

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

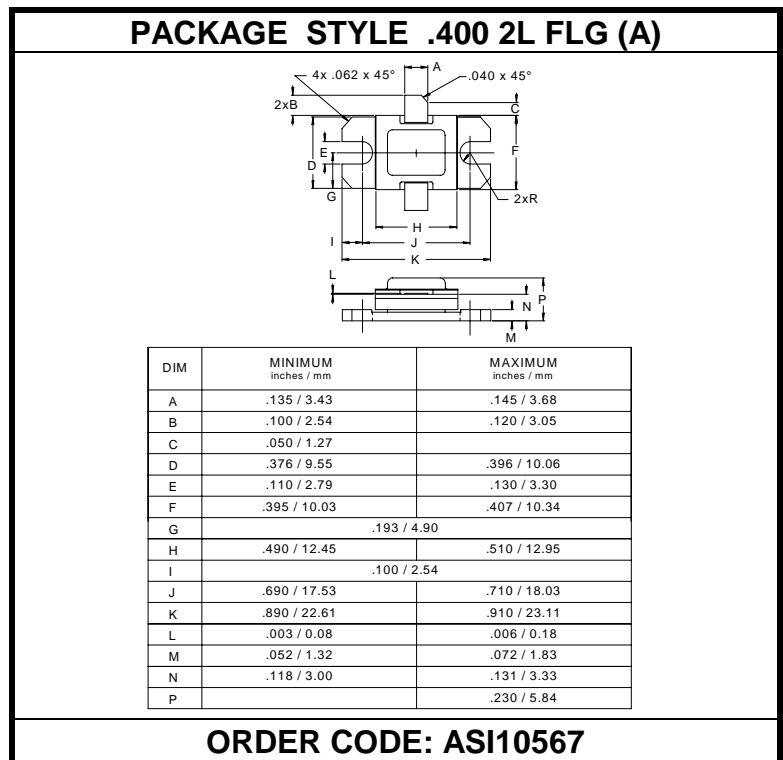
The **ASI AVD400** is a silicon NPN power transistor, designed for high power and low duty cycle DME and IFF applications.

**FEATURES:**

- Internal Input/Output Matching Networks
- $P_G = 6.5$  dB at 400 W/1150 MHz
- **Omnigold™** Metalization System

**MAXIMUM RATINGS**

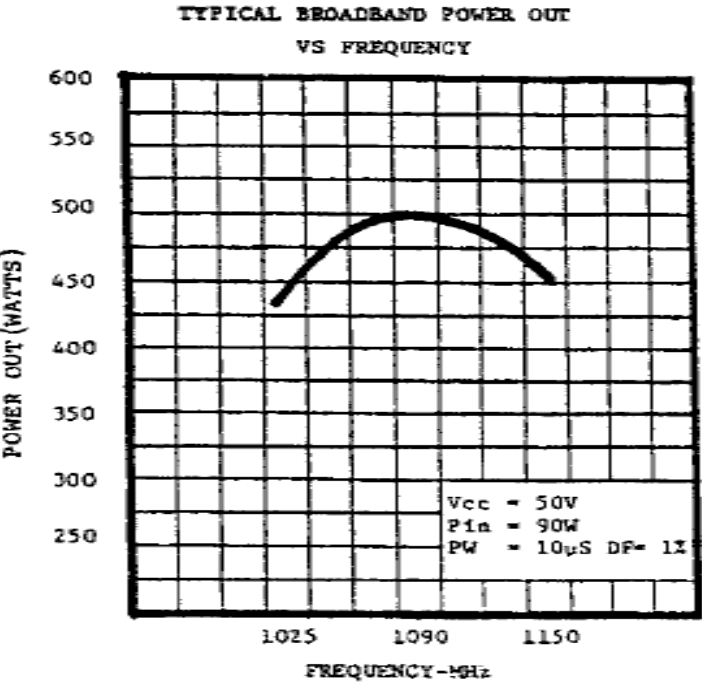
$I_C$	22 A
$V_{CC}$	55 V
$P_{DISS}$	1458 W @ $T_C = 25^\circ C$
$T_J$	-65 °C to +200 °C
$T_{STG}$	-65 °C to +200 °C
$\theta_{JC}$	0.12 °C/W


**CHARACTERISTICS**  $T_C = 25^\circ C$ 

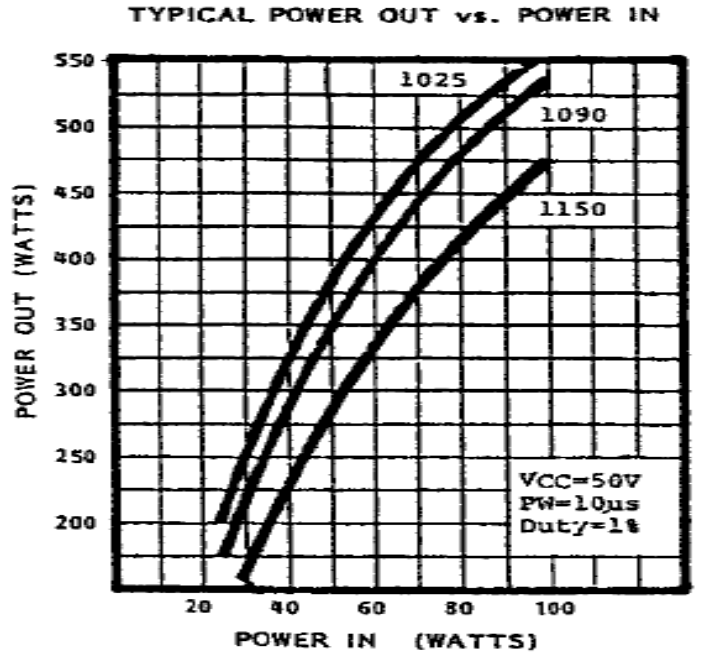
SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CBO}$	$I_C = 25$ mA	65			V
$BV_{CES}$	$I_C = 50$ mA	65			V
$BV_{EBO}$	$I_E = 10$ mA	3.5			V
$I_{CES}$	$V_{CE} = 50$ V			25	mA
$h_{FE}$	$V_{CE} = 5.0$ V $I_C = 0.25$ A	10		200	---
$P_G$	$V_{CC} = 50$ V $P_{OUT} = 400$ W $f = 1025 - 1150$ MHz	6.5			dB
$\eta_C$	$P_{IN} = 90$ W	40			%

Pulse Width = 10  $\mu$ sec, Duty Cycle = 1 %

**POWER OUTPUT vs FREQUENCY**



**POWER OUTPUT vs POWER INPUT**



**IMPEDANCE DATA:**

FREQ	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
1020 MHz	$2.89 + j4.1$	$1.38 - j3.2$
1090 MHz	$2.32 + j3.4$	$1.33 - j2.8$
1150 MHz	$1.99 + j2.8$	$1.26 - j2.5$

 $P_{IN} = 90 \text{ W}$  $V_{CE} = 50 \text{ V}$