

# ATTENUATOR CVD DIAMOND FLANGE MOUNT



DATA SHEET

PART SERIES: CA0505D XXFT

SHEET 1 OF 2  
Dwg 1013095

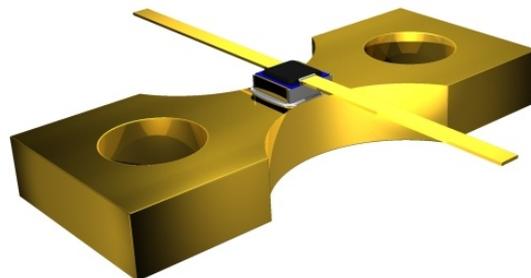
EN 15-1869  
Revision A

## FEATURES

- DC - 18 GHz
- CVD Diamond Substrate
- Small Size
- Highest Thermal Performance
- Excellent Peak Power Capability
- Self Passivated Thin Film Resistors
- Unaffected By Moisture
- Integrated Heat Sink

## APPLICATIONS

- Stabilize Amplifiers
- Improve VSWR Between Stages
- Protect Inputs from Overload
- Set Amplification Gain/Power
- Isolate Oscillators
- Isolate Couplers
- Sample Output Power
- Ideal for Space and Military



## GENERAL DESCRIPTION

CVD Diamond Flange Attenuators offer extremely high power ratings and smallest size watt-per-watt of any attenuator configuration on the planet. These attenuators may be used in applications up to 30 GHz and are ideal for military and space applications because of their high power capability, broad frequency response and small, light-weight size. These attenuators are processed using all thin film construction. They are ideal for peak power applications. High reliability tested versions per MIL-PRF-55342 are also available. These products are S-level approved.

## ORDERING INFORMATION

### Part Identifier:

CA0505D XXFT

Attenuation Value

## SPECIFICATIONS

### 1.0 ELECTRICAL

- Nominal Impedance: 50 ohms
- Frequency Range: DC - 18 GHz
- Attenuation Values Available: 0-10, 20, 30 dB
- Attenuation Accuracy:

ATTENUATION ACCURACY (dB)			
dB VALUE	DC – 8 GHz	8 -12.4 GHz	12.4 – 18 GHz
0 – 10	+ 0.25	+ 0.30	+ 0.50
20	± 0.50	± 0.50	± 0.75
30	± 0.50	± 0.50	± 1.00

- Input Power CW: 20 Watts
- Peak Power: 200 Watts (1 μs pulse width/1% duty cycle)
- VSWR:

VSWR (MAX)			
dB VALUE	DC – 8 GHz	8 -12.4 GHz	12.4 – 18 GHz
0-10, 20, 30	1.25:1	1.30:1	1.40:1

### 2.0 ENVIRONMENTAL

- Operating Temperature: -55°C to +150°C
- Non-operating Temperature: -65°C to +150°C

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## 3.0 MARKING

Unit Marking: None

## 4.0 QUALITY ASSURANCE

Sample Inspect Per MIL-STD-105, Level II, 1.0% AQL.

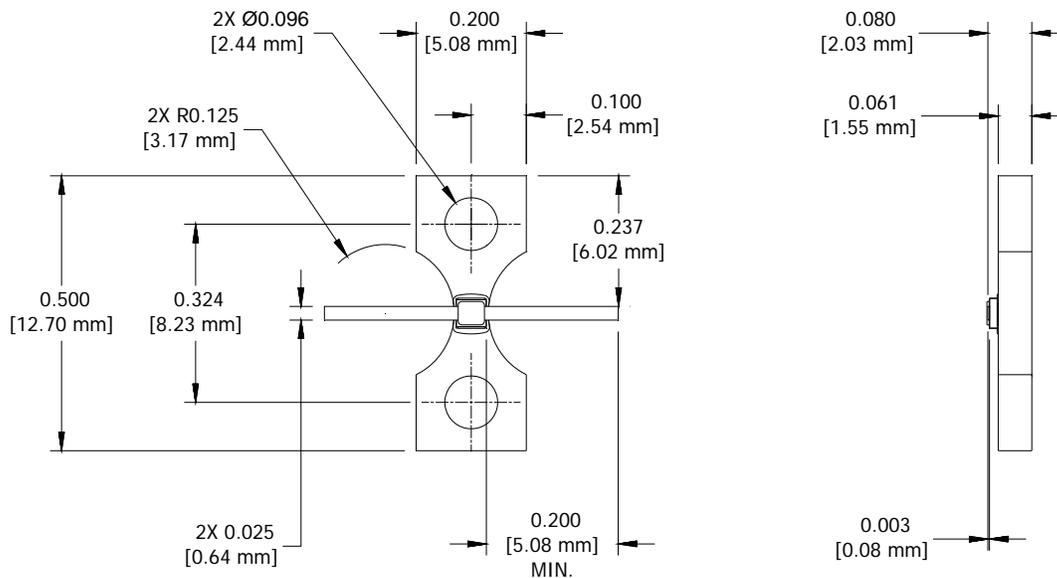
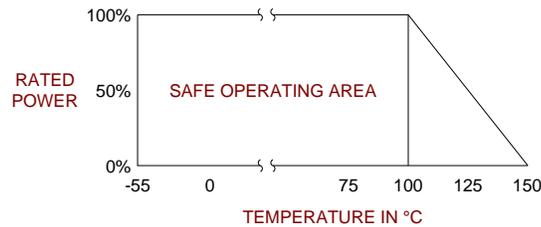
Visual and Mechanical Inspection for Conformance to Outline Drawing  
Measure DC Attenuation  
Data Retention - Standard

## 5.0 PACKAGING

Standard: Jewel Case

## 6.0 MECHANICAL

Substrate Material: CVD Diamond  
Tab Material: Beryllium Copper: Gold over Nickel plating  
Heat Sink: Copper, Gold over Nickel  
Resistive Element: Passivated TaN  
Workmanship: Per MIL-STD-454 Req. 9  
Metric Dimensions: Provided for reference only



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