

# NPN SILICON RF POWER TRANSISTOR

## DESCRIPTION:

The **ASI VHB1-28T** is Designed for

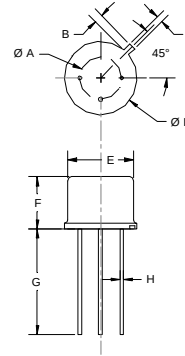
## FEATURES:

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- **Omnigold™** Metalization System

## MAXIMUM RATINGS

|                         |                              |
|-------------------------|------------------------------|
| <b>I<sub>C</sub></b>    | 0.4 A                        |
| <b>V<sub>CBO</sub></b>  | 55 V                         |
| <b>V<sub>CEO</sub></b>  | 30 V                         |
| <b>V<sub>EBO</sub></b>  | 3.5 V                        |
| <b>P<sub>DISS</sub></b> | 5 W @ T <sub>C</sub> = 25 °C |
| <b>T<sub>J</sub></b>    | -65 °C to +200 °C            |
| <b>T<sub>STG</sub></b>  | -65 °C to +200 °C            |
| <b>θ<sub>JC</sub></b>   | 35 °C/W                      |

## PACKAGE STYLE TO-39



| DIM | MINIMUM<br>inches / mm | MAXIMUM<br>inches / mm |
|-----|------------------------|------------------------|
| A   |                        | .200 / 5.080           |
| B   | .029 / 0.740           | .045 / 1.140           |
| C   | .028 / 0.720           | .034 / 0.860           |
| D   | .335 / 8.510           | .370 / 9.370           |
| E   | .305 / 7.750           | .335 / 8.500           |
| F   | .240 / 6.100           | .260 / 6.600           |
| G   |                        | .500 / 12.700          |
| H   | .016 / 0.407           | .020 / 0.508           |

**ORDER CODE: ASI10720**

## CHARACTERISTICS T<sub>C</sub> = 25 °C

| SYMBOL                              | TEST CONDITIONS                                                           | MINIMUM   | TYPICAL | MAXIMUM | UNITS   |
|-------------------------------------|---------------------------------------------------------------------------|-----------|---------|---------|---------|
| <b>BV<sub>CEO</sub></b>             | I <sub>C</sub> = 5.0 mA                                                   | 30        |         |         | V       |
| <b>BV<sub>CER</sub></b>             | I <sub>C</sub> = 5.0 mA R <sub>BE</sub> = 10 Ω                            | 55        |         |         | V       |
| <b>BV<sub>CBO</sub></b>             | I <sub>C</sub> = 0.1 mA                                                   | 55        |         |         | V       |
| <b>BV<sub>EBO</sub></b>             | I <sub>E</sub> = 0.1 mA                                                   | 3.5       |         |         | V       |
| <b>I<sub>CEX</sub></b>              | V <sub>C</sub> = 55 V V <sub>BE</sub> = -1.5 V                            |           |         | 100     | μA      |
| <b>I<sub>CEO</sub></b>              | V <sub>E</sub> = 28 V                                                     |           |         | 20      | μA      |
| <b>V<sub>CE</sub><sup>(S)</sup></b> | I <sub>C</sub> = 100 mA I <sub>B</sub> = 20 mA                            |           |         | 1.0     | V       |
| <b>h<sub>FE</sub></b>               | V <sub>CE</sub> = 5.0 V I <sub>C</sub> = 50 mA<br>I <sub>C</sub> = 360 mA | 10<br>5.0 |         | 200     | ---     |
| <b>C<sub>OB</sub></b>               | V <sub>CB</sub> = 28 V f = 1.0 MHz                                        |           |         | 3.0     | pF      |
| <b>P<sub>G</sub></b><br><b>η</b>    | V <sub>CE</sub> = 28 V P <sub>OUT</sub> = 1.0 W f = 175 MHz               | 13        | 60      |         | dB<br>% |