

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

The **VHB40-12F** is Designed for Class C Amplifier Applications in VHF Mobile Radios.

**FEATURES:**

- $P_G = 9.5$  dB Typ. at 40 W /175 MHz
- $\eta_c = 60\%$  Typ. at 40 W /175 MHz
- **Omnigold™** Metalization System

**MAXIMUM RATINGS**

$I_C$	5.0 A
$V_{CBO}$	36 V
$V_{CEO}$	18 V
$V_{EBO}$	4.0 V
$P_{DISS}$	70 W @ $T_C = 25^\circ C$
$T_J$	$-65^\circ C$ to $+200^\circ C$
$T_{STG}$	$-65^\circ C$ to $+150^\circ C$
$\theta_{JC}$	2.9 $^\circ C/W$

**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: ASI10716**

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

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CBO}$	$I_C = 50$ mA	36			V
$BV_{CES}$	$I_C = 50$ mA	36			V
$BV_{CEO}$	$I_C = 50$ mA	18			V
$BV_{EBO}$	$I_E = 10$ mA	4.0			V
$I_{CES}$	$V_{CE} = 15$ V			5.0	mA
$h_{FE}$	$V_{CE} = 5.0$ V $I_C = 5.0$ A	20		200	---
$C_{ob}$	$V_{CB} = 12.5$ V $f = 1.0$ MHz			135	pF
$P_G$ $\eta_c$	$V_{CC} = 12.5$ V $P_{OUT} = 40$ W $f = 175$ MHz	8.5	60		dB %