

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

The **ASI AVD090P** is Designed for High Peak power & low duty cycle, IFF, DME, and TACAN Applications.

FEATURES:

- Internal Input Matching Network
- $P_G = 8.4$ dB at 90 W/1150 MHz
- **Omnigold™** Metalization System

MAXIMUM RATINGS

I_C	1.0 A PEAK
V_{CB}	55 V
P_{DISS}	292 W @ 25 °C
T_J	-65 °C to +200 °C
T_{STG}	-65 °C to +150 °C
θ_{JC}	0.6 °C/W

PACKAGE STYLE .280 4L PILL (A)

DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.095 / 2.41	.105 / 2.67
B	.195 / 4.95	.205 / 5.21
C	1.000 / 25.40	
D	.004 / 0.10	.007 / 0.18
E	.050 / 1.27	.065 / 1.65
F		.145 / 3.68
G	.275 / 6.99	.285 / 7.21

ORDER CODE: ASI10563

CHARACTERISTICS $T_C = 25$ °C

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CBO}	$I_C = 10$ mA	65			V
BV_{CER}	$I_C = 25$ mA $R_{BE} = 10 \Omega$	65			V
BV_{EBO}	$I_E = 1.0$ mA	3.5			V
I_{CES}	$V_{CB} = 50$ V			100	mA
h_{FE}	$V_{CE} = 5.0$ V $I_C = 1.0$ A	10		200	---
C_{OB}	$V_{CE} = 50$ V $f = 1.0$ MHz			40	pF
P_G	$V_{CC} = 50$ V $P_{OUT} = 90$ W $f = 1025 - 1150$ MHz	8.4			dB
η_c	$P_{IN} = 13$ W		38		%

Pulse with = 10 μ S, Duty Cycle = 1.0 %

IMPEDANCE DATA**P_{IN} = 13 w****V_{CE} = 50 V**

FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
960 MHz	2.5 + j13.0	4.6 – j5.5
1030 MHz	5.2 + j15.0	5.0 – j5.5
1090 MHz	16.3 + j15.0	4.8 – j5.5
1150 MHz	14.7 + j2.5	4.7 – 7.0
1215 MHz	7.6 + j0.5	4.7 – j5.0