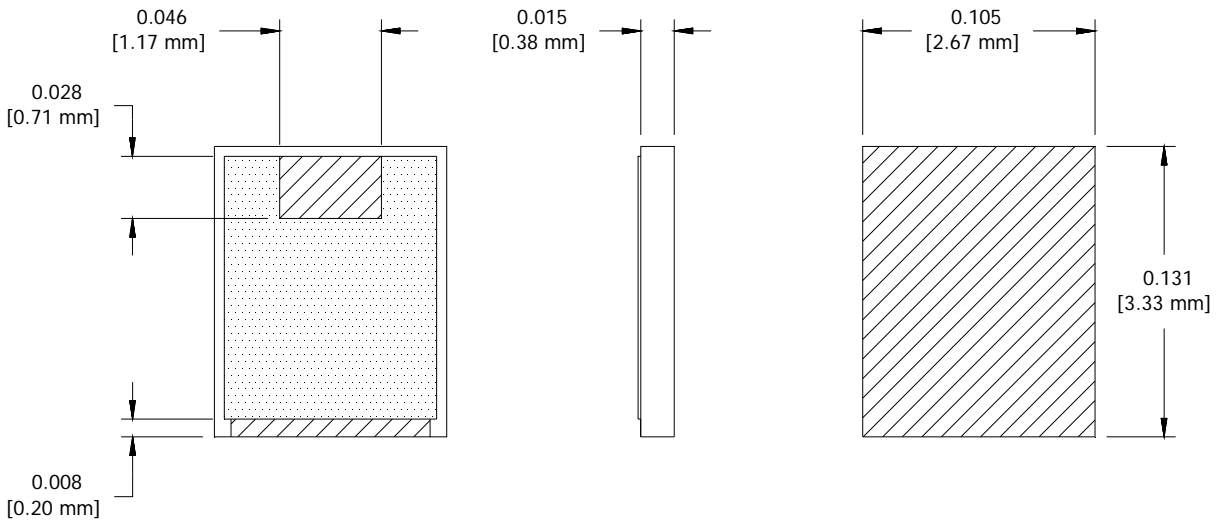
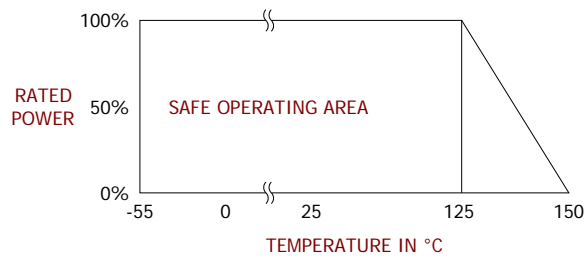
PART SERIES: HRXCT1310D

SHEET 3 OF 3  
Dwg 1012835

EN 14-1069  
Revision A

### 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 = ± 0.01 X.XXX = ± 0.005