

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

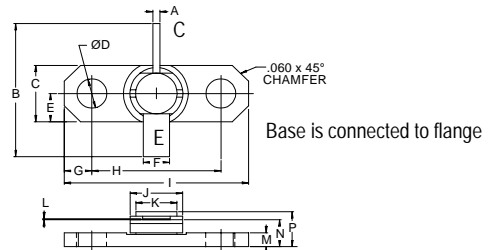
The **MSC3005** is Designed for Class "C" Amplifier Applications up to 3 GHz.

FEATURES:

- $P_{OUT} = 5.0 \text{ W}$ Typ. at 3 GHz
- **Common Base** Configuration
- **Omnigold™** Metallization System

MAXIMUM RATINGS

| | |
|---------------|---|
| I_C | 700 mA |
| V_{CB} | 30 V |
| P_{DISS} | 17 W @ $T_C = 25^\circ\text{C}$ |
| T_J | -65°C to $+200^\circ\text{C}$ |
| T_{STG} | -65°C to $+200^\circ\text{C}$ |
| θ_{JC} | 8.5°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 |

ASI ORDER CODE: ASI30304
CHARACTERISTICS $T_C = 25^\circ\text{C}$

| SYMBOL | TEST CONDITIONS | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|------------|---|---------|---------|---------|-------|
| BV_{CER} | $I_C = 5.0 \text{ mA}$ $R_{BE} = 10\Omega$ | 45 | | | V |
| BV_{CBO} | $I_C = 1.0 \text{ mA}$ | 45 | | | V |
| BV_{EBO} | $I_E = 1.0 \text{ mA}$ | 3.5 | | | V |
| I_{CBO} | $V_{CB} = 28 \text{ V}$ | | | 0.5 | mA |
| h_{FE} | $V_{CE} = 5.0 \text{ V}$ $I_C = 500 \text{ mA}$ | 20 | | 120 | --- |
| C_{OB} | $V_{CB} = 28 \text{ V}$ $f = 1.0 \text{ MHz}$ | | | 7.5 | pF |
| P_G | $V_{CC} = 28 \text{ V}$ $P_{OUT} = 4.5 \text{ W}$ $f = 3.0 \text{ GHz}$ | 4.5 | 5.0 | | dB |
| η_c | | 30 | 35 | | % |