

# TITLE: SPECIFICATION CONTROL DRAWING

PART IDENTIFIER: HR05XXXXS

(X)=TEST CODE: A=GROUP A; B=GROUP B; C=GROUP C  
(XX)=DB VALUE (01-20DB)

DESCRIPTION: CHIP ATTENUATOR WITH HIGH RELIABILITY TESTING.

NOTE: SINGLE LOT AND DATE CODE AVAILABLE UPON REQUEST.

ASSEMBLY DWG: N/A

## 1.0 SPECIFICATIONS:

### 1.1 ELECTRICAL:

- 1.1.1 IMPEDANCE: 50 OHMS NOMINAL.
- 1.1.2 FREQUENCY RANGE: DC-18 GHZ.
- 1.1.3 ATTENUATION VALUES AVAILABLE: 0-20 DB IN 1 DB INCREMENTS.
- 1.1.4 ATTENUATION ACCURACY: SEE TABLE.
- 1.1.5 ATTENUATION STABILITY: 0.0001 DB/DB/C°

ATTENUATION ACCURACY				
DB	DC - 4 GHZ	4 - 8 GHZ	8 - 12.4 GHZ	12.4 - 18 GHZ
0	-0,+3	-0,+5	-0,+5	-0,+5
1 -3	±0.3	±0.5	±0.5	±0.5
4 - 6	±0.4	±0.5	±0.5	±0.75
7 - 10	±0.5	±0.5	±0.75	±1.0
11 - 15	±0.75	+0.5,-3.0	+0.5,-3.5	---
16 - 20	±1.0	+0.5,-4.0	+1.0,-6.0	---

- 1.1.6 VSWR: DC - 4 GHZ - 1.25 MAX      8 - 18 GHZ - 1.50 MAX  
4 - 8 GHZ - 1.35 MAX

- 1.1.7 INPUT POWER: 100 MILLIWATTS CW.

- 1.1.7.1 FULL RATED POWER TO 125°C, DERATED LINEARLY TO 0 WATTS AT 150°C.
- 1.1.7.2 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.

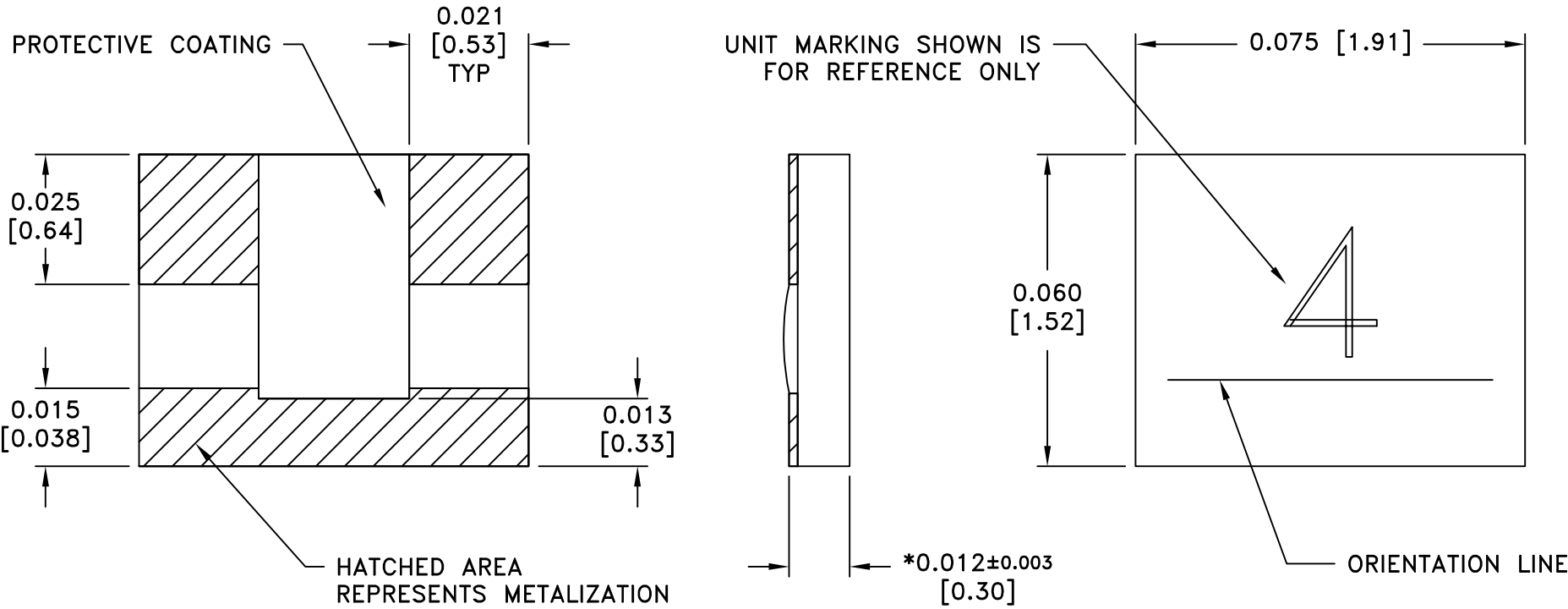
## 3.0 QUALITY ASSURANCE:

