# VHB10-28S

# NPN SILICON RF POWER TRANSISTOR

## DESCRIPTION:

The **ASI VHB10-28S** is an NPN power transistor designed for 138-175 MHz VHF communications. It utilizes emitter ballasting to provide high VSWR handling capability.

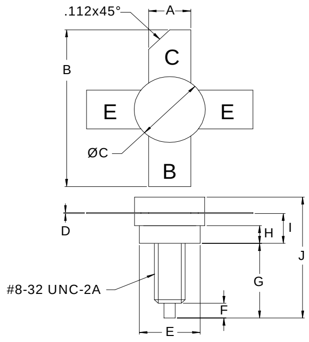
## FEATURES:

- Common Emitter, 28 V operation
- **$P_G$** = 10 dB at 10W/175 MHz
- ***Omnigold***™ Metalization System
- High VSWR capability

## MAXIMUM RATINGS

| | |
|---|---|
| **$I_C$** | 1.0 A |
| **$V_{CBO}$** | 65 V |
| **$V_{CEO}$** | 35 V |
| **$V_{EBO}$** | 4.0 V |
| **$P_{DISS}$** | 13.0 W |
| **$T_J$** | -65 °$^O$C to +200 °C |
| **$T_{STG}$** | -65 °C to +150 °C |
| **$\theta_{JC}$** | 13.5 °C/W |

## PACKAGE STYLE .380 4L STUD



| DIM | MINIMUM inches / mm | MAXIMUM inches / mm |
|---|---|---|
| A | .220 / 5.59 | .230 / 5.84 |
| B | .980 / 24.89 | |
| C | .370 / 9.40 | .385 / 9.78 |
| D | .004 / 0.10 | .007 / 0.18 |
| E | .320 / 8.13 | .330 / 8.38 |
| F | .100 / 2.54 | .130 / 3.30 |
| G | .450 / 11.43 | .490 / 12.45 |
| H | .090 / 2.29 | .100 / 2.54 |
| I | .155 / 3.94 | .175 / 4.45 |
| J | | .750 / 19.05 |

**ORDER CODE: ASI10723**

## CHARACTERISTICS $T_C = 25°C$

| SYMBOL | TEST CONDITIONS | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|---|---|---|---|---|---|
| **$BV_{CBO}$** | $I_C$ = 200 mA | 65 | | | **V** |
| **$BV_{CES}$** | $I_C$ = 200 mA | 65 | | | **V** |
| **$BV_{CEO}$** | $I_C$ = 200 mA | 35 | | | **V** |
| **$BV_{EBO}$** | $I_E$ = 10 mA | 4.0 | | | **V** |
| **$I_{CBO}$** | $V_{CB}$ = 30 V | | | 1.0 | **mA** |
| **$h_{FE}$** | $V_{CE}$ = 5.0 V $I_C$ = 200 mA | 5.0 | | 200 | **---** |
| **$C_{ob}$** | $V_{CB}$ = 30 V f = 1.0 MHz | | | 15 | **pF** |
| **$P_G$**<br>**$\eta_C$** | $V_{CC}$ = 28 V $P_{OUT}$ = 10 W f = 175 MHz<br>$P_{IN}$ = 1.0 W | 10 | <br>60 | | **dB**<br>**%** |