

## RF Power MOSFET Transistor 75W, 30-90MHz, 24V

M/A-COM Products  
Released; RoHS Compliant

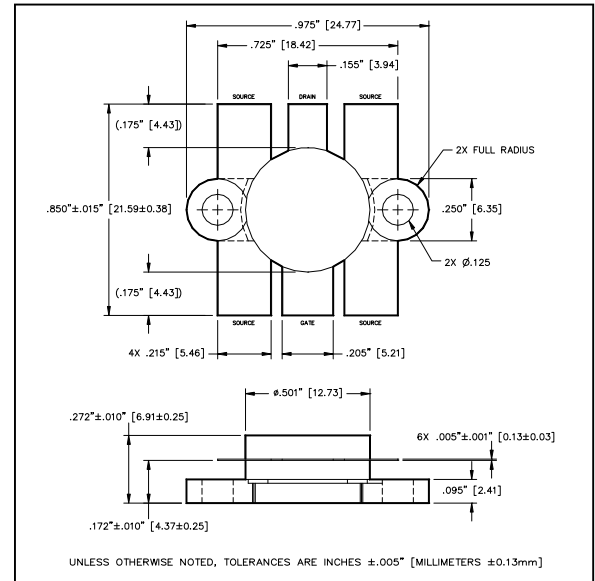
### Features

- 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

### Package Outline



LETTER 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	.128
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	.005

### 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	$V_{GS} = 24.0\text{ V}$ , $V_{DS} = 0.0\text{ V}$
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	$V_{DD} = 24.0\text{ V}$ , $I_{DQ} = 1000\text{ mA}$ , $P_{OUT} = 75.0\text{ W}$ $F = 88\text{ MHz}$
Drain Efficiency	$\eta_D$	65	-	%	$V_{DD} = 24.0\text{ V}$ , $I_{DQ} = 1000\text{ mA}$ , $P_{OUT} = 75.0\text{ W}$ $F = 88\text{ MHz}$
Load Mismatch Tolerance	VSWR-T	-	30:1	-	$V_{DD} = 24.0\text{ V}$ , $I_{DQ} = 1000\text{ mA}$ , $P_{OUT} = 75.0\text{ W}$ $F = 88\text{ MHz}$