- 3.1 VERIFY 100% VISUAL PRE-CAP INSPECTION PERFORMED PER TP-8965.
- 3.2 PERFORM GROUP A, B AND/OR C TESTING AS INDICATED BY THE PART NUMBER PER TP-8965.
- 3.3 TEST DATA REQUIREMENTS:
  - 3.3.1 TEST DATA REQUIRED FOR CUSTOMER - SEE PARAGRAPH 5.0 OF TP-8965.
  - 3.3.2 DATA RETENTION - 24 MONTHS.
  - 3.3.3 TEST SAMPLES REQUIRED FOR CUSTOMER - SEE PARAGRAPH 5.0 OF TP-8965.

4.0 PACKAGING: STANDARD PACK PER 755W002. (SERIALIZED WAFFLE PACK)

EMC TECHNOLOGY 8851 SW OLD KANSAS AVE. STUART, FL 34997	CAGE CODE # 24602		DWG #	1009965000
	CHANGE NOTICE	EN 11-1137	REV LVL	C
			SHEET	1 OF 2

PART ID REF
HR05XXXS



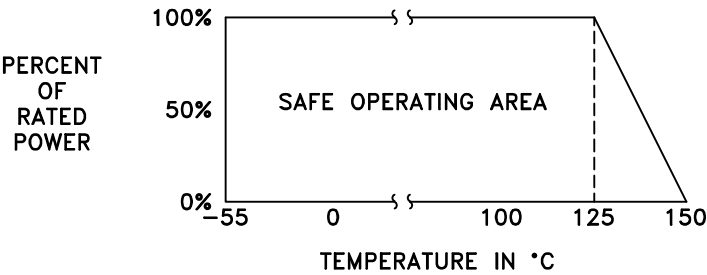
MECHANICAL SPECIFICATIONS:


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

METRIC EQUIVALENTS GIVEN IN [mm]  
FOR REFERENCE INFORMATION ONLY

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

POWER RATING AND DERATING



<div> 8851 SW OLD KANSAS AVE STUART, FL 34997 PHONE NO. (772)286-9300 FAX NO. (772)283-5286</div>	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		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.					
	<u>TOLERANCES</u>		CAGE CODE	SCALE	DRAWN BY	CHECKED BY	APPROVED BY	
	FRACT	--- --	24602	N/A	JG 12/8/04		DAR 12/8/04	
	ANG	---						
	XX	---	REV	CHANGE NOTICE		DRAWING NO		SHEET
	XXX	±0.005	C	EN 11-1137		1009965000		2 OF 2
	XXXX	---						