

## ATTENUATOR HIGH RELIABILITY CHIP

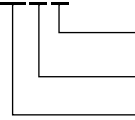
DATASHEET

PART SERIES: HR5XXXXW3S

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Doc# HR5XXXXW3S-1010085ECO-082606  
Revision C

## ORDERING INFORMATION

## PART IDENTIFIER: HR5XXXXW3S

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- (X)=Test Code: A=Group A; B=Group B; C=Group C
  - (0) = .0 dB AND (5) = .5 dB
  - (XX)= Whole dB Value (00 – 20 dB see Table 1)

## Engineering Notes:

Single lot and date code available upon request.

Test Times: Group A=2 Weeks

Group B=8 Weeks

Group C=8 Weeks

Standard Lead Time 10 weeks to build product before testing if no stock available.

Assembly DWG: N/A

TABLE 1			
ATTENUATION ACCURACY			
dB	DC - 4 GHz	4 - 8 GHz	8 – 12.4 GHz
0	-0, +0.3	-0, +0.5	-0, +0.5
.5 – 3.5	±0.3	±0.5	±0.5
4 – 6.5	±0.4	±0.5	±0.5
7 – 10.5	±0.5	±0.5	±0.75
11 – 15.5	±0.75	+0.5, -3.0	+0.5, -3.5
16 – 20	±1.0	+0.5, -4.0	+1.0, -6.0

## SPECIFICATIONS

## 1. ELECTRICAL:

Nominal Impedance:	50 Ω
Frequency Range:	DC – 12.4 GHz
Attenuation Values Available:	0-20 dB in 0.5 dB Increments
Attenuation Accuracy:	See Table 1
Attenuation Stability:	0.0001 dB/dB/°C
VSWR:	DC - 4 GHz – 1.25 Max, 4 – 8 GHz – 1.35 Max, 8 – 12.4 GHz – 1.50 Max.
Input Power: 100 Milliwatts CW	Full Rated Power To 125°C, Derated Linearly to 0 Watts at 150°C. Peak Power, 1 Watt for 10μS Pulse Width @ 1% Duty Cycle.

## 2. ENVIRONMENTAL:

Altitude:	Non-Operating: Sea Level to 50,000 Feet. Operating: Sea Level to 50,000 Feet.
Temperature Range:	Non-Operating: -55°C to +150°C Operating: -55°C to +150°C
Vibration:	Per MIL-STD-202, Method 204, Cond. D.
Shock:	Per MIL-STD-202, Method 213, Cond. I.
Moisture Resistance:	Per MIL-STD-202, Method 106 except sub-cycle steps 7A, and 7B and Polarization and Load are not applicable.

### 3. MARKING:

Unit Marking: Marked with color dots. Background color violet for half dB values.  
Legibility and Permanency per MIL-STD-130.

### 4. QUALITY ASSURANCE:

Verify 100% visual pre-cap inspection performed per TP-8965.

Perform Group A, B, and/or C testing as indicated by the part number per TP-8965.

Test Data Requirements:

Test Data required for customer: See paragraph 5.0 of TP-8965.

Data retention: 24 Months.

Test samples required for customer: See paragraph 5.0 of TP-8965.

### 5. PACKAGING:

Standard Pack per 755W002 (Serialized Waffle Pack).

