

## NPN SILICON RF POWER TRANSISTOR

### DESCRIPTION:

The ASI HF50-12F is Designed for

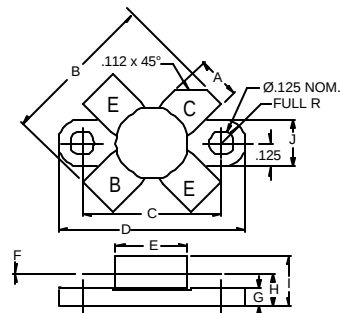
### FEATURES:

- $P_G = 16$  dB min. at 50 W/30 MHz
- $IMD_3 = -30$  dBc max. at 30 W<sub>(PEP)</sub>
- *Omnigold*™ Metalization System

### MAXIMUM RATINGS

|               |                                 |
|---------------|---------------------------------|
| $I_C$         | 12.0 A                          |
| $V_{CBO}$     | 36 V                            |
| $V_{CEO}$     | 18 V                            |
| $V_{EBO}$     | 3.5 V                           |
| $P_{DISS}$    | 183 W @ $T_C = 25^\circ C$      |
| $T_J$         | $-65^\circ C$ to $+200^\circ C$ |
| $T_{STG}$     | $-65^\circ C$ to $+150^\circ C$ |
| $\theta_{JC}$ | $1.05^\circ C/W$                |

### PACKAGE STYLE .380 4L FLG



| DIM | MINIMUM<br>inches / mm | MAXIMUM<br>inches / mm |
|-----|------------------------|------------------------|
| A   | .220 / 5.59            | .230 / 5.84            |
| B   | .785 / 19.94           |                        |
| C   | .720 / 18.29           | .730 / 18.54           |
| D   | .970 / 24.64           | .980 / 24.89           |
| E   |                        | .385 / 9.78            |
| F   | .004 / 0.10            | .006 / 0.15            |
| G   | .085 / 2.16            | .105 / 2.67            |
| H   | .160 / 4.06            | .180 / 4.57            |
| I   |                        | .280 / 7.11            |
| J   | .240 / 6.10            | .255 / 6.48            |

ORDER CODE: ASI10596

### CHARACTERISTICS $T_C = 25^\circ C$

| SYMBOL     | TEST CONDITIONS                                 | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|------------|-------------------------------------------------|---------|---------|---------|-------|
| $BV_{CBO}$ | $I_C = 50$ mA                                   | 36      |         |         | V     |
| $BV_{CES}$ | $I_C = 100$ mA                                  | 36      |         |         | V     |
| $BV_{CEO}$ | $I_C = 50$ mA                                   | 18      |         |         | V     |
| $BV_{EBO}$ | $I_E = 10$ mA                                   | 3.5     |         |         | V     |
| $I_{CES}$  | $V_{CE} = 15$ V                                 |         |         | 10      | mA    |
| $h_{FE}$   | $V_{CE} = 5.0$ V $I_C = 5.0$ A                  | 10      |         | ---     | ---   |
| $C_{OB}$   | $V_{CB} = 12.5$ V $f = 1.0$ MHz                 |         |         | 300     | pF    |
| $G_P$      | $V_{CE} = 12.5$ V $P_{IN} = 7.0$ W $f = 50$ MHz | 10      |         |         | dB    |
| $h_C$      | $P_{OUT} = 50$ W <sub>(PEP)</sub>               |         | 55      |         | %     |