

VHF POWER MOSFET

N-Channel Enhancement Mode

DESCRIPTION:

The **ASI MRF151** is a gold metallized N-Channel Enhancement mode MOSFET intended for use in 50 Vdc large signal output to 200 MHz.

FEATURES:

- $P_G = 13.0$ dB Typ. at 175 MHz/150 W
- CS configuration; 50 Vdc operation
- **Omnigold™** Metalization System

MAXIMUM RATINGS

| | |
|---------------|-----------------------|
| I_D | 16 A |
| V_{DSS} | 125 V |
| V_{GS} | ± 30 V |
| P_{DISS} | 300 W @ $T_C = 25$ °C |
| T_J | -65 °C to +200 °C |
| T_{STG} | -65 °C to +150 °C |
| θ_{JC} | 0.6 °C/W |

PACKAGE STYLE .500 4L FLG

| DIM | MINIMUM inches / mm | MAXIMUM inches / mm |
|-----|------------------------|------------------------|
| A | .220 / 5.59 | .230 / 5.84 |
| B | .125 / 3.18 | |
| C | .245 / 6.22 | .255 / 6.48 |
| D | .720 / 18.28 | .730 / 18.54 |
| E | .125 / 3.18 | |
| F | .970 / 24.64 | .980 / 24.89 |
| G | .495 / 12.57 | .505 / 12.83 |
| H | .003 / 0.08 | .007 / 0.18 |
| I | .090 / 2.29 | .110 / 2.79 |
| J | .150 / 3.81 | .175 / 4.45 |
| K | | .280 / 7.11 |
| L | .980 / 24.89 | 1.050 / 26.67 |

CHARACTERISTICS $T_C = 25$ °C

| SYMBOL | TEST CONDITIONS | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|-------------------------------------|---|---------|------------------|---------|---------|
| BV_{DSS} | $I_D = 100$ mA | 125 | | | V |
| I_{DSS} | $V_{DS} = 50$ V $V_{GS} = 0$ V | | | 5.0 | mA |
| I_{GSS} | $V_{DS} = 0$ V $V_{GS} = 20$ V | | | 1.0 | μA |
| V_{GS} | $V_{DS} = 10$ V $I_D = 100$ mA | 1.0 | | 5.0 | V |
| g_{fs} | $V_{DS} = 10$ V $I_D = 5$ A | 5.0 | | | mho |
| C_{iss} C_{oss} C_{rss} | $V_{DS} = 50$ V $V_{GS} = 0$ V $f = 1.0$ MHz | | 350 220 15 | | pF |
| P_G η_D | $V_{DD} = 50$ V $I_{DQ} = 250$ mA $f = 175$ MHz $P_{out} = 150$ W (PEP) $P_{IN} = 6.0$ W | 40 | 13.0 45 | | dB % |

NOTE:

Available in V_{GH} matched pairs or matched quads by adding MP or MQ suffix to part number.

Example

MRF151MP = matched pair of MRF151

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