

# ATTENUATOR CHIP 100 mW



DATA SHEET

PART SERIES: TS05XXW3

SHEET 1 OF 3  
Dwg 1003905

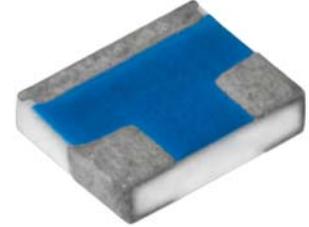
EN 16-1250  
Revision R

## FEATURES

- Small Footprint
- High Power
- Surface Mount
- Low VSWR
- Easy Installation
- Wide Attenuation Offering

## APPLICATIONS

- Mobile Networks
- Broadcast
- High Power Amplifiers
- Isolators/Circulators
- Military
- Instrumentation



## GENERAL DESCRIPTION

EMC Technology offers the widest selection of chip attenuators worldwide. Chip components are offered in Alumina, Aluminum Nitride, Beryllium Oxide, and CVD diamond for maximum performance.

## ORDERING INFORMATION

**Part Identifier:** TS05XXW3  
**(XX) – dB Value**

## SPECIFICATIONS

### 1.0 ELECTRICAL

Nominal Impedance: 50 ohms  
 Frequency Range: DC – 12.4 GHz  
 Attenuation Values Available: 0 – 20 in 1 dB increments  
 Attenuation Accuracy:

| dB      | ATTENUATION ACCURACY |           |              |
|---------|----------------------|-----------|--------------|
|         | DC – 4 GHz           | 4 – 8 GHz | 8 – 12.4 GHz |
| 0       | -0,+ .3              | -0,+ .5   | -0,+ .5      |
| 1 – 3   | ±0.3                 | ±0.5      | ±0.5         |
| 4 – 6   | ±0.4                 | ±0.5      | ±0.5         |
| 7 – 10  | ±0.5                 | ±0.5      | ±0.75        |
| 11 – 15 | ±0.75                | +0.5,-3.0 | +0.5,-3.5    |
| 16 - 20 | ±1.0                 | +0.5,-4.0 | +1.0,-6.0    |

Input Power CW: 100 Milliwatts CW full rated power to 125°C, derated linearly to 0 watts at 150°C.  
 Peak Power: 1 watt for 10us pulse width @ 1% duty cycle.  
 VSWR: DC – 4 GHz - 1.25 Max  
 4 – 8 GHz - 1.35 Max  
 8 – 12.4 GHz - 1.50 Max

### 2.0 ENVIRONMENTAL

Operating Temperature: -55°C to +150°C  
 Non-operating Temperature: -65°C to +150°C  
 Altitude Non-Operating: Sea level to 50,000 feet.  
 Altitude Operating: Sea level to 50,000 feet.  
 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 subcycle steps 7a and 7b and polarization and load Are not applicable.

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## 3.0 MARKING

Unit Marking: Marked with dB value. Legibility and permanency PER MIL-STD-130

## 4.0 QUALITY ASSURANCE

Sample inspect per ansi/asqc z1.4 general inspection, level II, aql = 1.0.

Visual and mechanical examination for conformance to outline dwg requirements.

Perform inspection in accordance with 824W170 and 824F036 for commercial grade product.

Test data requirements:

