

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

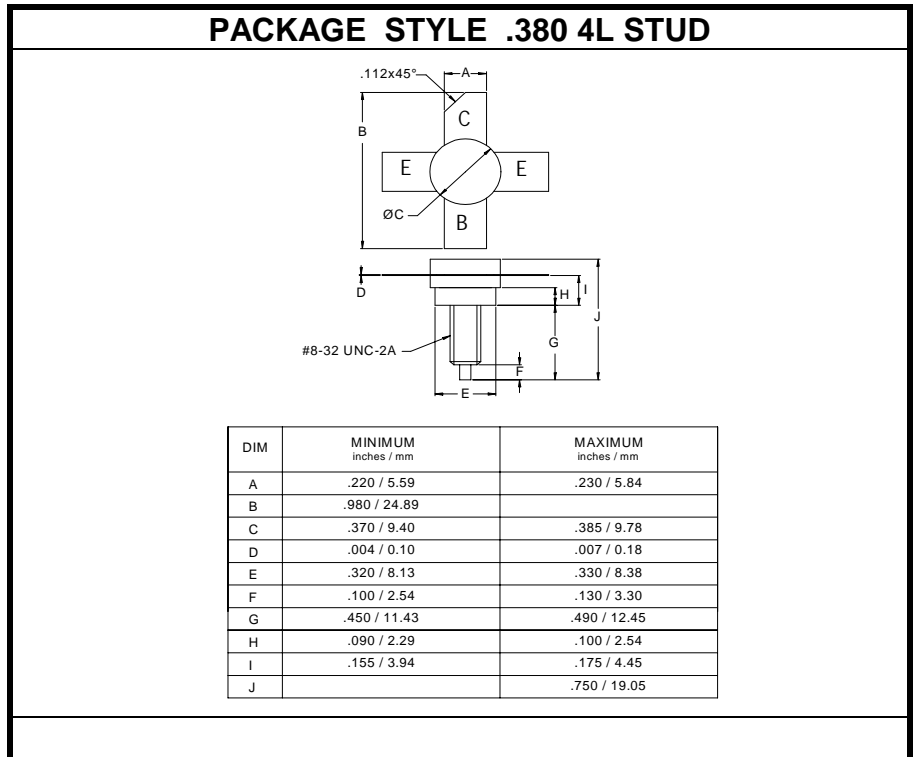
The **ASI 2N5643** is Designed for wideband large-signal amplifier stages in the 125 – 175 MHz range.

**FEATURES:**

- Minimum Gain = 7.6 dB
- Output Power = 40 W
- **OmniGold™** Metalization System

**MAXIMUM RATINGS**

|                         |                               |
|-------------------------|-------------------------------|
| <b>I<sub>C</sub></b>    | 5.0 A                         |
| <b>V<sub>CB0</sub></b>  | 65 V                          |
| <b>V<sub>CEO</sub></b>  | 35 V                          |
| <b>V<sub>EBO</sub></b>  | 4.0 V                         |
| <b>P<sub>DISS</sub></b> | 60 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>   | 2.9 °C/W                      |


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

| SYMBOL                  | TEST CONDITIONS         |                         |             | MINIMUM | TYPICAL | MAXIMUM | UNITS      |
|-------------------------|-------------------------|-------------------------|-------------|---------|---------|---------|------------|
| <b>BV<sub>CEO</sub></b> | I <sub>C</sub> = 200 mA |                         |             | 35      |         |         | <b>V</b>   |
| <b>BV<sub>CES</sub></b> | I <sub>C</sub> = 200 mA |                         |             | 65      |         |         | <b>V</b>   |
| <b>BV<sub>EBO</sub></b> | I <sub>E</sub> = 10 mA  |                         |             | 4.0     |         |         | <b>V</b>   |
| <b>I<sub>CB0</sub></b>  | V <sub>CB</sub> = 30 V  |                         |             |         |         | 1.0     | <b>mA</b>  |
| <b>h<sub>FE</sub></b>   | V <sub>CE</sub> = 5.0 V | I <sub>C</sub> = 500 mA |             | 5.0     |         | ---     | <b>---</b> |
| <b>C<sub>OB</sub></b>   | V <sub>CB</sub> = 30 V  | f = 1.0 MHz             |             |         | 45      | 65      | <b>pF</b>  |
| <b>G<sub>P</sub></b>    | V <sub>CE</sub> = 28 V  | P <sub>OUT</sub> = 40 W | f = 175 MHz | 7.6     | 8.1     | ---     | <b>dB</b>  |
| <b>η<sub>C</sub></b>    | V <sub>CE</sub> = 10 V  | I <sub>C</sub> = 200 mA | f = 100 MHz |         | 60      |         | <b>%</b>   |