

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

The **ASI VHB1-28T** is Designed for Class C, 28 V High Band Applications up to 175 MHz.

**FEATURES:**

- Class C Operation
- $P_G = 13 \text{ dB}$  at 1.0 W/175 MHz
- **Omnigold™** Metalization System

**MAXIMUM RATINGS**

$I_C$	0.4 A
$V_{CBO}$	55 V
$V_{CEO}$	30 V
$V_{EBO}$	3.5 V
$P_{DISS}$	5 W @ $T_C = 25 \text{ }^\circ\text{C}$
$T_J$	-65 °C to +200 °C
$T_{STG}$	-65 °C to +200 °C
$\theta_{JC}$	35 °C/W

**PACKAGE STYLE TO-39**

DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.200 / 5.080	
B	.029 / 0.740	.045 / 1.140
C	.028 / 0.720	.034 / 0.860
D	.335 / 8.510	.370 / 9.370
E	.305 / 7.750	.335 / 8.500
F	.240 / 6.100	.260 / 6.600
G	.500 / 12.700	
H	.016 / 0.407	.020 / 0.508

**ORDER CODE: ASI10720**

**CHARACTERISTICS**  $T_C = 25 \text{ }^\circ\text{C}$ 

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CEO}$	$I_C = 5.0 \text{ mA}$	30			V
$BV_{CER}$	$I_C = 5.0 \text{ mA}$ $R_{BE} = 10 \text{ } \Omega$	55			V
$BV_{CBO}$	$I_C = 0.1 \text{ mA}$	55			V
$BV_{EBO}$	$I_E = 0.1 \text{ mA}$	3.5			V
$I_{CEX}$	$V_C = 55 \text{ V}$ $V_{BE} = -1.5 \text{ V}$			100	$\mu\text{A}$
$I_{CEO}$	$V_E = 28 \text{ V}$			20	$\mu\text{A}$
$V_{CE}^{(S)}$	$I_C = 100 \text{ mA}$ $I_B = 20 \text{ mA}$			1.0	V
$h_{FE}$	$V_{CE} = 5.0 \text{ V}$ $I_C = 50 \text{ mA}$ $I_C = 360 \text{ mA}$	10 5.0		200	---
$C_{OB}$	$V_{CB} = 28 \text{ V}$ $f = 1.0 \text{ MHz}$			3.0	pF
$P_G$ $\eta_c$	$V_{CE} = 28 \text{ V}$ $P_{OUT} = 1.0 \text{ W}$ $f = 175 \text{ MHz}$	13	60		dB %