

# RF MOSFET Power Transistor, 75W, 24V

## 30 - 90 MHz

**FH2114**

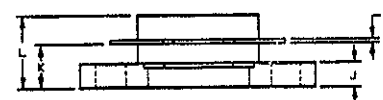
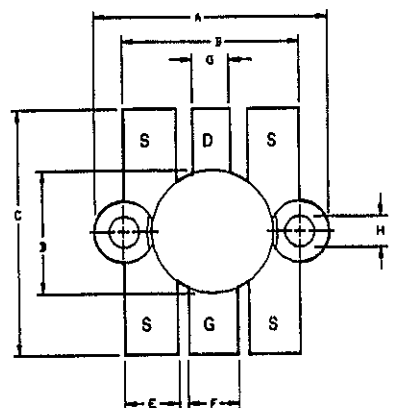
V2.00

### Features

- N-Channel Enhancement Mode Device
- Meets CECOM Drawing A3012711
- Designed for Frequency Hopping Systems
- 30-90 MHz
- Lower Capacitances for Broadband Operation
- Lower Noise Figure Than Bipolar Devices

### Absolute Maximum Ratings at 25°C

| Parameter            | Symbol        | Rating      | Units |
|----------------------|---------------|-------------|-------|
| Drain-Source Voltage | $V_{DS}$      | 65          | V     |
| Gate-Source Voltage  | $V_{GS}$      | 20          | V     |
| Drain-Source Current | $I_{DS}$      | 16          | A     |
| Power Dissipation    | $P_D$         | 159         | W     |
| Junction Temperature | $T_J$         | 200         | °C    |
| Storage Temperature  | $T_{STG}$     | -55 to +150 | °C    |
| Thermal Resistance   | $\theta_{JC}$ | 1.1         | °C/W  |



| LETTER<br>DIM | MILLIMETERS |       | INCHES |      |
|---------------|-------------|-------|--------|------|
|               | MIN         | MAX   | MIN    | MAX  |
| A             | 24.38       | 25.15 | .960   | .990 |
| B             | 18.29       | 18.54 | .720   | .730 |
| C             | 21.36       | 21.74 | .841   | .856 |
| D             | 12.60       | 12.85 | .496   | .506 |
| E             | 5.33        | 5.59  | .210   | .220 |
| F             | 5.08        | 5.33  | .200   | .210 |
| G             | 3.81        | 4.06  | .150   | .160 |
| H             | 3.10        | 3.15  | .122   | .125 |
| J             | 2.51        | 2.67  | .099   | .105 |
| K             | 4.06        | 4.57  | .160   | .180 |
| L             | 6.68        | 7.49  | .263   | .295 |
| M             | .10         | .15   | .004   | .006 |

### Electrical Characteristics at 25°C

| Parameter                      | Symbol       | Min | Max  | Units         | Test Conditions                                                                                            |
|--------------------------------|--------------|-----|------|---------------|------------------------------------------------------------------------------------------------------------|
| Drain-Source Breakdown Voltage | $BV_{DSS}$   | 65  | -    | V             | $V_{GS}=0.0\text{ V}$ , $I_{DS}=100.0\text{ mA}$                                                           |
| Drain-Source Leakage Current   | $I_{DSS}$    | -   | 2.0  | mA            | $V_{DS}=24.0\text{ V}$ , $V_{GS}=0.0\text{ V}$                                                             |
| Gate-Source Leakage Current    | $I_{GSS}$    | -   | 4.0  | $\mu\text{A}$ | $V_{GS}=20.0\text{ V}$ , $V_{DS}=0.0\text{ V}$                                                             |
| Gate Threshold Voltage         | $V_{GS(TH)}$ | 2.0 | 7.2  | V             | $V_{DS}=27.0\text{ V}$ , $I_{DS}=1000.0\text{ mA}$                                                         |
| Forward Transconductance       | $G_M$        | 1.6 | -    | S             | $V_{DS}=24.0\text{ V}$ , $I_{DS}=1000.0\text{ mA}$ , $\Delta V_{GS}=1.0\text{ V}$ , 80 $\mu\text{s}$ Pulse |
| Input Capacitance              | $C_{ISS}$    | -   | 210  | pF            | $V_{DS}=30.0\text{ V}$ , $F=1.0\text{ MHz}$                                                                |
| Output Capacitance             | $C_{OSS}$    | -   | 160  | pF            | $V_{DS}=30.0\text{ V}$ , $F=1.0\text{ MHz}$                                                                |
| Reverse Capacitance            | $C_{RSS}$    | -   | 25   | pF            | $V_{DS}=30.0\text{ V}$ , $F=1.0\text{ MHz}$                                                                |
| Power Gain                     | $G_P$        | 13  | -    | dB            | $V_{DS}=24.0\text{ V}$ , $I_{DS}=1000\text{ mA}$ , $P_{OUT}=75.0\text{ W}$ , $F=88\text{ MHz}$             |
| Drain Efficiency               | $\eta_D$     | 65  | -    | %             | $V_{DS}=24.0\text{ V}$ , $I_{DS}=1000\text{ mA}$ , $P_{OUT}=75.0\text{ W}$ , $F=88\text{ MHz}$             |
| Load Mismatch Tolerance        | VSWR-T       | -   | 30:1 | -             | $V_{DS}=24.0\text{ V}$ , $I_{DS}=1000\text{ mA}$ , $P_{OUT}=75.0\text{ W}$ , $F=88\text{ MHz}$             |

Specifications Subject to Change Without Notice.

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