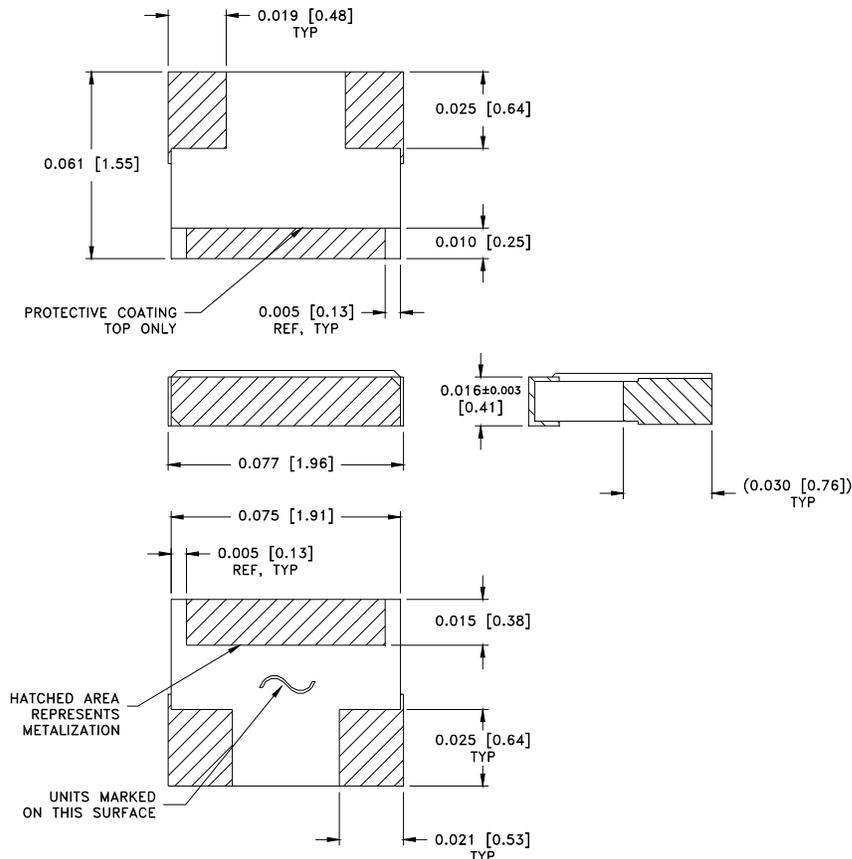
No test data required for customer.

Data retention – 24 months packaging

Standard Packaging: Tape and Reel

## 5.0 MECHANICAL

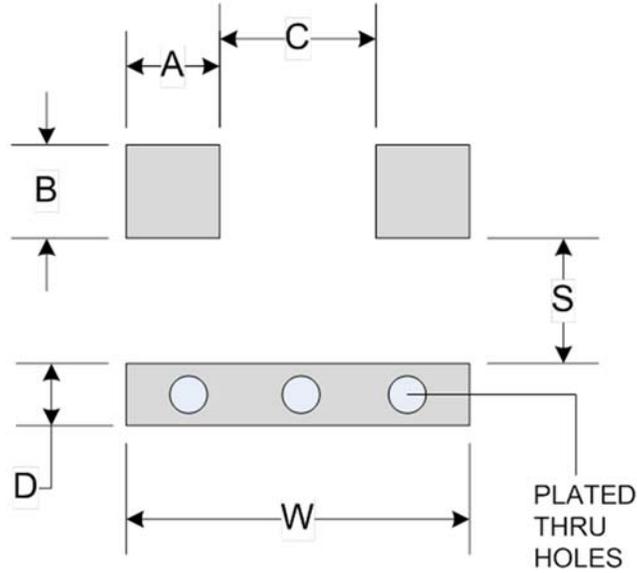
Resistive Film: Thin Film, Tantalum Nitride  
Terminal Material: Thick Film, Nickel Barrier, Solder Plated.  
Metric Dimensions: Provided for reference only  
Workmanship: PER MIL-PRF-55342



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

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## 6.0 SUGGESTED MOUNTING FOOTPRINT



| Part Number        | Inches |       |       |       |       |       | mm   |      |      |      |      |      |
|--------------------|--------|-------|-------|-------|-------|-------|------|------|------|------|------|------|
|                    | A      | B     | C     | D     | S     | W     | A    | B    | C    | D    | S    | W    |
| TS05xxW3 / MTVA-W3 | 0.022  | 0.028 | 0.041 | 0.013 | 0.026 | 0.075 | 0.56 | 0.71 | 1.04 | 0.33 | 0.66 | 1.91 |