

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

The **ASI VHB100-12** is Designed for 12.5 V, Class C High-Band Applications up to 175 MHz.

**FEATURES:**

- Internal Input Matching Network
- $P_G = 6.0$  dB at 100 W/175 MHz
- **Omnigold™** Metalization System

**MAXIMUM RATINGS**

|               |                       |
|---------------|-----------------------|
| $I_C$         | 20 A                  |
| $V_{CBO}$     | 36 V                  |
| $V_{CEO}$     | 18 V                  |
| $V_{CES}$     | 36 V                  |
| $V_{EBO}$     | 4.0 V                 |
| $P_{DISS}$    | 270 W @ $T_C = 25$ °C |
| $T_J$         | -65 °C to +200 °C     |
| $T_{STG}$     | -65 °C to +150 °C     |
| $\theta_{JC}$ | 0.65 °C/W             |

**PACKAGE STYLE .500 6L FLG**

| DIM | MINIMUM<br>inches / mm | MAXIMUM<br>inches / mm |
|-----|------------------------|------------------------|
| A   | .150 / 3.43            | .160 / 4.06            |
| B   | .045 / 1.14            |                        |
| C   | .210 / 5.33            | .220 / 5.59            |
| D   | .835 / 21.21           | .865 / 21.97           |
| E   | .200 / 5.08            | .210 / 5.33            |
| F   | .490 / 12.45           | .510 / 12.95           |
| G   | .003 / 0.08            | .007 / 0.18            |
| H   | .125 / 3.18            |                        |
| I   | .725 / 18.42           |                        |
| J   | .970 / 24.64           | .980 / 24.89           |
| K   | .090 / 2.29            | .105 / 2.67            |
| L   | .150 / 3.81            | .170 / 4.32            |
| M   | .285 / 7.24            |                        |
| N   | .120 / 3.05            | .135 / 3.43            |

**ORDER CODE: ASI10719**

**CHARACTERISTICS**  $T_C = 25$  °C

| SYMBOL            | TEST CONDITIONS                                   | MINIMUM | TYPICAL | MAXIMUM | UNITS   |
|-------------------|---|---------|---------|---------|---------|
| $BV_{CEO}$        | $I_C = 100$ mA                                    | 18      |         |         | V       |
| $BV_{CES}$        | $I_C = 100$ mA                                    | 36      |         |         | V       |
| $BV_{CBO}$        | $I_C = 50$ mA                                     | 36      |         |         | V       |
| $BV_{EBO}$        | $I_E = 10$ mA                                     | 4.0     |         |         | V       |
| $I_{CES}$         | $V_{CE} = 12.5$ V                                 |         |         | 15      | 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                   |         |         | 420     | pF      |
| $P_G$<br>$\eta_C$ | $V_{CC} = 12.5$ V $P_{OUT} = 100$ W $f = 175$ MHz | 6.0     | 60      |         | dB<br>% |

This datasheet has been download from:

[www.datasheetcatalog.com](http://www.datasheetcatalog.com)

Datasheets for electronics components.