# NPN SILICON RF POWER TRANSISTOR

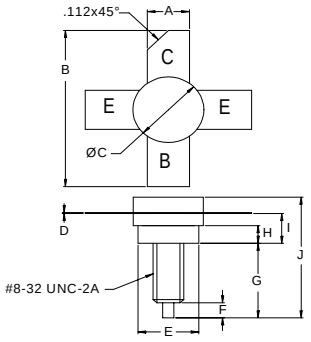
## DESCRIPTION:

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

## PACKAGE STYLE .380 4L STUD




| DIM | MINIMUM inches / mm | MAXIMUM inches / mm |
|---|---|---|
| A | .220 / 5.59 | .230 / 5.84 |
| B | .980 / 24.89 | |
| C | .370 / 9.40 | .385 / 9.78 |
| D | .004 / 0.10 | .007 / 0.18 |
| E | .320 / 8.13 | .330 / 8.38 |
| F | .100 / 2.54 | .130 / 3.30 |
| G | .450 / 11.43 | .490 / 12.45 |
| H | .090 / 2.29 | .100 / 2.54 |
| I | .155 / 3.94 | .175 / 4.45 |
| J | | .750 / 19.05 |

## MAXIMUM RATINGS

| | |
|---|---|
| $I_C$ | 5.0 A |
| $V_{CBO}$ | 65 V |
| $V_{CEO}$ | 35 V |
| $V_{EBO}$ | 4.0 V |
| $P_{DISS}$ | 60 W @ $T_C$ = 25 °C |
| $T_J$ | -65 °C to +200 °C |
| $T_{STG}$ | -65 °C to +200 °C |
| $\theta_{JC}$ | 2.9 °C/W |

## CHARACTERISTICS $T_C$ = 25 °C

| SYMBOL | TEST CONDITIONS | | | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|---|---|---|---|---|---|---|---|
| $BV_{CEO}$ | $I_C$ = 200 mA | | | 35 | | | V |
| $BV_{CES}$ | $I_C$ = 200 mA | | | 65 | | | V |
| $BV_{EBO}$ | $I_E$ = 10 mA | | | 4.0 | | | V |
| $I_{CBO}$ | $V_{CB}$ = 30 V | | | | | 1.0 | mA |
| $h_{FE}$ | $V_{CE}$ = 5.0 V | $I_C$ = 500 mA | | 5.0 | | --- | --- |
| $C_{OB}$ | $V_{CB}$ = 30 V | | f = 1.0 MHz | | 45 | 65 | pF |
| $G_P$ | $V_{CE}$ = 28 V | $P_{OUT}$ = 40 W | f = 175 MHz | 7.6 | 8.1 | --- | dB |
| $\eta_C$ | $V_{CE}$ = 10 V | $I_C$ = 200 mA | f = 100 MHz | | 60 | | % |