

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

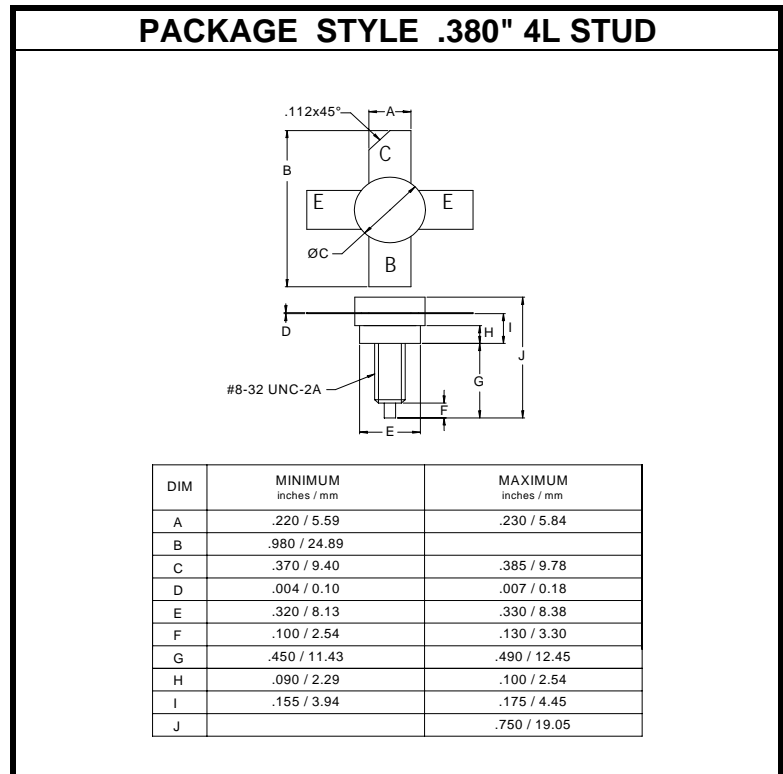
The **MRF1946A** is Designed for 12.5 V 175 MHz Large-Signal Power Amplifier Applications.

**FEATURES INCLUDE:**

- High Common Emitter Power Gain
- Output Power = 30 W

**MAXIMUM RATINGS**

<b>I<sub>C</sub></b>	8.0 A
<b>V<sub>CE</sub></b>	16 V
<b>V<sub>CB</sub></b>	36 V
<b>P<sub>DISS</sub></b>	100 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 +150 °C
<b>θ<sub>JC</sub></b>	1.75 °C/W


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

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
<b>BV<sub>CES</sub></b>	I <sub>C</sub> = 25 mA	36			<b>V</b>
<b>BV<sub>CEO</sub></b>	I <sub>C</sub> = 25 mA	16			<b>V</b>
<b>BV<sub>EBO</sub></b>	I <sub>E</sub> = 5.0 mA	4.0			<b>V</b>
<b>I<sub>CES</sub></b>	V <sub>CE</sub> = 15 V			5.0	<b>mA</b>
<b>h<sub>FE</sub></b>	V <sub>CE</sub> = 5.0 V      I <sub>C</sub> = 1.0 A	40	75	150	<b>---</b>
<b>C<sub>ob</sub></b>	V <sub>CB</sub> = 15 V      f = 1.0 MHz		75	100	<b>pF</b>
<b>G<sub>PE</sub></b> <b>η</b>	V <sub>CC</sub> = 12.5 V      P <sub>out</sub> = 30 W      f = 175 MHz	10 60	11 70		<b>DB</b> <b>%</b>
<b>ψ</b>	V <sub>CC</sub> = 15.5 V      P <sub>IN</sub> = 2.0 dB Overdrive Load VSWR = 30:1 ALL PHASE ANGLES	<b>No Degradation in Power Output</b>			