

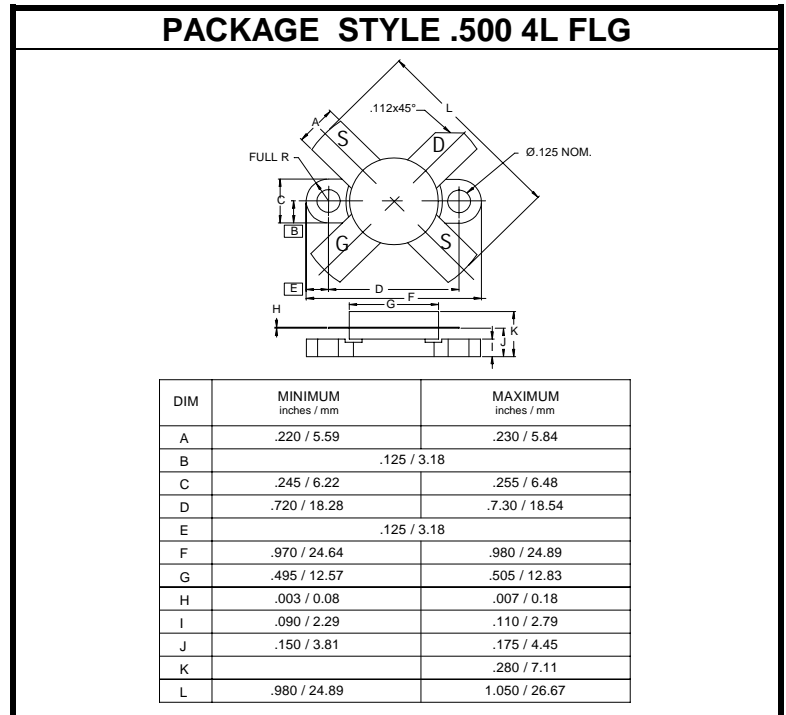
# SILICON N-CHANNEL RF POWER MOSFET

**DESCRIPTION:**

The **MRF161** is an Enhancement-Mode N-Channel MOS Broadband RF Power Transistor for Wideband Large Signal Amplifier and Oscillator Applications from 2.0 to 400 MHz.

**MAXIMUM RATINGS**

$I_D$	900 mA
$V_{DSS}$	65 V
$V_{GS}$	$\pm 40$ V
$P_{DISS}$	17.5 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 $+150^\circ\text{C}$
$\theta_{JC}$	$10^\circ\text{C/W}$


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

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$V_{(BR)DSS}$	$I_D = 5.0$ mA $V_{GS} = 0$ V	65			V
$I_{DSS}$	$V_{DSS} = 28$ V $V_{GS} = 0$ V			1.0	mA
$I_{GSS}$	$V_{GS} = 40$ V $V_{DS} = 0$ V			1.0	$\mu\text{A}$
$V_{GS(th)}$	$V_{DS} = 10$ V $I_D = 10$ mA	1.0		6.0	V
$g_{fs}$	$V_{DS} = 10$ V $I_D = 100$ mA	80			mmhos
$C_{iss}$ $C_{oss}$ $C_{rss}$	$V_{DS} = 28$ V $V_{GS} = 0$ V $f = 1.0$ MHz		7.0 9.7 2.3		pF
NF	$V_{DS} = 28$ V $I_D = 100$ mA $f = 400$ MHz $Z_S = 67.7+j = 14.1$ $Z_L = 14.5+j = 25.7$		3.0		dB
$G_{ps}$ $\eta$	$V_{DD} = 28$ V $I_{DQ} = 50$ mA $P_{out} = 5.0$ W	11.0 45	13.5 50		dB %
$\psi$	$V_{DD} = 28$ V $I_{DQ} = 50$ mA $P_{out} = 5.0$ W $V_{SWR} = 30:1$ AT ALL PHASE ANGLES	NO DEGRADATION IN OUTPUT POWER			