

# VHF POWER MOSFET

## N-Channel Enhancement Mode

**DESCRIPTION:**

The **VFT80-28** is Designed for General Purpose Class B Power Amplifier Applications up to 175 MHz.

**FEATURES:**

- $P_G = 10$  dB Typical at 175 MHz
- 10:1 Load VSWR Capability
- *Omnigold™* Metalization System

**MAXIMUM RATINGS**

|            |                                 |
|------------|---------------------------------|
| $I_C$      | 10 A                            |
| $V_{CB}$   | 60 V                            |
| $V_{CE}$   | 35 V                            |
| $P_{DISS}$ | 140 W @ $T_C = 25^\circ C$      |
| $T_J$      | $-65^\circ C$ to $+200^\circ C$ |
| $T_{STG}$  | $-65^\circ C$ to $+150^\circ C$ |
| $q_{JC}$   | $1.5^\circ C/W$                 |

**PACKAGE STYLE .380 4L FLG**

| DIM | MINIMUM<br>inches / mm | MAXIMUM<br>inches / mm |
|-----|------------------------|------------------------|
| A   | .220 / 5.59            | .230 / 5.84            |
| B   | .785 / 19.94           |                        |
| C   | .720 / 18.29           | .730 / 18.54           |
| D   | .970 / 24.64           | .980 / 24.89           |
| E   |                        | .385 / 9.78            |
| F   | .004 / 0.10            | .006 / 0.15            |
| G   | .085 / 2.16            | .105 / 2.67            |
| H   | .160 / 4.06            | .180 / 4.57            |
| I   |                        | .280 / 7.11            |
| J   | .240 / 6.10            | .255 / 6.48            |

**ORDER CODE: ASI10705**

**CHARACTERISTICS**  $T_C = 25^\circ C$ 

| SYMBOL                              | TEST CONDITIONS  | MINIMUM                        | TYPICAL          | MAXIMUM | UNITS   |
|-------------------------------------|--|--------------------------------|------------------|---------|---------|
| $BV_{DSS}$                          | $I_D = 100$ mA   | 60                             |                  |         | V       |
| $I_{DSS}$                           | $V_{DS} = 28$ V $V_{GS} = 0$ V                                     |                                |                  | 5.0     | mA      |
| $I_{GSS}$                           | $V_{DS} = 0$ V $V_{GS} = 20$ V                                     |                                |                  | 1.0     | mA      |
| $V_{GS(th)}$                        | $I_D = 50$ mA $V_{DS} = 10$ V                                      | 1.0                            |                  | 6.0     | V       |
| $g_{fs}$                            | $I_D = 2$ A $V_{DS} = 10$ V  | 1200                           |                  |         | mS      |
| $C_{iss}$<br>$C_{oss}$<br>$C_{rss}$ | $V_{DS} = 28$ V $V_{GS} = 0$ V $f = 1.0$ MHz                       |                                | 105<br>165<br>20 |         | pF      |
| $P_G$<br>$h_D$                      | $V_{DD} = 28$ V $I_{DQ} = 25$ mA $P_{out} = 80$ W<br>$f = 175$ MHz | 10<br>50                       | 12<br>60         |         | dB<br>% |
| $y$                                 | $V_{SWR} = 30:1$ AT ALL PHASE ANGLES                               | NO DEGRADATION IN OUTPUT POWER |                  |         |         |