

# NPN SILICON RF POWER TRANSISTOR

## DESCRIPTION:

The **ASI AM81214-300** is Designed for 1200 – 1400 MHz, L-Band Applications.

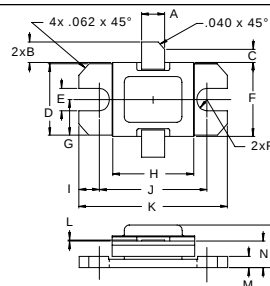
## FEATURES:

- Internal Input/Output Matching Network
- Common Base
- $P_G = 6.5$  db at 325 W/1400 MHz
- **Omnigold™** Metalization System

## MAXIMUM RATINGS

|               |                                  |
|---------------|----------------------------------|
| $I_C$         | 18.75 A                          |
| $V_{CC}$      | 55 V                             |
| $P_{DISS}$    | 730 W @ $T_C = 25^\circ\text{C}$ |
| $T_J$         | -65 °C to +250 °C                |
| $T_{STG}$     | -65 °C to +200 °C                |
| $\theta_{JC}$ | 0.24 °C/W                        |

## PACKAGE STYLE .400 2L FLG(A)



| DIM | MINIMUM<br>inches / mm | MAXIMUM<br>inches / mm |
|-----|------------------------|------------------------|
| A   | .135 / 3.43            | .145 / 3.68            |
| B   | .100 / 2.54            | .120 / 3.05            |
| C   | .050 / 1.27            |                        |
| D   | .376 / 9.55            | .396 / 10.06           |
| E   | .110 / 2.79            | .130 / 3.30            |
| F   | .395 / 10.03           | .407 / 10.34           |
| G   | .193 / 4.90            |                        |
| H   | .490 / 12.45           | .510 / 12.95           |
| I   | .100 / 2.54            |                        |
| J   | .690 / 17.53           | .710 / 18.03           |
| K   | .890 / 22.61           | .910 / 23.11           |
| L   | .003 / 0.08            | .006 / 0.18            |
| M   | .052 / 1.32            | .072 / 1.83            |
| N   | .118 / 3.00            | .131 / 3.33            |
| P   |                        | .230 / 5.84            |

## CHARACTERISTICS $T_C = 25^\circ\text{C}$

| SYMBOL     | TEST CONDITIONS                                          | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|------------|----------------------------------------------------------|---------|---------|---------|-------|
| $BV_{CBO}$ | $I_C = 50$ mA                                            | 65      |         |         | V     |
| $BV_{CES}$ | $I_C = 50$ mA                                            | 65      |         |         | V     |
| $BV_{EBO}$ | $I_E = 15$ mA                                            | 3.0     |         |         | V     |
| $I_{CES}$  | $V_{CE} = 50$ V                                          |         |         | 30      | mA    |
| $h_{FE}$   | $V_{CE} = 5.0$ V $I_C = 5.0$ A                           | 10      |         | ---     | ---   |
| $P_G$      | $V_{CC} = 50$ V $P_{IN} = 63$ W $f = 1235$ to $1365$ MHz | 6.3     | 6.8     |         | dB    |
| $\eta_c$   |                                                          | 40      | 45      |         | %     |
| $P_{OUT}$  |                                                          | 270     | 300     |         | W     |