

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

The **ASI3005** is a common Base transistor capable of providing 5.0 W Class C, RF power @ 3.0 GHz.

**FEATURES:**

- $P_G = 5.2$  dB min. at 5 W / 3,000 MHz
- Emitter Ballst Resistors
- **Omnigold™** Metalization System

**MAXIMUM RATINGS**

$I_C$	2.5 A
$V_{CC}$	50 V
$P_{DISS}$	25 W @ $T_C = 25\text{ }^\circ\text{C}$
$T_J$	-65 °C to +200 °C
$T_{STG}$	-65 °C to +200 °C
$\theta_{JC}$	7.0 °C/W

**PACKAGE STYLE .250 2L FLG**

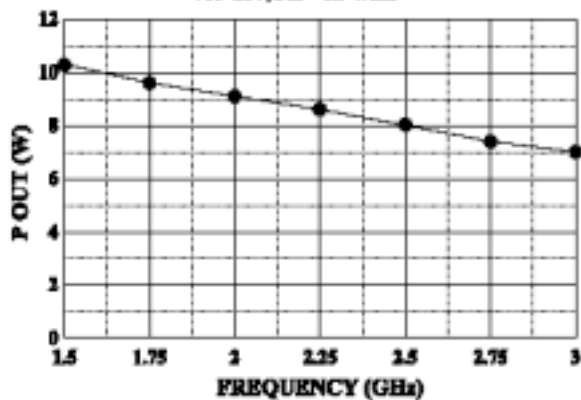
DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.028 / 0.71	.032 / 0.81
B	.740 / 18.80	
C	.245 / 6.22	.255 / 6.48
D	.128 / 3.25	.132 / 3.35
E		.125 / 3.18
F	.110 / 2.79	.117 / 2.97
G		.117 / 2.97
H	.560 / 14.22	.570 / 14.48
I	.790 / 20.07	.810 / 20.57
J	.225 / 5.72	.235 / 5.97
K	.165 / 4.19	.185 / 4.70
L	.003 / 0.08	.007 / 0.18
M	.058 / 1.47	.068 / 1.73
N	.119 / 3.02	.135 / 3.43
P	.149 / 3.78	.187 / 4.75

**ORDER CODE: ASI10540**

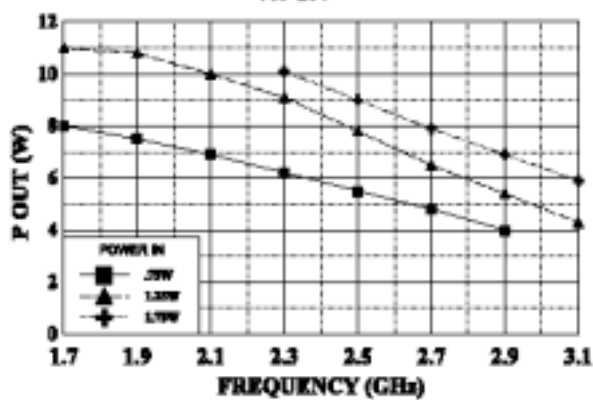
**CHARACTERISTICS**  $T_C = 25\text{ }^\circ\text{C}$ 

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CES}$	$I_C = 5.0$ mA	50			V
$BV_{EBO}$	$I_E = 10$ mA	3.5			V
$I_{CBO}$	$V_{CB} = 28$ V			0.5	mA
$h_{FE}$	$V_{CE} = 5.0$ V $I_C = 300$ mA	20		120	---
$C_{ob}$	$V_{CB} = 28$ V $f = 1.0$ MHz			7.5	pF
$P_G$ $\eta_c$ VSWR	$V_{CC} = 28$ V $P_{OUT} = 5.0$ W $f = 3.0$ GHz $P_{IN} = 1.5$ W	5.2	30	20:1	dB % ---

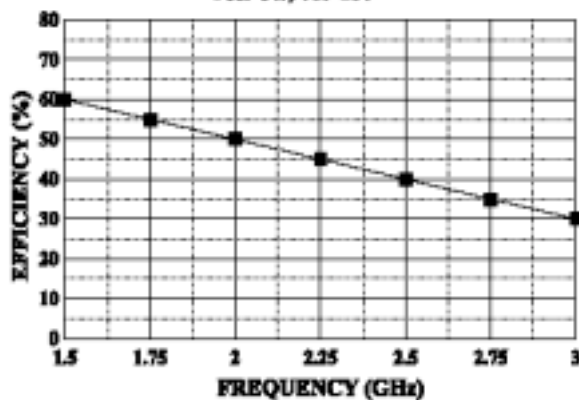
**SATURATED P OUT VS FREQUENCY**

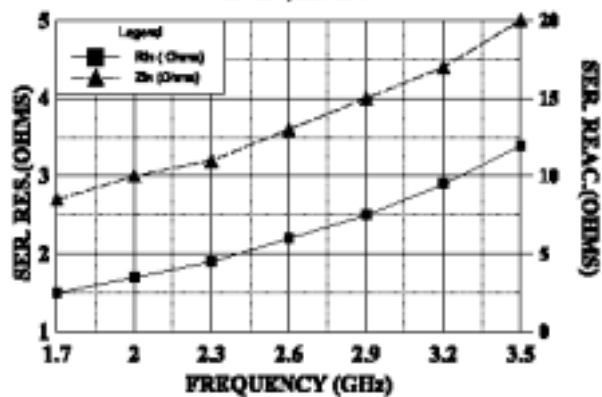
 Vcc=28V, P<sub>in</sub> = 1.5 Watts

**TYPICAL POWER OUTPUT VS FREQUENCY**

Vcc=28V


**EFFICIENCY VS FREQUENCY**

Post-5W, Vcc=28V


**SERIES INPUT IMPEDANCE VS FREQUENCY**

 Vcc=28V, P<sub>in</sub>=1.5W

**SERIES LOAD IMPEDANCE VS FREQUENCY**

 Vcc=28V, P<sub>in</sub>=1.5W
