

ATTENUATOR CHIP 1 WATT



DATA SHEET

PART SERIES: TS05XXWB1

SHEET 1 OF 2
Dwg 1004135

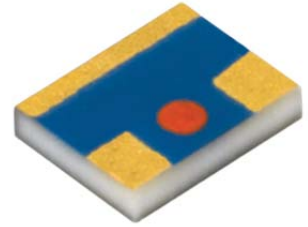
EN 16-0685
Revision K

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: TS05XXWB1
(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:

| ATTENUATION ACCURACY | | | |
|----------------------|------------|-----------|--------------|
| dB | 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
Temperature Coefficient: +/-200 PPM / °C max
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 only with color dot.

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

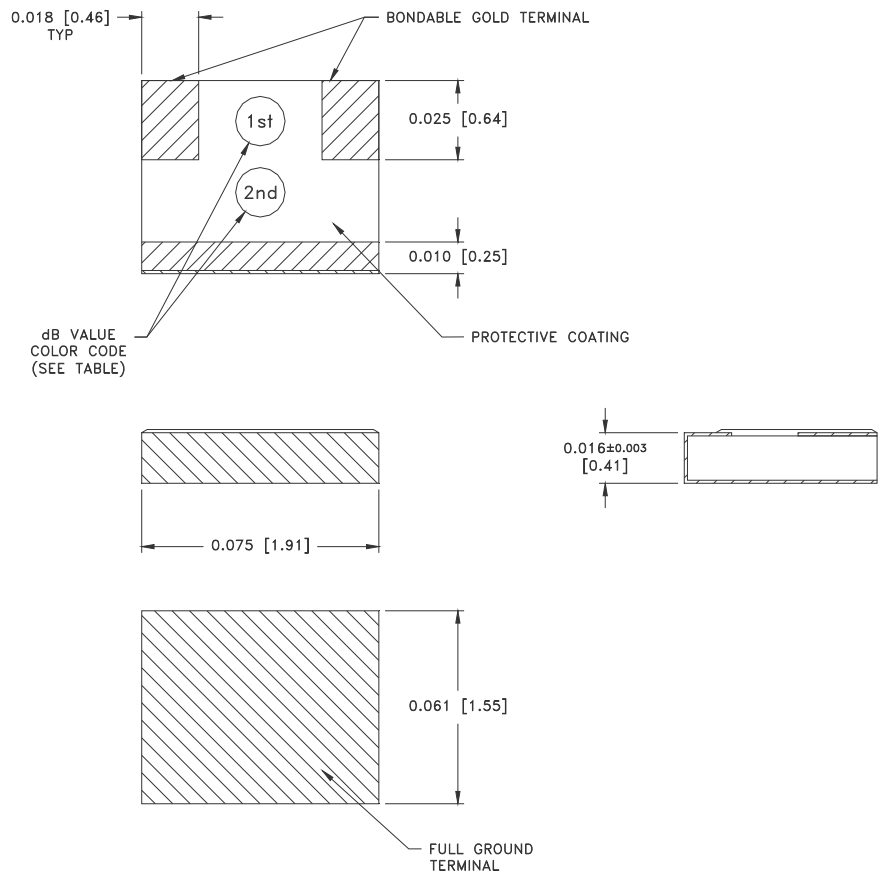
Terminal Material: Thick Film, Bondable Gold.

Ground Plane Material: Thick Film

Metric Dimensions: Provided for reference only

Workmanship PER MIL-PRF-55342

| REFERENCE TABLE | | | | | |
|-----------------|-----------|-----|--------|-----------|-----|
| dB VAL | DOT COLOR | | dB VAL | DOT COLOR | |
| | 1st | 2nd | | 1st | 2nd |
| 0 | BLK | --- | 11 | BRN | BRN |
| 1 | BRN | --- | 12 | BRN | RED |
| 2 | RED | --- | 13 | BRN | ORG |
| 3 | ORG | --- | 14 | BRN | YEL |
| 4 | YEL | --- | 15 | BRN | GRN |
| 5 | GRN | --- | 16 | BRN | BLU |
| 6 | BLU | --- | 17 | BRN | VIO |
| 7 | VIO | --- | 18 | BRN | GRY |
| 8 | GRY | --- | 19 | BRN | WHT |
| 9 | WHT | --- | 20 | RED | BLK |
| 10 | BRN | BLK | | | |



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