

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
θ_{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	μA
I_{CEO}	$V_E = 28 \text{ V}$			20	μA
$V_{CE}^{(S)}$	$I_C = 100 \text{ mA}$ $I_B = 20 \text{ mA}$			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 η_c	$V_{CE} = 28 \text{ V}$ $P_{OUT} = 1.0 \text{ W}$ $f = 175 \text{ MHz}$	13	60		dB %