

**TITLE: SPECIFICATION CONTROL DRAWING**

**PART IDENTIFIER:** TS05XXW3  
(XX) DB VALUE

**DESCRIPTION:** CHIP ATTENUATOR

**ASSEMBLY DWG:** 1900304

**1.0 SPECIFICATIONS:**

- 1.1 ELECTRICAL:
  - 1.1.1 IMPEDANCE: 50 OHMS NOMINAL.
  - 1.1.2 FREQUENCY RANGE: DC-12.4GHZ.
  - 1.1.3 ATTENUATION VALUES AVAILABLE: 0-20DB IN 1DB INCREMENTS.
  - 1.1.4 ATTENUATION ACCURACY: SEE TABLE.

| 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    |

- 1.1.5 VSWR: DC - 4 GHZ - 1.25 MAX      8 - 12.4 GHZ - 1.50 MAX  
4 - 8 GHZ - 1.35 MAX
- 1.1.6 INPUT POWER: 100 MILLIWATTS CW.
  - 1.1.6.1 FULL RATED POWER TO 125°C, DERATED LINEARLY TO 0 WATTS AT 150°C.
  - 1.1.6.2 PEAK POWER, 1 WATT FOR 10US PULSE WIDTH @ 1% DUTY CYCLE.

1.2 MECHANICAL:

- 1.2.1 OUTLINE DWG: SEE SHEET 2.
- 1.2.2 WORKMANSHIP: PER MIL-PRF-55342.

1.3 ENVIRONMENTAL:

- 1.3.1 ALTITUDE:
  - 1.3.1.1 NON-OPERATING: SEA LEVEL TO 50,000 FEET.
  - 1.3.1.2 OPERATING: SEA LEVEL TO 50,000 FEET.
- 1.3.2 TEMPERATURE RANGE:
  - 1.3.2.1 NON-OPERATING: -55° C TO +150° C.
  - 1.3.2.2 OPERATING: -55°C TO +150°C.
- 1.3.3 VIBRATION: PER MIL-STD-202, METHOD 204, COND. D.
- 1.3.4 SHOCK: PER MIL-STD-202, METHOD 213, COND. I.
- 1.3.5 MOISTURE RESISTANCE: PER MIL-STD-202, METHOD 106 EXCEPT SUBCYCLE STEPS 7A AND 7B AND POLARIZATION AND LOAD ARE NOT APPLICABLE.

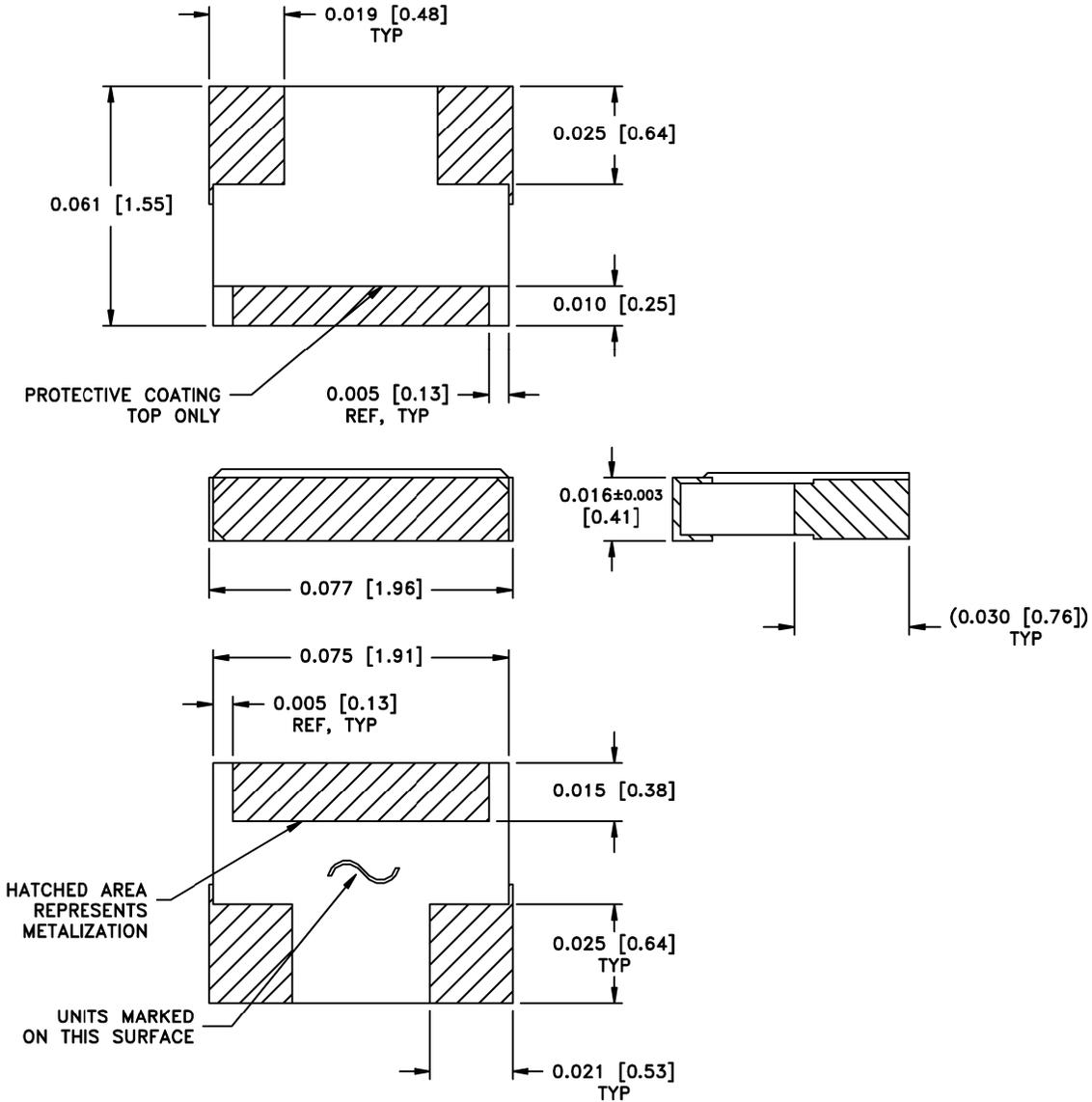
**2.0 UNIT MARKING:** MARKED WITH DB VALUE.  
LEGIBILITY AND PERMANENCY PER MIL-STD-130.

