

TITLE: SPECIFICATION CONTROL DRAWING

PART IDENTIFIER: MTVA0X00N0XS

X TEMPERATURE COEFFICIENT OF ATTENUATION 1×10^{-3} DB/DB/°C.

SHIFT (NEG)	DB VALUE	FREQUENCY RANGE
-0.003	1, 2, 3, 4, 5, 6, 8	DC - 18 GHZ
-0.004	1, 2, 3, 4, 6	
-0.005	1, 2, 3, 4, 5, 6, 8	
-0.006	2, 3, 4, 5, 6, 7	DC - 12.4 GHZ
-0.007	2, 3, 4, 5, 6, 7, 8	
-0.009	2, 3, 6, 7	

ATTENUATION SHIFT NEGATIVE.

X DB VALUE SEE TABLE ABOVE.

DESCRIPTION: TEMPERATURE VARIABLE CHIP ATTENUATOR.

ASSEMBLY DWG: 1901004

1.0 SPECIFICATIONS:

- 1.1 ELECTRICAL:
 - 1.1.1 IMPEDANCE: 50 OHMS NOMINAL.
 - 1.1.2 OPERATING FREQUENCY RANGE: SEE TABLE ABOVE.
 - 1.1.3 ATTENUATION VALUES AVAILABLE: SEE TABLE ABOVE.
 - 1.1.4 ATTENUATION ACCURACY AT 25°C: $\pm 0.5\text{DB @ 1 GHZ}$.
 - 1.1.5 VSWR: 1.30:1 MAX. @ 1GHZ.
 - 1.1.6 INPUT POWER: 200 MILLIWATTS CW.
 - 1.1.6.1 FULL RATED POWER TO 125°C, DERATED LINEARLY TO 0 WATTS AT 150°C.
 - 1.1.7 TEMPERATURE COEFFICIENT OVER OPERATING TEMPERATURE RANGE: SEE TABLE ABOVE, TEMPERATURE COEFFICIENT TOLERANCE: $\pm 0.001 \text{ DB/DB/°C}$.
- 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 OPERATING TEMPERATURE RANGE: -55°C TO +150 °C.

2.0 UNIT MARKING: DB VALUE (X), DIRECTION OF SHIFT (N) AND TCA SHIFT (X).
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 DRAWING REQUIREMENTS.
- 3.2 SAMPLE INSPECTION (DESTRUCTIVE TESTING).
 - 3.2.1 SELECT THREE (3) UNITS FROM LOT AND MEASURE DCA EVERY 20°C OVER THE TEMPERATURE RANGE -55°C TO +125°C.
 - 3.2.1.1 CALCULATE, USING LINEAR REGRESSION, THE SLOPE OF THE CURVE.
 - 3.2.1.2 CALCULATE TCA USING THE FOLLOWING FORMULA:

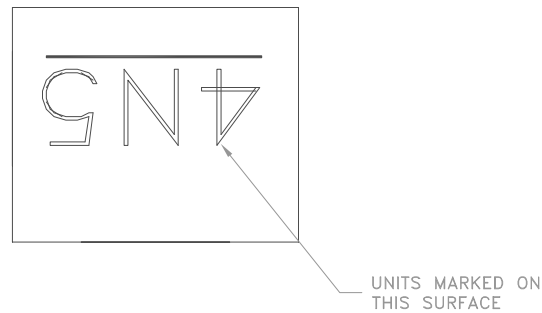
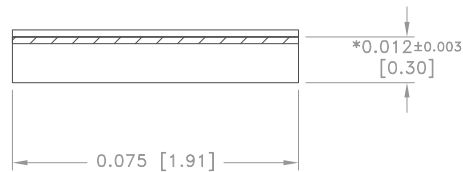
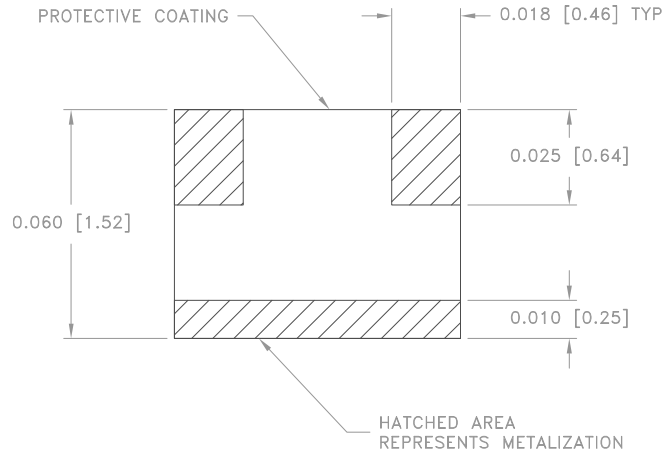
$$\text{TCA} = \frac{\text{SLOPE}}{\text{ATTENUATION @ 25°C}}$$
 - 3.2.1.3 ACCEPTANCE LIMITS: PER 1.1.7.
- 3.3 INSPECTION IN ACCORDANCE WITH 824W170 AND 824F036 FOR COMMERCIAL GRADE PRODUCT.
- 3.4 TEST DATA REQUIREMENTS:
 - 3.4.1 NO TEST DATA REQUIRED FOR CUSTOMER.
 - 3.4.2 DATA RETENTION - 24 MONTHS.

4.0 PACKAGING: STANDARD PACK PER 755W002.

EMC TECHNOLOGY 8851 SW OLD KANSAS AVE. STUART, FL 34997	CAGE CODE # 24602		DWG #	1004975000
	CHANGE NOTICE	EN 12-0212	REV LVL	W
			SHEET	1 OF 2

PART ID REF
MTVAS

U.S. PATENT NO. 5332981



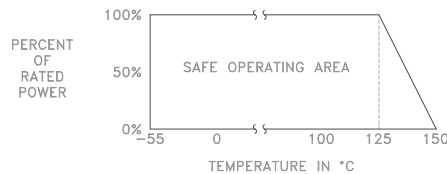
MECHANICAL SPECIFICATIONS:

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

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



EMC Technology
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 ---

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CAGE CODE	SCALE	DRAWN BY	CHECKED BY	APPROVED BY
24602	N/A	JG 2/15/10		
REV	CHANGE NOTICE	DRAWING NO	SHEET	
W	12-0212	1004975000	2 OF 2	