

MOSFET Power Transistor, 80W, 26V

925 - 960 MHz

CR2480M

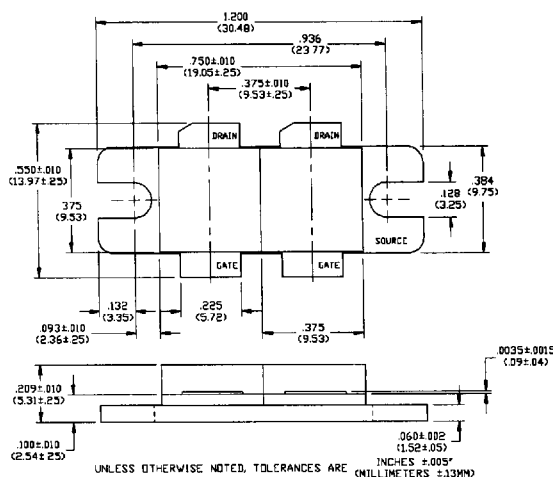
V2.00

Features

- N-Channel Enhancement Mode Device
- Cellular Base Station Applications
- 80 Watts CW
- Common Source Gem ni Configuration
- RESFET Structure
- Internal Input Impedance Matching
- Gold Metallization

Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	20	V
Drain-Source Current	I_{DS}	28	A
Power Dissipation	P_D	233	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-55 to +150	°C
Thermal Resistance	θ_{JC}	0.75	°C/W



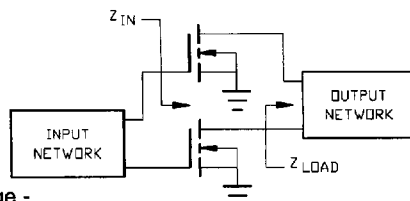
Electrical Characteristics at 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Drain-Source Breakdown Voltage	BV_{DSS}	60	-	V	$I_D=40$ mA, $V_{GS}=0.0$ V*
Drain-Source Leakage Current	I_{DSS}	-	4.0	mA	$V_{DS}=28.0$ V, $V_{GS}=0.0$ V*
Gate-Source Leakage Current	I_{GSS}	-	2.0	μA	$V_{GS}=20$ V, $V_{DS}=0.0$ V*
Gate Threshold Voltage	$V_{GS(TH)}$	2.0	6.0	V	$V_{DS}=10.0$ V, $I_{DS}=200$ mA*
Forward Transconductance	G_M	1.0	-	S	$V_{DS}=10.0$ V, $I_{DS}=2000$ mA (pulsed)*
Input Capacitance	C_{ISS}	-	200	pF	$V_{DS}=28.0$ V, $F=1.0$ MHz (Reference Only)*
Output Capacitance	C_{OSS}	-	50	pF	$V_{DS}=28.0$ V, $F=1.0$ MHz*
Reverse Capacitance	C_{RSS}	-	14	pF	$V_{DS}=28.0$ V, $F=1.0$ MHz*
Power Gain	G_P	10	-	dB	$V_{DS}=26.0$ V, $I_{DS}=400$ mA, $P_{OUT}=80$ W, $F=960$ MHz
Drain Efficiency	η_D	50	-	%	$V_{DS}=26.0$ V, $I_{DS}=400$ mA, $P_{OUT}=80$ W, $F=960$ MHz
Load Mismatch Tolerance	VSWR-T	-	3.0:1	-	$V_{DS}=26.0$ V, $I_{DS}=400$ mA, $P_{OUT}=80$ W, $F=960$ MHz

* Per Side

Typical Optimum Device Impedances

F(MHz)	$Z_{IN}(\Omega)$	$Z_{LOAD}(\Omega)$
935	4.6 + j8.0	2.3 + j3.1
960	4.7 + j7.8	2.4 + j3.1



- Continued next page -

Specifications Subject to Change Without Notice.

M/A-COM, Inc.

