

SILICON MICROWAVE POWER TRANSISTOR

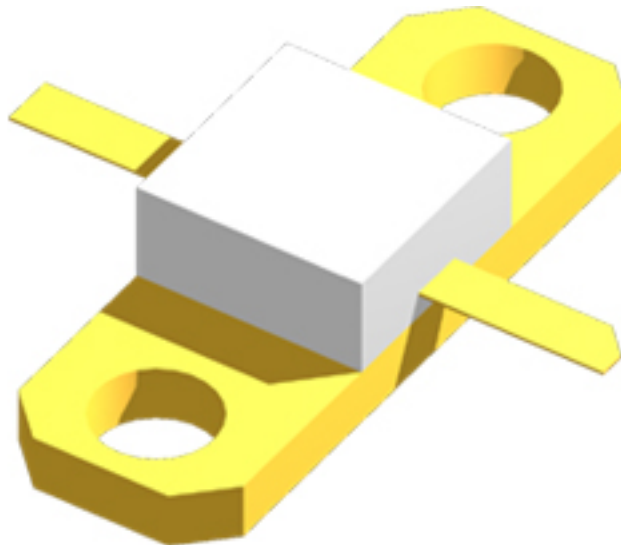
PRODUCT DATA SHEET

FEATURES:

- Common Base Package Configuration
- High Output Power
25 W @ 1.7 GHz
- High Gain Bandwidth Product
 $f_t = 6.0 \text{ GHz @ } I_C = 2.0 \text{ A}$
- High Gain
 $G_{PE} = 6.5 \text{ dB @ } 1.7 \text{ GHz}$
- High Reliability
Gold Metallization
Nitride Passivation
- Diffused Ballast Resistors
- BeO Packaging

PERFORMANCE DATA:

- Electrical Characteristics ($T_A = 25^\circ\text{C}$)



Absolute Maximum Ratings:

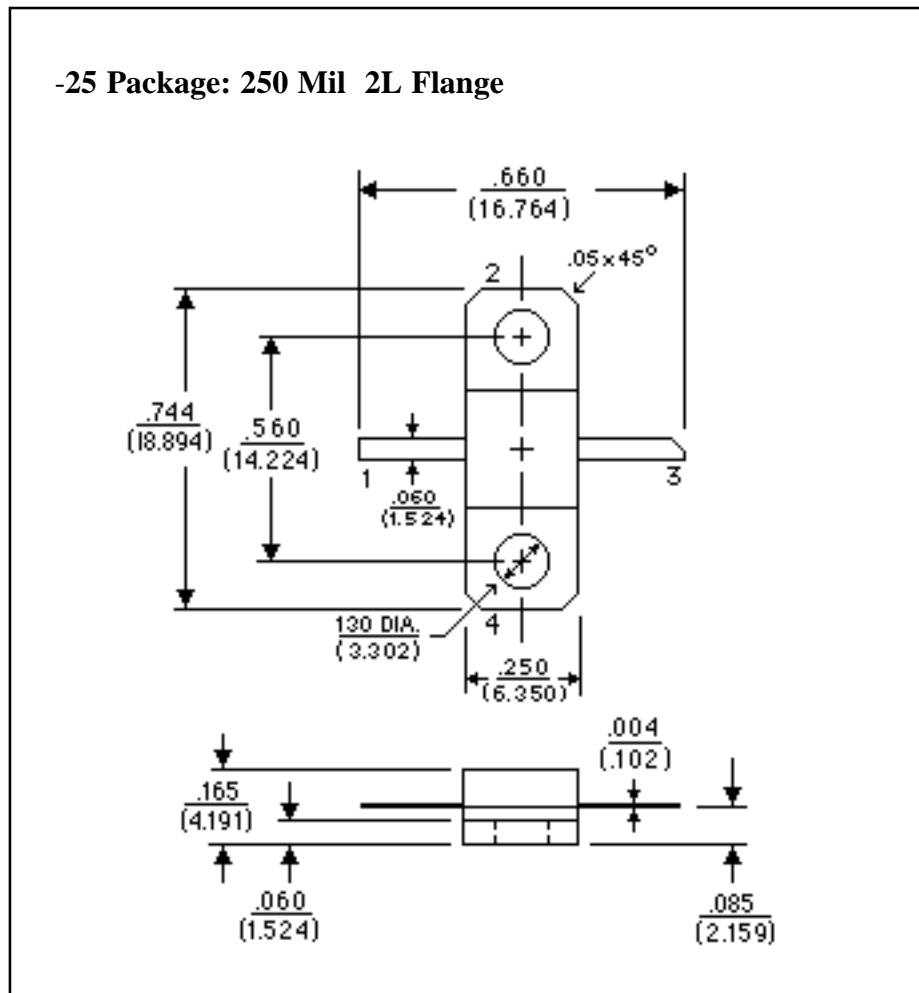
| SYMBOL | PARAMETERS | RATING | UNITS |
|---------------|-----------------------------------|------------|------------------|
| V_{CBO} | Collector-Base Voltage | 40 | V |
| V_{CEO} | Collector-Emitter Voltage | 20 | V |
| V_{EBO} | Emitter-Base Voltage | 3.0 | V |
| I_C | Collector Current (instantaneous) | 4 | A |
| T_J | Junction Temperature | 200 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -65 to 200 | $^\circ\text{C}$ |
| θ_{JC} | Thermal Resistance | 9 | C/W |

| SYMBOL | PARAMETERS & CONDITIONS $V_{CE} = 15\text{V}, I_C = 2.0 \text{ A}, \text{Class C}$ | UNIT | MIN. | TYP. | MAX. |
|-----------|---|------|------|------|------|
| P_{1dB} | Power output at 1 dB compression: $f = 1.7 \text{ GHz}$ | W | | 25 | |
| η | Collector Efficiency Class C | % | | 65 | |
| h_{FE} | Forward Current Transfer Ratio: $V_{CB} = 8\text{V}, I_C = 200 \text{ mA}$ | | 20 | 60 | 100 |
| C_{OB} | Output Capacitance: $f = 1 \text{ MHz}, I_E = 0$ | pF | | 4.0 | |
| P_T | Total Power Dissipation | W | | 38.5 | |

BIPOLARICS, INC.

Part Number BPT17B25

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NOTES: (unless otherwise specified)

1. Dimensions are $\frac{\text{in}}{\text{(mm)}}$
2. Tolerances:
 in .xxx = $\pm .005$
 mm .xx = $\pm .13$
3. All dimensions nominal; subject to change without notice

| LEAD | 1 | 2 | 3 | 4 |
|-------------|----------|----------|-----------|----------|
| -23 Package | Emitter | Base | Collector | Base |

BIPOLARICS, INC.
 46766 Lakeview Blvd.
 Fremont, CA 94538
 Phone: (510) 226-6565 FAX: (510) 226-6765