

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

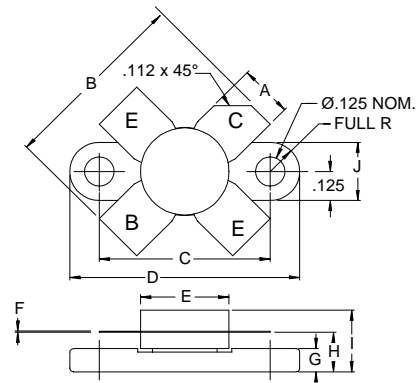
The **ASI VHB40-28F** is an epitaxial planar transistor, designed for 28 V FM Class C RF amplifiers utilized in base stations. This device utilizes ballasted emitter resistors to achieve optimum load mismatch capability.

**FEATURES:**

- 175 MHz 28 V Class C
- Efficiency 60% min
- $P_{OUT} = 40\text{ W @ } 7.6\text{ dB}$
- **Omnigold™** Metalization System

**MAXIMUM RATINGS**

$I_C$	5.0 A
$V_{CBO}$	65 V
$V_{CE0}$	35 V
$V_{EBO}$	4.0 V
$P_{DISS}$	60 W
$T_J$	-65 °C to +200 °C
$T_{STG}$	-65 °C to +150 °C
$\theta_{JC}$	2.9 °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: ASI10726**
**CHARACTERISTICS**  $T_C = 25\text{ °C}$ 

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CEO}$	$I_C = 200\text{ mA}$	35			V
$BV_{CES}$	$I_C = 200\text{ mA}$	65			V
$BV_{CBO}$	$I_C = 10\text{ mA}$	65			V
$BV_{EBO}$	$I_E = 10\text{ mA}$	4.0			V
$I_{CBO}$	$V_{CB} = 30\text{ V}$			1.0	mA
$I_{CES}$	$V_{CE} = 30\text{ V}$			10	mA
$h_{FE}$	$V_{CE} = 5.0\text{ V}$ $I_C = 500\text{ mA}$	5.0		200	---



<b>C<sub>ob</sub></b>	V <sub>CB</sub> = 30 V	f = 1.0 MHz			65	<b>pF</b>
<b>P<sub>G</sub></b> <b>η<sub>c</sub></b>	V <sub>CE</sub> = 28 V P <sub>OUT</sub> = 40 W	P <sub>IN</sub> = 7.0 W	f = 175 MHz	7.6	60	<b>dB</b> <b>%</b>

**IMPEDANCE DATA**V<sub>CE</sub> = 28 V

f = 175 MHz

P <sub>IN</sub> (W)	P <sub>OUT</sub> = (W)	Z <sub>IN</sub> (Ω)	Z <sub>CL</sub> = (Ω)
2	28.5	0.85 + j1.20	3.25 + j7.05
4	43.0	1.05 + j1.32	4.45 + j5.40
6	53.0	1.01 + j1.42	5.25 + j4.42
8	60.5	1.05 + j1.35	5.45 + j4.12