

# ATTENUATOR CHIP 1 WATT



DATA SHEET

PART SERIES: TS05XXW1F

SHEET 1 OF 2  
Dwg 1011225

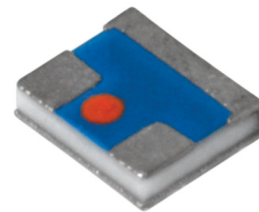
EN 16-0685  
Revision B

## 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: TS05XXW1F**  
**(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.

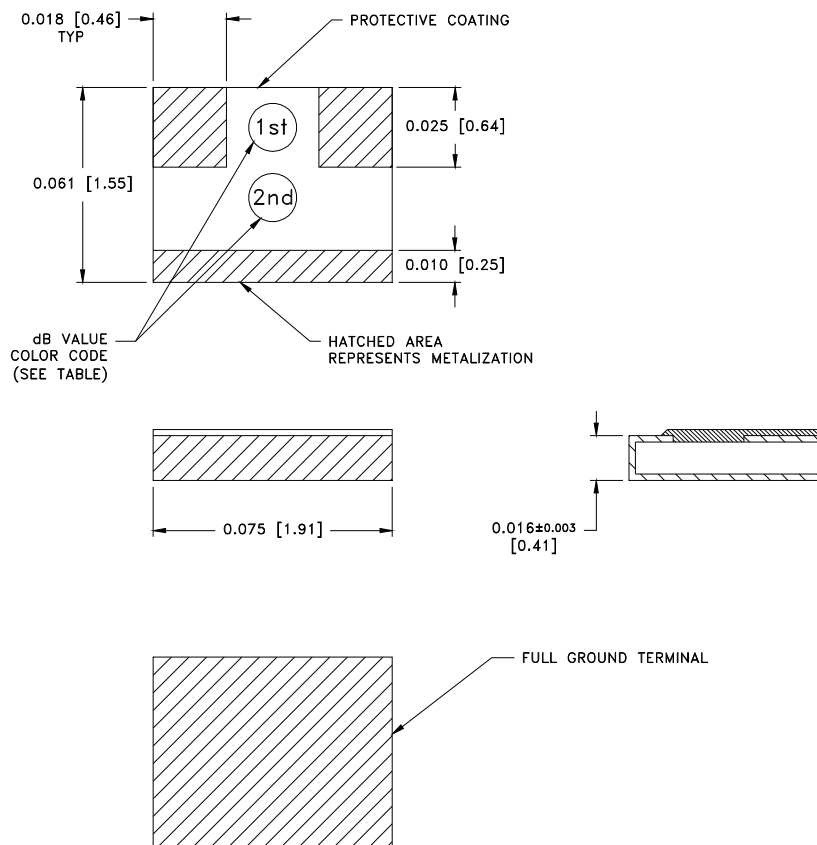
Data retention – 24 months packaging

Standard Packaging: Tape and Reel

## 5.0 MECHANICAL

Resistive Film: Thin Film, Tantalum Nitride  
Terminal Material: Thick Film, Lead free plating, RoHS compliant  
Metric Dimensions: Provided for reference only  
Workmanship: PER MIL-PRF-55342

REFERENCE TABLE					
dB	DOT COLOR		dB	DOT COLOR	
VAL	1st	2nd	VAL	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