North America: Tel. (800) 366-2266
Fax (800) 618-8883

Asia/Pacific: Tel. +81 (03) 3226-1671
Fax +81 (03) 3226-1451

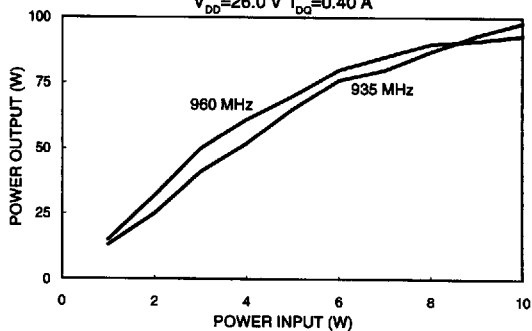
Europe: Tel. +44 (1344) 869 595
Fax +44 (1344) 300 020

9-13

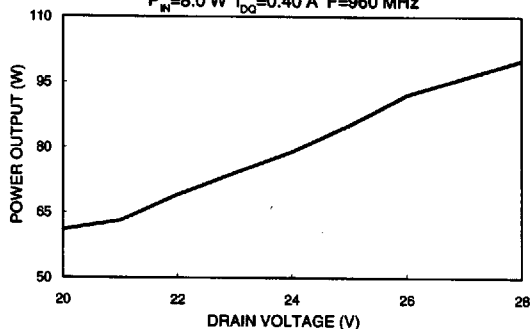
5642205 0001842 520

Typical Broadband Performance Curves

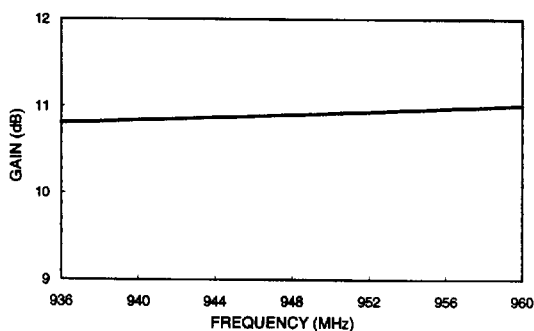
OUTPUT POWER vs INPUT POWER

 $V_{DD}=26.0\text{ V}$ $I_{DQ}=0.40\text{ A}$ 

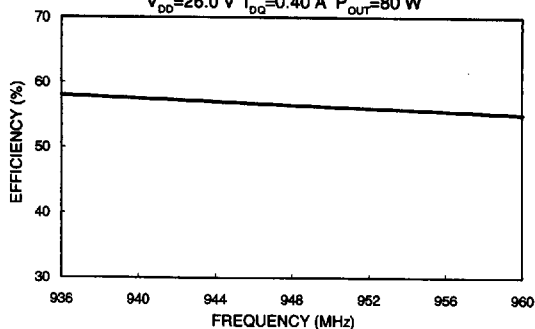
OUTPUT vs DRAIN VOLTAGE

 $P_{IN}=8.0\text{ W}$ $I_{DQ}=0.40\text{ A}$ $F=960\text{ MHz}$ 

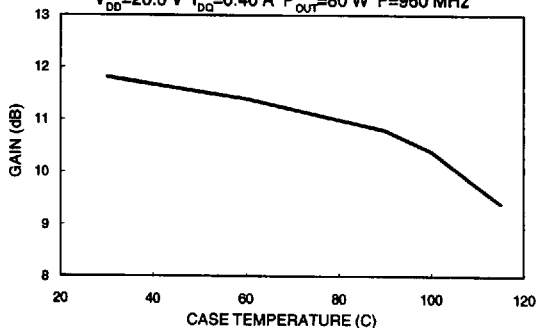
GAIN vs FREQUENCY



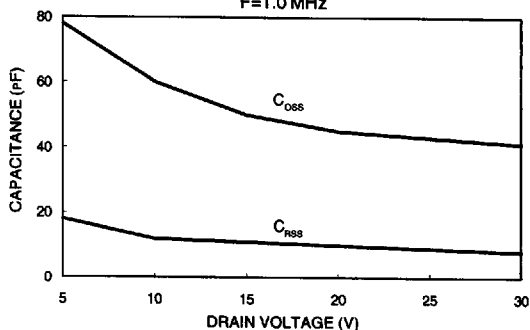
EFFICIENCY vs FREQUENCY

 $V_{DD}=26.0\text{ V}$ $I_{DQ}=0.40\text{ A}$ $P_{OUT}=80\text{ W}$ 

GAIN vs TEMPERATURE

 $V_{DD}=26.0\text{ V}$ $I_{DQ}=0.40\text{ A}$ $P_{OUT}=80\text{ W}$ $F=960\text{ MHz}$ 

CAPACITANCE vs VOLTAGE

 $F=1.0\text{ MHz}$ 

Specifications Subject to Change Without Notice.

9-14

M/A-COM, Inc.

North America: Tel. (800) 366-2266
Fax (800) 618-8883

Asia/Pacific: Tel. +81 (03) 3226-1671
Fax +81 (03) 3226-1451

Europe: Tel. +44 (1344) 869 595
Fax +44 (1344) 300 020

5642205 0001843 467