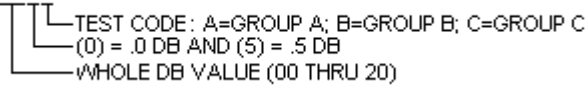


**TITLE: SPECIFICATION CONTROL DRAWING**

**PART IDENTIFIER:** HR5XXXXW3S



**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-12.4 GHZ.
  - 1.1.3 ATTENUATION VALUES AVAILABLE: 0-20DB IN 0.5DB 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
0	-0,+3	-0,+5	-0,+5
.5 - 3.5	±0.3	±0.5	±0.5
4 - 6.5	±0.4	±0.5	±0.5
7 - 10.5	±0.5	±0.5	±0.75
11 - 15.5	±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 - 12.4 GHZ - 1.50 MAX  
4 - 8 GHZ - 1.35 MAX
- 1.1.6 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 WATTS 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 COLOR DOTS. BACKGROUND COLOR VIOLET FOR HALF DB VALUES. LEGIBILITY AND PERMANENCY PER MIL-STD-130.

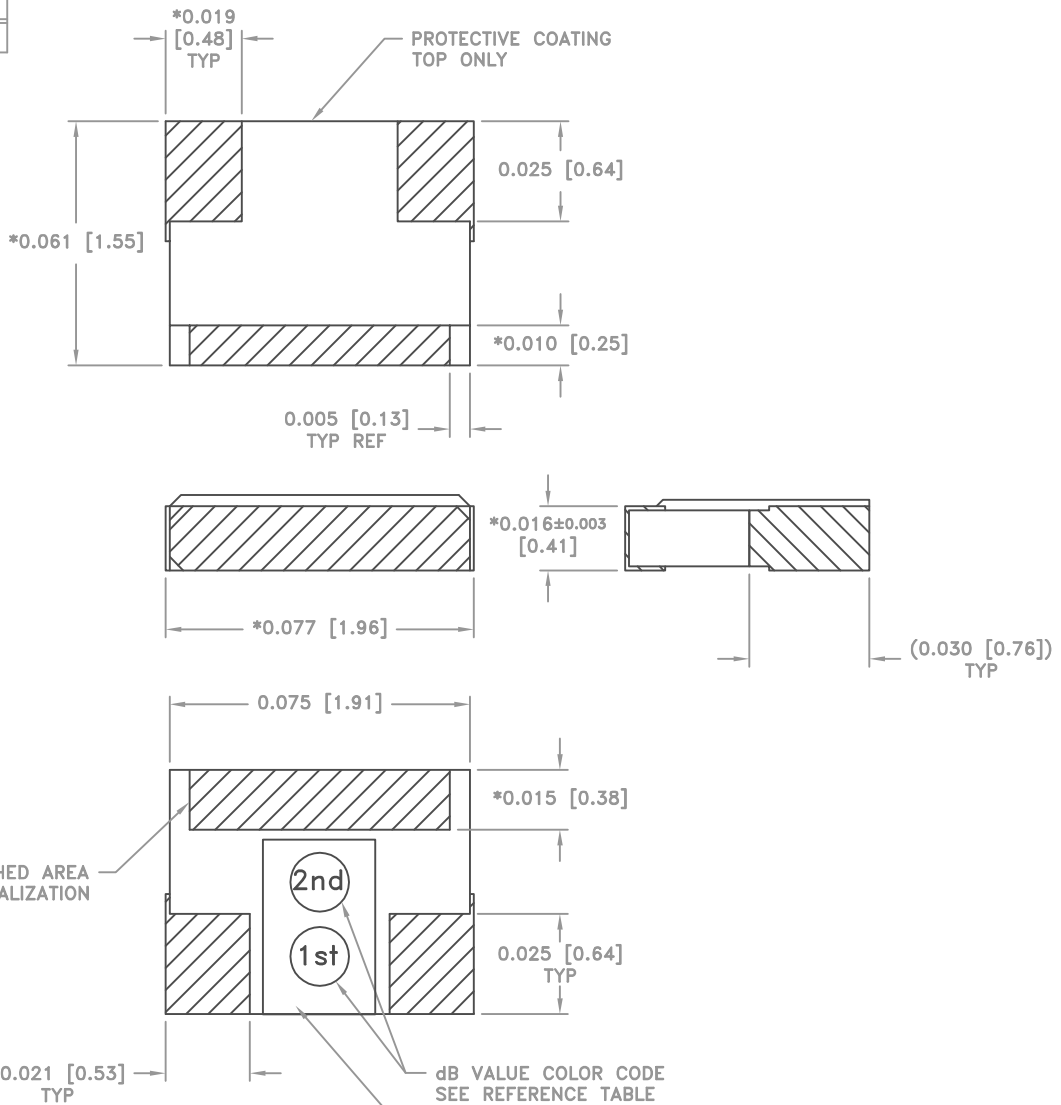
**3.0 QUALITY ASSURANCE:**

- 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)

<b>EMC TECHNOLOGY</b> 8851 SW OLD KANSAS AVE. STUART, FL 34997	<b>CAGE CODE # 24602</b>		<b>DWG #</b>	1010085000
	<b>CHANGE NOTICE</b>	EN 09-E1001	<b>REV LVL</b>	C
			<b>SHEET</b>	1 <u>OF</u> 2

PART ID REF
HR5XXXW3S



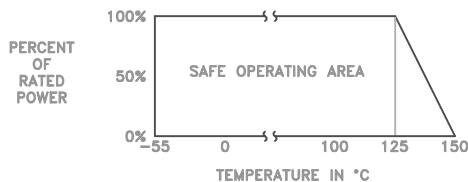
**MECHANICAL SPECIFICATIONS:**

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

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

METRIC EQUIVALENTS GIVEN IN [mm] FOR REFERENCE INFORMATION ONLY

**POWER RATING AND DERATING**



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			

NOTE: VIOLET PROTECTIVE COATING REPRESENTS HALF dB VALUES.

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	SCALE	DRAWN BY	CHECKED BY	APPROVED BY
24602	32:1	JG 12/8/04		DAR 12/8/04
REV	CHANGE NOTICE	DRAWING NO	SHEET	
C	EN 09-E1001	1010085000	2 OF 2	