

# 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

**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

**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>