

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

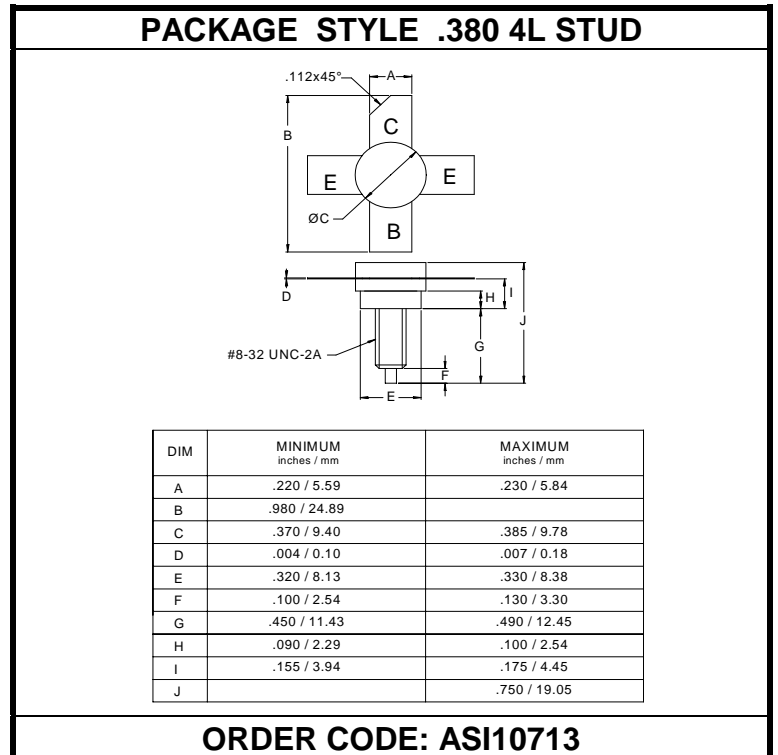
The **ASI VHB10-12S** is Designed for 12.5 V, High Band Application.

FEATURES:

- Common Emitter
- $P_G = 10$ dB at 10 W/175 MHz
- **Omnigold™** Metalization System

MAXIMUM RATINGS

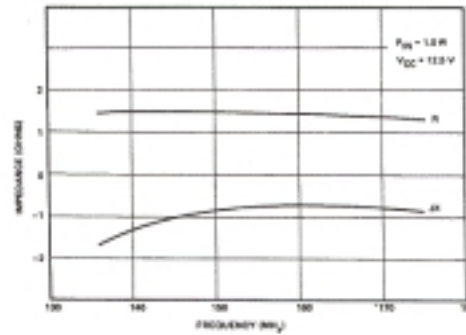
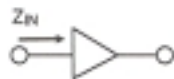
| | |
|---------------|----------------------|
| I_C | 2.0 A |
| V_{CBO} | 36 V |
| V_{CEO} | 18 V |
| V_{CES} | 36 V |
| V_{EBO} | 4.0 V |
| P_{DISS} | 20 W @ $T_C = 25$ °C |
| T_J | -65 °C to +200 °C |
| T_{STG} | -65 °C to +150 °C |
| θ_{JC} | 8.8 °C/W |


CHARACTERISTICS $T_C = 25$ °C

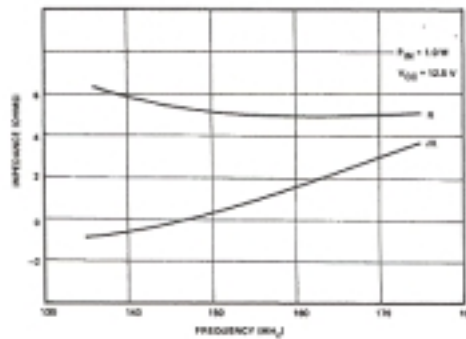
| SYMBOL | TEST CONDITIONS | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|-------------------|--|---------|---------|---------|---------|
| BV_{CEO} | $I_C = 15$ mA | 18 | | | V |
| BV_{CES} | $I_C = 50$ mA | 36 | | | V |
| BV_{EBO} | $I_E = 2.5$ mA | 4.0 | | | V |
| I_{CBO} | $V_{CB} = 15$ V | | | 1.0 | mA |
| h_{FE} | $V_{CE} = 5.0$ V $I_C = 250$ mA | 5.0 | | 200 | --- |
| C_{OB} | $V_{CB} = 12.5$ V $f = 1.0$ MHz | | | 45 | pF |
| P_G η_c | $V_{CE} = 12.5$ V $P_{OUT} = 10$ W $f = 175$ MHz | 10 | 60 | | dB % |

IMPEDANCE DATA

TYPICAL INPUT IMPEDANCE

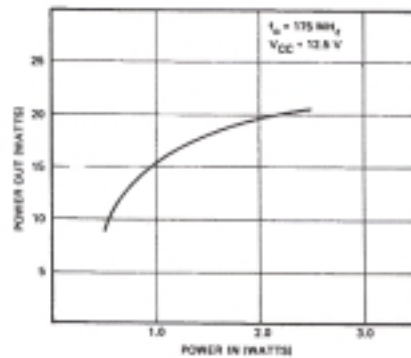


TYPICAL COLLECTOR LOAD IMPEDANCE



TYPICAL PERFORMANCE

POWER OUTPUT vs POWER INPUT



POWER OUTPUT vs FREQUENCY

