

**TITLE: SPECIFICATION CONTROL DRAWING**

**PART IDENTIFIER:** SMT2525TALN

**DESCRIPTION:** SURFACE MOUNT TERMINATION, ALUMINUM NITRIDE, TUNED FOR TELECOM BANDS

**ASSEMBLY DWG:** 1101614

**1.0 SPECIFICATIONS:**

**1.1 ELECTRICAL:**

- 1.1.1 IMPEDANCE: 50Ω NOMINAL.
- 1.1.2 FREQUENCY: DC-4 GHZ.
- 1.1.3 VSWR: 1.2:1 MAX.
- 1.1.4 INPUT POWER:
  - 1.1.4.1 60 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<sub>θ</sub>)
  - 1.2.3.1 0.833 °C / WATT R<sub>θ</sub> FROM RESIST FILM TO MOUNTING SURFACE DIRECTLY UNDER CENTER OF CHIP. CHIP SOLDERED DIRECTLY TO MOUNTING SURFACE.
- 1.2.4 FILM TEMPERATURE (T<sub>F</sub>)
  - 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<sub>S</sub> = MAXIMUM MOUNTING SURFACE TEMPERATURE  
 T<sub>F</sub> = MAXIMUM FILM TEMPERATURE  
 P<sub>MAX</sub> = MAXIMUM APPLIED INPUT POWER  
 R<sub>θ</sub> = 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.

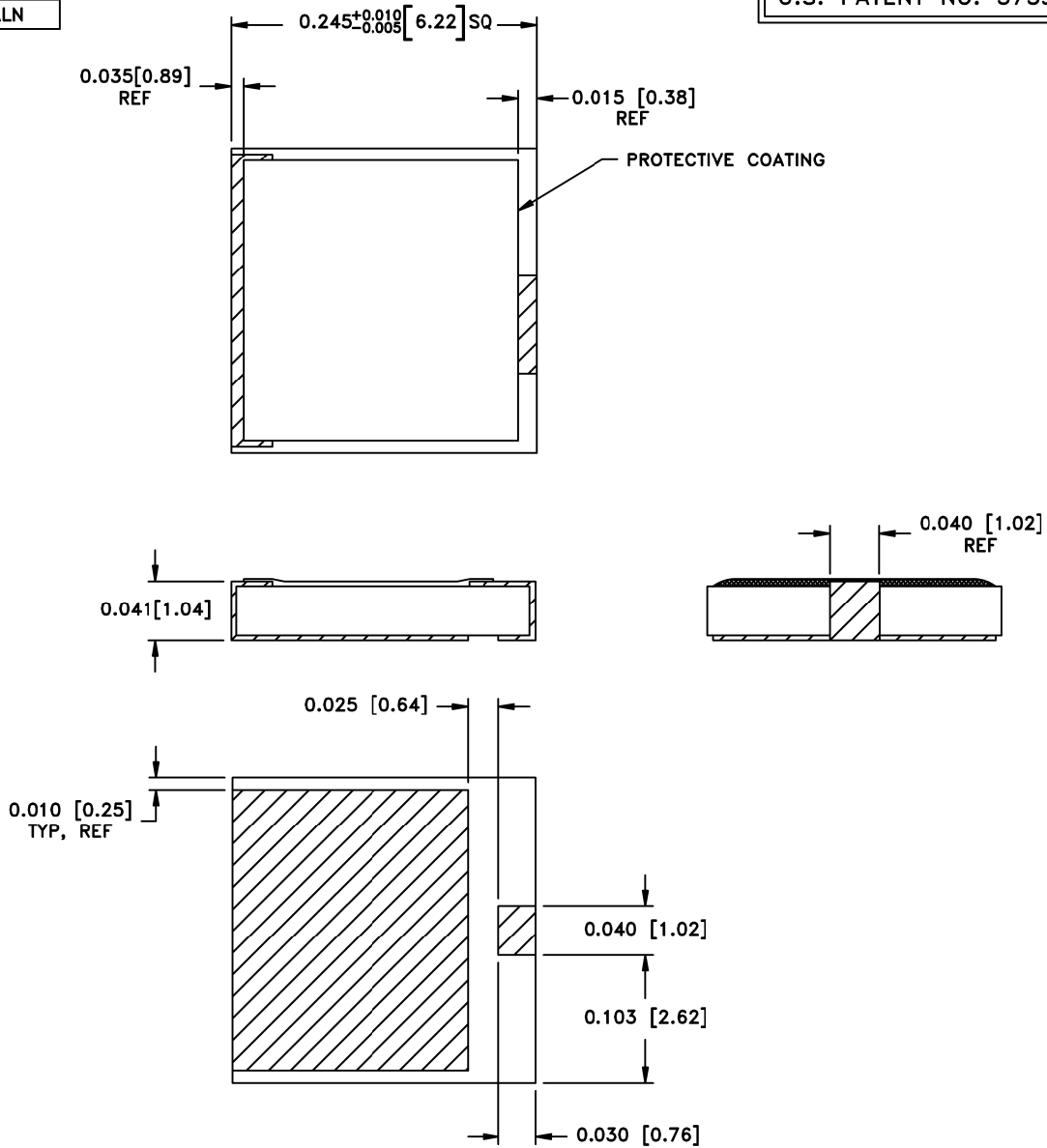
**2.0 UNIT MARKING: NONE.**

**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 PACKING PER 755W002.**

EMC TECHNOLOGY 8851 SW OLD KANSAS AVE. STUART, FL 34997	<b>CAGE CODE # 24602</b>		<b>DWG #</b>	1009645000
	<b>CHANGE NOTICE</b>	EN 09-E0836	<b>REV LVL</b>	E
			<b>SHEET</b>	1 OF 2

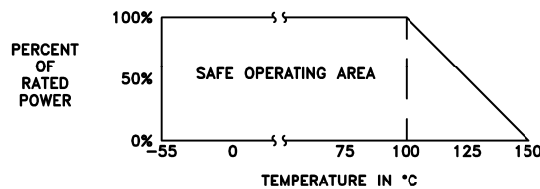


**MECHANICAL SPECIFICATIONS**

**SUBSTRATE:**  
 MATERIAL - ALUMINUM NITRIDE, ASTM F356.  
**TERMINAL :**  
 MATERIAL - THICK FILM, NICKEL BARRIER,  
 SOLDER PLATED.  
**RESIST:**  
 MATERIAL - THICK FILM.

METRIC EQUIVALENTS GIVEN IN [mm]  
 ARE FOR REFERENCE INFORMATION ONLY

**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 --- ---

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CAGE CODE 24602	SCALE 10:1	DRAWN BY JG 5/27/08	CHECKED BY	APPROVED BY
REV E	CHANGE NOTICE EN 09-E0836	DRAWING NO 1009645000	SHEET 2 OF 2	