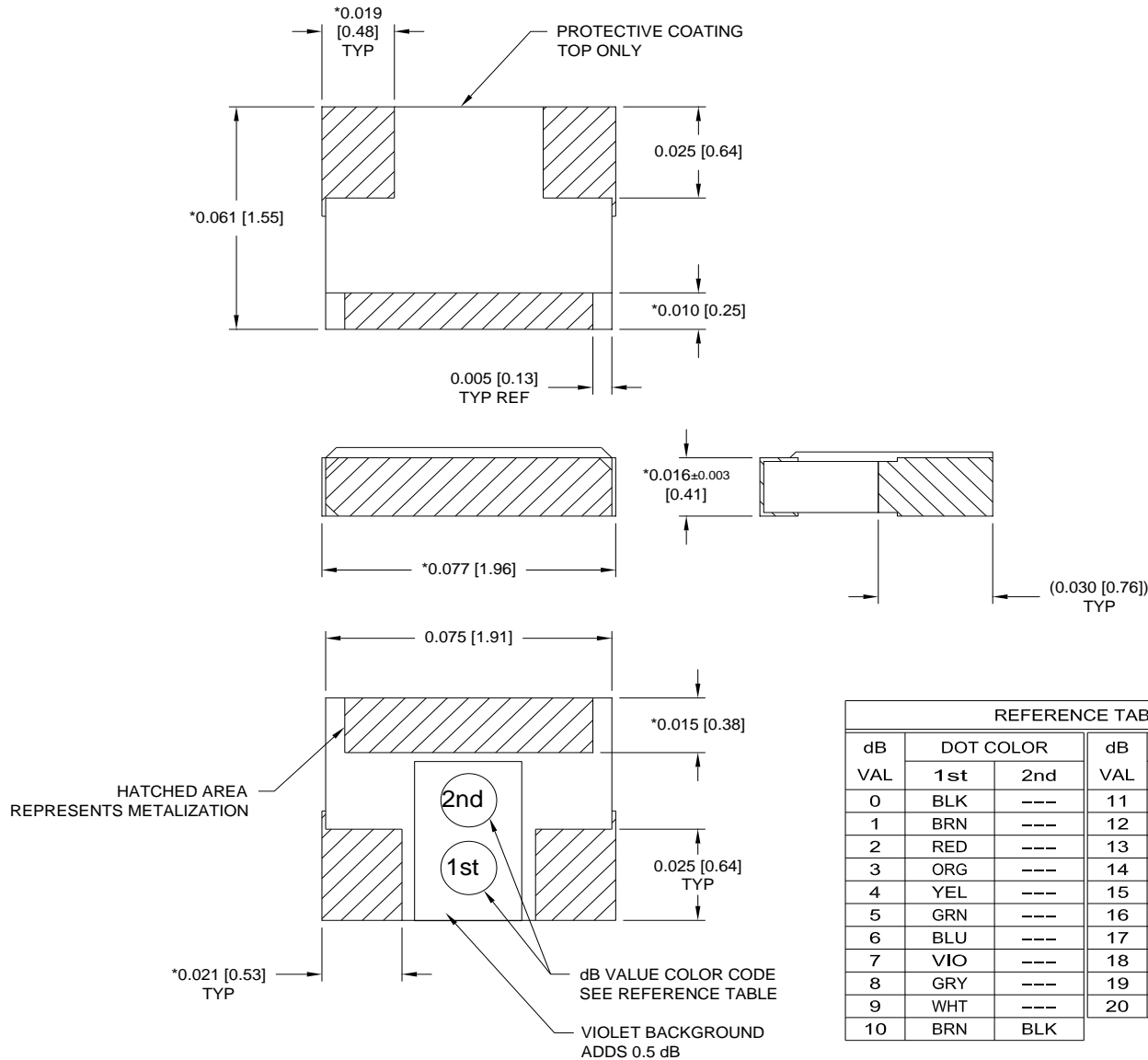
### 6. MECHANICAL:

Substrate Material:	Alumina 96%, MIL - I – 10.
Resistive Element Material:	Thin Film, Tantalum Nitride.
Terminal Material:	Thick Film, Nickel Barrier, Solder Coated.
Metric Dimensions [mm]:	Provided for reference information only.
Workmanship:	Per MIL-PRF-55342.
Outline Drawing:	See Sheet 3.

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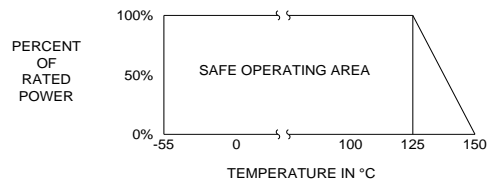
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\* DIMENSIONS APPLY BEFORE SOLDER. ALLOW 0.015 MAX FOR ALL PRETINNED SURFACES.

NOTE: VIOLET PROTECTIVE COATING REPRESENTS HALF dB VALUES.

## POWER RATING AND DERATING



Unless Otherwise Specified Dimensions are in Inches: Tolerance X.XXX = ±0.005