

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

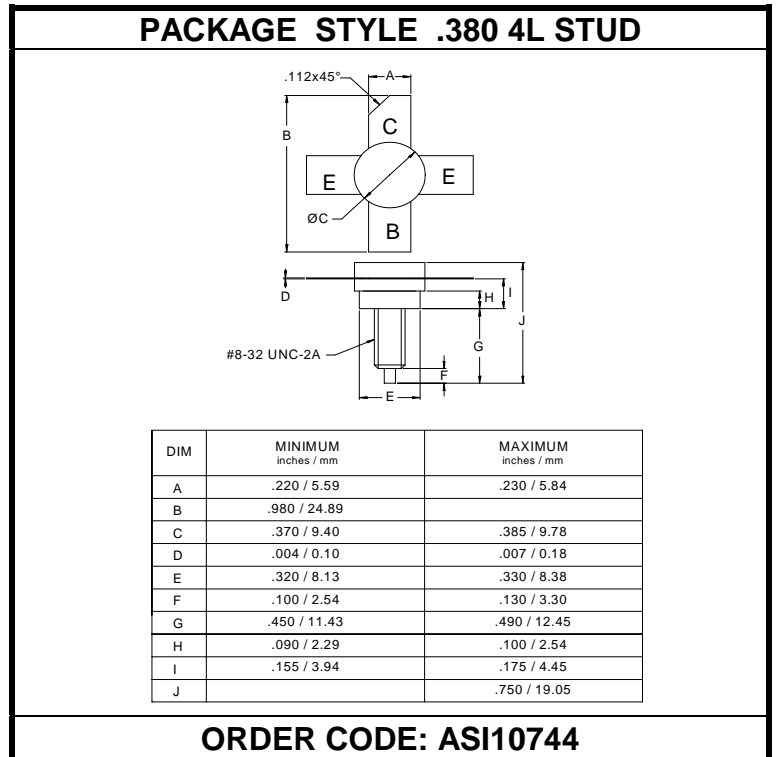
The **ASI VMB40-12S** is Designed for 12.5 V, Medium Band Class C Application.

**FEATURES:**

- Common Emitter
- $P_G = 10$  dB 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 @ $T_C = 25$ °C |
| $T_J$         | -65 °C to +200 °C    |
| $T_{STG}$     | -65 °C to +150 °C    |
| $\theta_{JC}$ | 2.5 °C/W             |


**CHARACTERISTICS**  $T_C = 25$  °C

| SYMBOL            | TEST CONDITIONS                                  | MINIMUM | TYPICAL | MAXIMUM | UNITS   |
|-------------------|--|---------|---------|---------|---------|
| $BV_{CEO}$        | $I_C = 50$ mA                                    | 18      |         |         | V       |
| $BV_{CES}$        | $I_C = 50$ mA                                    | 36      |         |         | V       |
| $BV_{CBO}$        | $I_C = 50$ mA                                    | 36      |         |         |         |
| $BV_{EBO}$        | $I_E = 10$ mA                                    | 4.0     |         |         | V       |
| $I_{CES}$         | $V_{CE} = 12.5$ 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                  |         |         | 165     | pF      |
| $P_G$<br>$\eta_C$ | $V_{CE} = 12.5$ V $P_{OUT} = 40$ W $f = 175$ MHz | 10      | 60      |         | dB<br>% |