**3.0 QUALITY ASSURANCE:**

- 3.1 SAMPLE INSPECT PER ANSI/ASQC Z1.4 GENERAL INSPECTION, LEVEL II, AQL = 1.0.
  - 3.1.1 VISUAL AND MECHANICAL EXAMINATION FOR CONFORMANCE TO OUTLINE DWG REQUIREMENTS.
- 3.2 PERFORM INSPECTION IN ACCORDANCE WITH 824W170 AND 824F036 FOR COMMERCIAL GRADE PRODUCT.
- 3.3 TEST DATA REQUIREMENTS:
  - 3.3.1 NO TEST DATA REQUIRED FOR CUSTOMER.
  - 3.3.2 DATA RETENTION – 24 MONTHS.

**4.0 PACKAGING:** STANDARD PACK PER 755W002.

|  |                          |             |                |            |
|--|--------------------------|-------------|----------------|------------|
| <b>EMC TECHNOLOGY</b><br><b>8851 SW OLD KANSAS AVE.</b><br><b>STUART, FL 34997</b> | <b>CAGE CODE # 24602</b> |             | <b>DWG #</b>   | 1003905000 |
|  | <b>CHANGE NOTICE</b>     | EN 09-E0971 | <b>REV LVL</b> | N          |
|  |                          |             | <b>SHEET</b>   | 1 OF 2     |

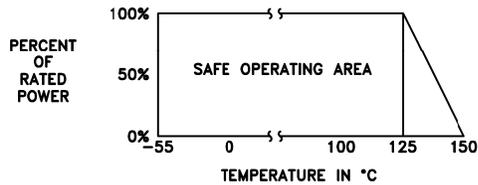


METRIC EQUIVALENTS GIVEN IN [mm]  
FOR REFERENCE INFORMATION ONLY

**MECHANICAL SPECIFICATIONS:**

SUBSTRATE:  
MATERIAL - ALUMINA 96%, MIL-I-10.  
TERMINAL:  
MATERIAL - THICK FILM, NICKEL BARRIER,  
SOLDER PLATED.  
RESISTIVE ELEMENT:  
MATERIAL - THIN FILM, TANTALUM NITRIDE.

**POWER RATING AND DERATING**



8851 SW OLD KANSAS AVE  
STUART, FL 34997  
PHONE NO. (772)286-9300  
FAX NO. (772)283-5286

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES  
**TOLERANCES**  
FRACT ---  
ANG ---  
XX ---  
XXX ±0.005  
XXXX ---

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF EMC TECHNOLOGY INC AND SHALL NOT BE DUPLICATED OR USED AS BASIS FOR THE MANUFACTURE OR SALE OF PARTS OR DEVICES WITHOUT PERMISSION.

|                           |                                     |                                 |                        |                                   |
|---------------------------|-------------------------------------|---------------------------------|------------------------|-----------------------------------|
| CAGE CODE<br><b>24602</b> | SCALE<br><b>32:1</b>                | DRAWN BY<br><b>CRH 09/21/09</b> | CHECKED BY             | APPROVED BY<br><b>FJV 9/26/01</b> |
| REV<br><b>N</b>           | CHANGE NOTICE<br><b>EN 09-E0971</b> | DRAWING NO<br><b>1003905000</b> | SHEET<br><b>2 OF 2</b> |                                   |