

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

The **ASI VHB50-28F** is an NPN power transistor designed for 28 V Class-C ground station transmitters, it utilizes emitter ballasting and gold metallization to provide optimum VSWR capability.

**FEATURES:**

- Common Emitter
- $P_G = 6.0$  dB at 50 W/175 MHz
- **Omnigold™** Metalization System

**MAXIMUM RATINGS**

$I_C$	6.5 A
$V_{CBO}$	65 V
$V_{CEO}$	35 V
$V_{EBO}$	4.0 V
$P_{DISS}$	75W
$T_J$	-65 °C to +200 °C
$T_{STG}$	-65 °C to +150 °C
$\theta_{JC}$	2.3 °C/W

**PACKAGE STYLE .380 4L FLG**

DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.220 / 5.59	.230 / 5.84
B	.785 / 19.94	
C	.720 / 18.29	.730 / 18.54
D	.970 / 24.64	.980 / 24.89
E		.385 / 9.78
F	.004 / 0.10	.006 / 0.15
G	.085 / 2.16	.105 / 2.67
H	.160 / 4.06	.180 / 4.57
I		.280 / 7.11
J	.240 / 6.10	.255 / 6.48

**ORDER CODE: ASI10728**

**CHARACTERISTICS**  $T_C = 25\text{ °C}$ 

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CEO}$	$I_C = 200$ mA	35			V
$BV_{CES}$	$I_C = 200$ mA	65			V
$BV_{EBO}$	$I_E = 10$ mA	4.0			V
$I_{CBO}$	$V_{CB} = 30$ V			2.0	mA
$h_{FE}$	$V_{CE} = 5.0$ V $I_C = 500$ mA	10		150	---
$C_{ob}$	$V_{CB} = 28$ V $f = 1.0$ MHz			80	pF
$P_G$ $\eta_c$	$V_{CE} = 28$ V $P_{OUT} = 50$ W $f = 175$ MHz $P_{IN} = 12$ W	6.0	60		dB %



**IMPEDANCE DATA**

FREQ.	Z <sub>IN</sub> (Ω)	Z <sub>CL</sub> (Ω)
150 MHz	1.0 + j2.0	4.0 - j3.69

P<sub>OUT</sub> = 60 W

V<sub>CE</sub> = 28 V