

# NPN RF POWER TRANSISTOR

**DESCRIPTION:**

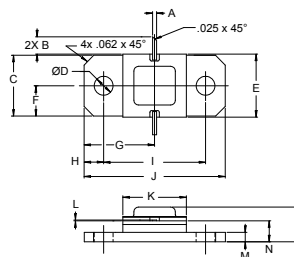
The **AM82731-001** is a Common Base Device Designed for Pulsed S-Band Radar Amplifier Applications.

**FEATURES INCLUDE:**

- Input/Output Matching
- Gold Metallization
- Emitter Ballasting

**MAXIMUM RATINGS**

|                         |                                 |
|-------------------------|---------------------------------|
| <b>I<sub>C</sub></b>    | 0.45 A                          |
| <b>V<sub>CC</sub></b>   | 34 V                            |
| <b>P<sub>DISS</sub></b> | 11.5 W @ T <sub>C</sub> = 25 °C |
| <b>T<sub>J</sub></b>    | -65 °C to +250 °C               |
| <b>T<sub>STG</sub></b>  | -65 °C to +200 °C               |
| <b>θ<sub>JC</sub></b>   | 13.0 °C/W                       |

**PACKAGE STYLE 400 2NL FLG**


| DIM | MINIMUM<br>inches / mm | MAXIMUM<br>inches / mm |
|-----|------------------------|------------------------|
| A   | .020 / 0.51            | .030 / 0.76            |
| B   | .100 / 2.54            |                        |
| C   | .376 / 9.55            | .396 / 10.06           |
| D   | .110 / 2.79            | .130 / 3.30            |
| E   | .395 / 10.03           | .407 / 10.34           |
| F   |                        | .193 / 4.90            |
| G   |                        | .450 / 11.43           |
| H   |                        | .125 / 3.18            |
| I   | .640 / 16.26           | .660 / 16.76           |
| J   | .890 / 22.61           | .910 / 23.11           |
| K   | .395 / 10.03           | .415 / 10.54           |
| L   | .004 / 0.10            | .007 / 0.18            |
| M   | .052 / 1.32            | .072 / 1.83            |
| N   | .118 / 3.00            | .131 / 3.33            |
| P   |                        | .230 / 5.84            |

1 = COLLECTOR    2 & 4 = BASE    3 = EMITTER

**CHARACTERISTICS** T<sub>C</sub> = 25 °C

| SYMBOL                  | TEST CONDITIONS   | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|-------------------------|---|---------|---------|---------|-------|
| <b>BV<sub>CBO</sub></b> | I <sub>C</sub> = 1.0 mA   | 45      |         |         | V     |
| <b>BV<sub>CER</sub></b> | I <sub>C</sub> = 1.0 mA    R <sub>BE</sub> = 10 Ω                       | 45      |         |         | V     |
| <b>I<sub>CES</sub></b>  | V <sub>CE</sub> = 30 V  |         |         | 0.5     | mA    |
| <b>BV<sub>EBO</sub></b> | I <sub>E</sub> = 1.0 mA   | 3.5     |         |         | V     |
| <b>h<sub>FE</sub></b>   | V <sub>CE</sub> = 5 V    I <sub>C</sub> = 100 mA                        | 10      |         |         | ---   |
| <b>P<sub>OUT</sub></b>  | V <sub>CE</sub> = 30 V    P <sub>IN</sub> = 0.3 W    f = 2.7 to 3.1 GHz | 1.0     | 1.1     |         | W     |
| <b>η<sub>C</sub></b>    |   | 27      | 30      |         | %     |
| <b>P<sub>G</sub></b>    |   | 5.2     | 5.6     |         | dB    |

Note: Pulse Width = 100 μS  
Duty Cycle = 10%