

# POWER MOSFET

## N-Channel Enhancement Mode

### DESCRIPTION:

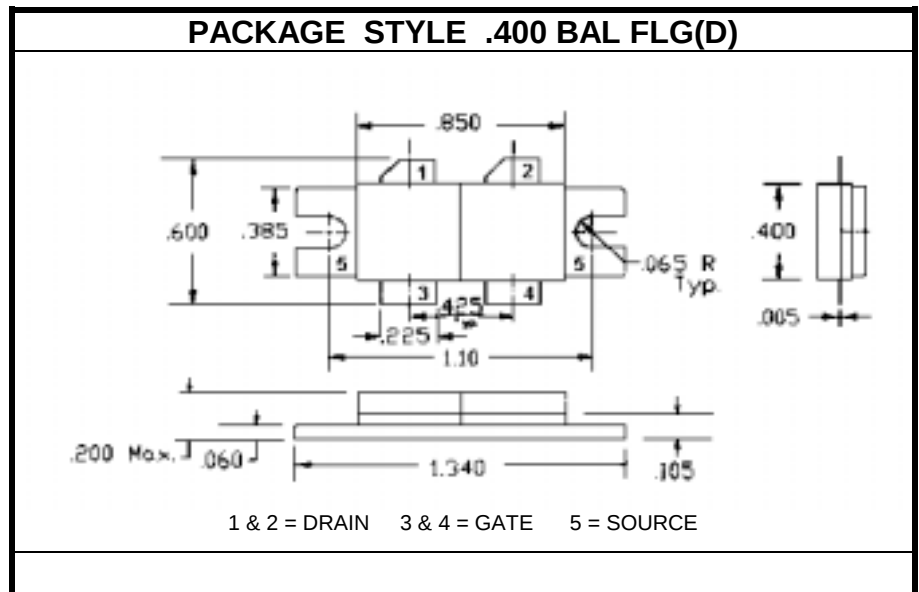
The **ASI BLF378** is a N-Channel Enhancement-Mode RF Power MOSFET Designed for broadband RF Applications up to 225 MHz.

### FEATURES INCLUDE:

- $P_G = 14$  dB Min. at 225 MHz
- 20:1 Load VSWR Capability
- **Omnigold™** metalization system

### MAXIMUM RATINGS

|               |                                             |
|---------------|---------------------------------------------|
| $I_D$         | 18 A                                        |
| $V_{DSS}$     | 125 V                                       |
| $V_{GS}$      | 20 V                                        |
| $P_{DISS}$    | 500 W @ $T_C = 25^\circ\text{C}$            |
| $T_J$         | $-65^\circ\text{C}$ to $+200^\circ\text{C}$ |
| $T_{STG}$     | $-65^\circ\text{C}$ to $+150^\circ\text{C}$ |
| $\theta_{JC}$ | $0.35^\circ\text{C/W}$                      |



### CHARACTERISTICS $T_C = 25^\circ\text{C}$

| SYMBOL                              | TEST CONDITIONS   |                   | MINIMUM  | TYPICAL          | MAXIMUM | UNITS          |
|-------------------------------------|-------------------|-------------------|----------|------------------|---------|----------------|
| $BV_{DSS}$                          | $I_D = 40$ mA     | $V_{GS} = 0$ V    | 125      |                  |         | V              |
| $I_{DSS}$                           | $V_{DS} = 50$ V   | $V_{GS} = 0$ V    |          |                  | 5.0     | mA             |
| $I_{GSS}$                           | $V_{DS} = 0$ V    | $V_{GS} = 30$ V   |          |                  | 1.0     | $\mu\text{A}$  |
| $V_{GS}$                            | $V_{GS} = V_{DS}$ | $I_{DS} = 300$ mA | 1.0      |                  | 7.0     | V              |
| $gM$                                | $V_{DS} = 10$ V   | $V_{GS} = 5.0$ V  |          | 5.5              |         | Mho            |
| $R_{DS(on)}$                        | $V_{GS} = 20$ V   | $I_{DS} = 6.0$ A  |          | 0.30             |         | $\Omega$       |
| $I_{DSAT}$                          | $V_{GS} = 20$ V   | $V_{DS} = 10$ V   |          | 35               |         | A              |
| $C_{iss}$<br>$C_{oss}$<br>$C_{rss}$ | $V_{DS} = 50$ V   | $V_{GS} = 0$ V    |          | 400<br>200<br>15 |         | pF             |
| $P_{GS}$<br>$\eta$<br>$\psi$        | $V_{DS} = 50$ V   | $I_{DQ} = 0.8$ A  | 14<br>50 |                  | 20:1    | dB<br>%<br>--- |

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