

TITLE: SPECIFICATION CONTROL DRAWING

PART IDENTIFIER: 5307ALN

DESCRIPTION: HIGH POWER LOAD, ALUMINUM NITRIDE, (THICK FILM)

ASSEMBLY DWG: 1700374

1.0 SPECIFICATIONS:

1.1 ELECTRICAL:

- 1.1.1 RESISTANCE VALUE: 50Ω NOMINAL.
- 1.1.2 INPUT POWER: 125 WATTS AT 100°C HEAT SINK, DERATED LINEARLY TO ZERO WATTS AT 150°C.
- 1.1.3 FREQUENCY RANGE: DC - 2.0 GHZ.
- 1.1.4 VSWR: 1.25 MAX.

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 TEMPERATURE RANGE:
 - 1.3.1.1 STORAGE: -65°C TO +150°C.
 - 1.3.2.1 OPERATING: -55°C TO +150°C.

2.0 UNIT MARKING: "EMCT" AND PART IDENTIFIER.
LEGIBILITY AND PERMANENCY PER MIL-STD-130.

3.0 QUALITY ASSURANCE:

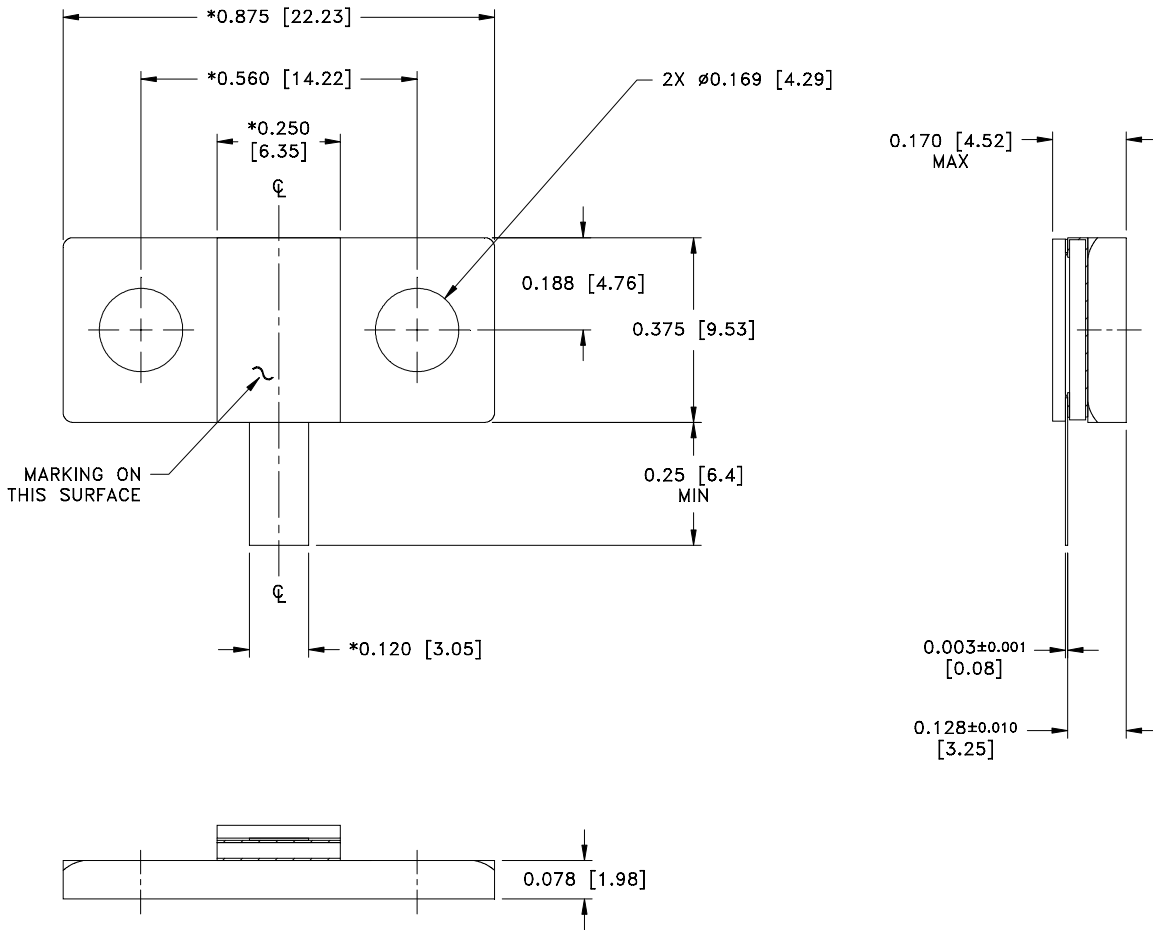
- 3.1 VISUAL AND MECHANICAL PER IP-1022.
- 3.2 100% DC RESISTANCE CHECK (GO/NO GO): 50Ω ± 5%.
- 3.3 DATA REQUIREMENTS:
 - 3.3.1 NO TEST DATA REQUIRED FOR CUSTOMER.
 - 3.3.2 DATA RETENTION – 24 MONTHS.

4.0 PACKAGING: STANDARD PACKING PER MC0023.

| | | | | | | | | | |
|------------------------|--|-------------------|-----------|-----|--|---------|---------------|----|--|
| ENG | | PUR | | MFG | | PLAN | | SM | |
| CC | | | | QA | | | | | |
| EMC TECHNOLOGY, INC | | CAGE CODE # 24602 | | | | DWG # | 1008435000 | | |
| 1971 OLD CUTHBERT ROAD | | CHANGE NOTICE | EN 02-202 | | | REV LVL | H | | |
| CHERRY HILL, NJ 08034 | | | | | | SHEET | 1 <u>OF</u> 2 | | |

PART ID REF

5307ALN



MECHANICAL SPECIFICATIONS:

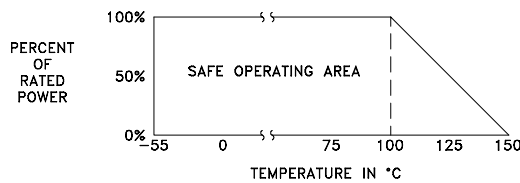
- CHIP:
 - MATERIAL - SUBSTRATE - ALUMINUM NITRIDE, MIL-I-10.
 - RESISTIVE ELEMENT - THICK FILM.
- TOP PLATE:
 - MATERIAL - ALUMINA, MIL-I-10.
- TAB:
 - MATERIAL - COPPER, ASTM B152.
 - FINISH - SILVER, QQ-S-365.
- HEAT SINK:
 - MATERIAL - COPPER, ASTM B187.
 - FINISH - NICKEL, QQ-N-290.



METRIC EQUIVALENTS GIVEN IN [mm] FOR REFERENCE INFORMATION ONLY

ALLOW ± 0.010 ON TOP PLATE FOR MISALIGNMENT.
 *DIMENSIONS TO BE SYMMETRICAL ABOUT C.L. WITHIN ± 0.005 .

POWER RATING AND DERATING



1971 OLD CUTHBERT RD
 CHERRY HILL NJ 08034
 PHONE NO. (856) 429-7800
 FAX NO. (856) 429-1807

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES
 FRACT --- --
 ANG --- --
 XX --- --
 XXX ± 0.005
 XXXX --- --

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|--------------------|----------------------------|--------------------------|-----------------|---------------------------|
| CAGE CODE 24602 | SCALE 4:1 | DRAWN BY CSS 6-3-02 | CHECKED BY | APPROVED BY DAR 6/4/02 |
| REV H | CHANGE NOTICE EN 02-202 | DRAWING NO 1008435000 | SHEET 2 OF 2 | |