

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

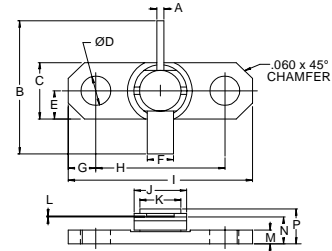
The **ASI MSC3003** is a common base transistor capable of providing 3.0 W Class-C RF output power @ 3.0 GHz.

FEATURES:

- $P_G = 6.0$ dB min. at 3 W / 3,000 MHz
- Difused Ballast Resistor
- **Omnigold™** Metalization System

MAXIMUM RATINGS

| | |
|---------------|----------------------|
| I_C | 60 mA |
| V_{CC} | 30 V |
| P_{DISS} | 10 W @ $T_C = 25$ °C |
| T_J | -65 °C to +200 °C |
| T_{STG} | -65 °C to +200 °C |
| θ_{JC} | 17 °C/W |

PACKAGE STYLE .250 2L FLG


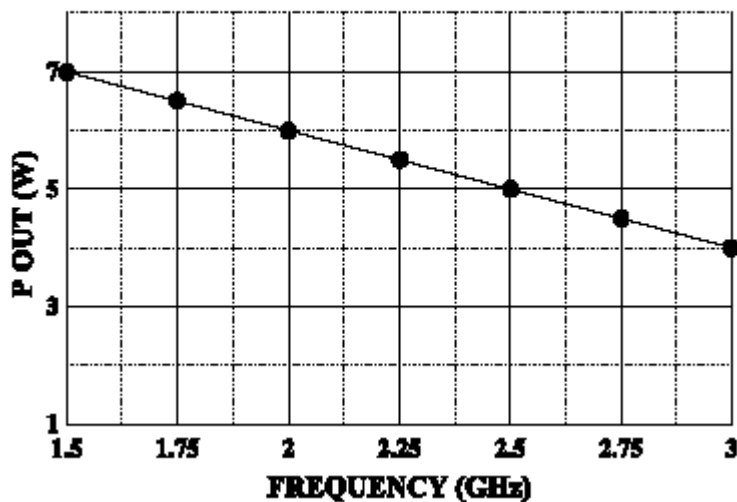
| DIM | MINIMUM inches / mm | MAXIMUM inches / mm |
|-----|------------------------|------------------------|
| A | .028 / 0.71 | .032 / 0.81 |
| B | .740 / 18.80 | |
| C | .245 / 6.22 | .255 / 6.48 |
| D | .128 / 3.25 | .132 / 3.35 |
| E | .125 / 3.18 | |
| F | .110 / 2.79 | .117 / 2.97 |
| G | .117 / 2.97 | |
| H | .560 / 14.22 | .570 / 14.48 |
| I | .790 / 20.07 | .810 / 20.57 |
| J | .225 / 5.72 | .235 / 5.97 |
| K | .165 / 4.19 | .185 / 4.70 |
| L | .003 / 0.08 | .007 / 0.18 |
| M | .058 / 1.47 | .068 / 1.73 |
| N | .119 / 3.02 | .135 / 3.43 |
| P | .149 / 3.78 | .187 / 4.75 |

CHARACTERISTICS $T_C = 25$ °C

| SYMBOL | TEST CONDITIONS | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|---------------------------|------------------------------------------------------------------------|---------|---------|---------|----------------|
| BV_{CBO} | $I_C = 1.0$ mA | 45 | | | V |
| BV_{CER} | $I_C = 5.0$ mA $R_{BE} = 10$ Ω | 45 | | | V |
| BV_{EBO} | $I_E = 10$ mA | 3.5 | | | V |
| I_{CBO} | $V_{CB} = 28$ V | | | 0.5 | mA |
| h_{FE} | $V_{CE} = 5.0$ V $I_C = 200$ mA | 30 | | 300 | --- |
| C_{OB} | $V_{CB} = 28$ V $f = 1.0$ MHz | | | 5.0 | pF |
| P_G η_c VSWR | $V_{CC} = 28$ V W $P_{OUT} = 3.0$ W $f = 3.0$ GHz $P_{IN} = 0.75$ W | 6.0 | 30 | 30:1 | dB % --- |

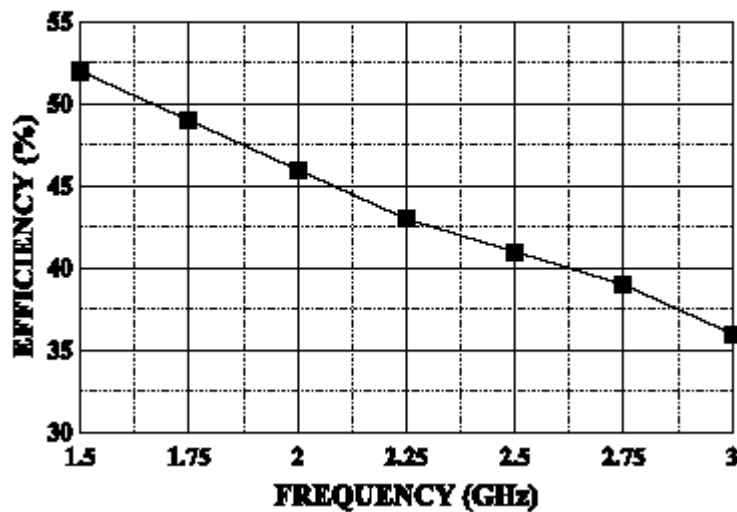
SATURATED POWER OUTPUT VS FREQUENCY

$V_{CC}=28V, P_{in}=75W$



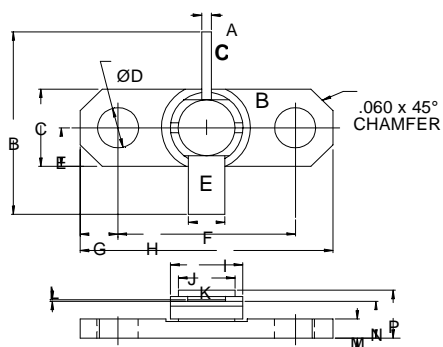
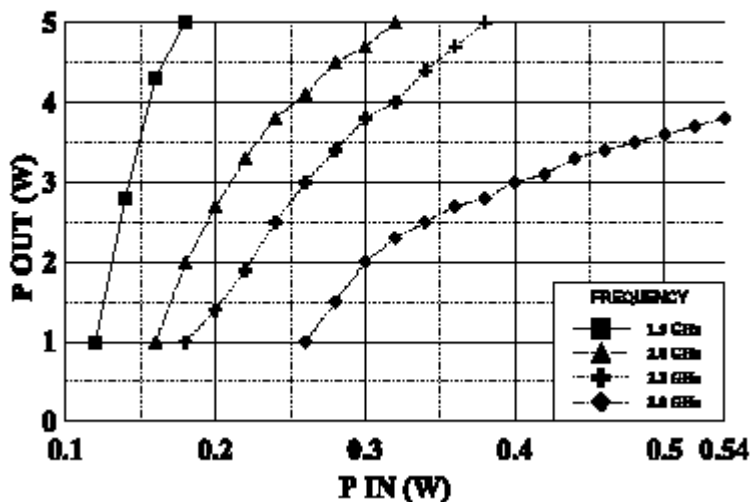
EFFICIENCY VS FREQUENCY

$P_{out}=3W, V_{CC}=28V$



Port VS Pin VS FREQUENCY

$V_{CC}=28V, P_{IN}=75W$



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