

TITLE: SPECIFICATION CONTROL DRAWING

PART IDENTIFIER: SMT2010A

DESCRIPTION: POWER STRIPLINE RESISTOR, ALUMINA

ASSEMBLY DWG: 1101684

1.0 SPECIFICATIONS:

1.1 ELECTRICAL:

1.1.1 IMPEDANCE: 50Ω NOMINAL.

1.1.2 FREQUENCY: DC - 3 GHZ.

1.1.3 VSWR: 1.25:1 MAX.

1.1.4 INPUT POWER:

1.1.4.1 10 WATTS. CHIP SOLDERED TO MOUNTING SURFACE. MOUNTING SURFACE TEMPERATURE MAINTAINED AT 100 °C MAXIMUM. APPLY LINEAR DE-RATING OF INPUT POWER TO 0 WATTS AT 150 °C.

1.2 MECHANICAL:

1.2.1 OUTLINE DWG: SEE SHEET 2.

1.2.2 WORKMANSHIP: PER MIL-PRF-55342

1.2.3 THERMAL IMPEDANCE (R_θ)

1.2.3.1 2.500 °C / WATT R_θ FROM RESIST FILM TO MOUNTING SURFACE DIRECTLY UNDER CENTER OF CHIP. CHIP SOLDERED DIRECTLY TO MOUNTING SURFACE.

1.2.4 FILM TEMPERATURE (T_F)

1.2.4.1 200 °C ABSOLUTE MAXIMUM FILM TEMPERATURE. DE-RATE TO 150 °C MAXIMUM FILM TEMPERATURE FOR ALL MILITARY/HIGH-RELIABILITY APPLICATIONS.

1.2.5 THERMAL

1.2.5.1 DETERMINE MAXIMUM MOUNTING SURFACE TEMPERATURE BY APPLYING THE FOLLOWING FORMULA:

$$T_s = T_f - (P_{MAX} \times R_{\theta})$$

WHERE: T_S = MAXIMUM MOUNTING SURFACE TEMPERATURE

T_F = MAXIMUM FILM TEMPERATURE

P_{MAX} = MAXIMUM APPLIED INPUT POWER

R_θ = CHIP THERMAL IMPEDANCE.

1.3 ENVIRONMENTAL:

1.3.1 TEMPERATURE RANGE:

1.3.1.1 NON-OPERATING: -55°C TO +150°C.

1.3.1.2 OPERATING: -55°C TO +150°C.

2.0 UNIT MARKING: NONE.

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 PER 824W154.

3.1.2 DC RESISTANCE: 50Ω ± 5%.

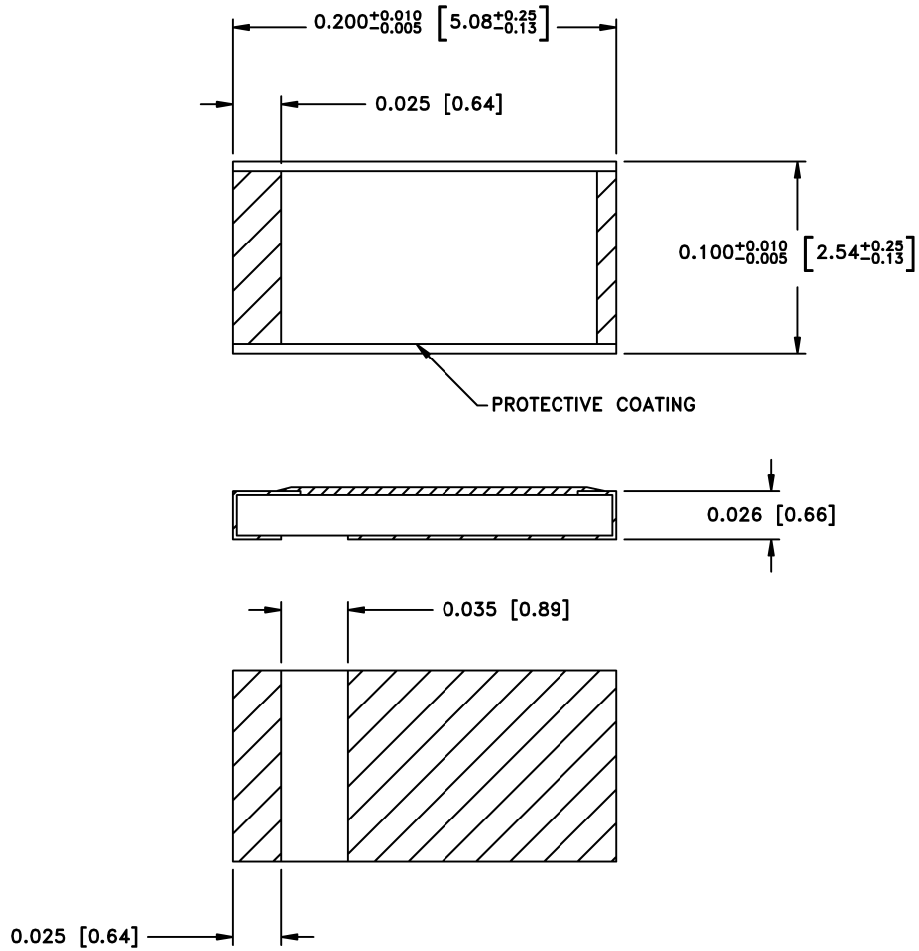
3.2 DATA REQUIREMENTS:

3.2.1 NO TEST DATA REQUIRED FOR CUSTOMER.

3.2.2 DATA RETENTION – 24 MONTHS.

4.0 PACKAGING: STANDARD PACK PER 755W002.

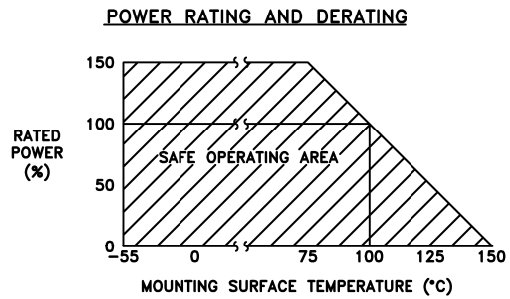
EMC TECHNOLOGY 8851 SW OLD KANSAS AVE. STUART, FL 34997	CAGE CODE # 24602		DWG #	1010175000
	CHANGE NOTICE	EN 08-E0491	REV LVL	A
			SHEET	1 <u>OF</u> 2



MECHANICAL SPECIFICATIONS:

- SUBSTRATE:
MATERIAL - ALUMINA, MIL-1-10.
- TERMINALS:
MATERIAL - THICK FILM, NICKEL BARRIER.
SOLDER PLATED
- RESIST:
MATERIAL - THICK FILM.

METRIC EQUIVALENTS GIVEN IN [mm]
FOR REFERENCE INFORMATION ONLY



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 24602	SCALE 15:1	DRAWN BY JG 5/29/08	CHECKED BY	APPROVED BY
REV A	CHANGE NOTICE EN 08-E0491	DRAWING NO 1010175000	SHEET 2 OF 2	