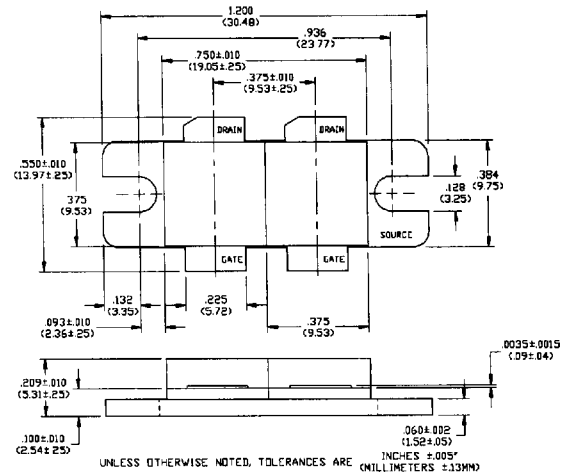
MOSFET Power Transistor, 80W, 26V
925 - 960 MHz

CR2480M

V2.00

Features

- N-Channel Enhancement Mode Device
- Cellular Base Station Applications
- 80 Watts CW
- Common Source Gemini 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

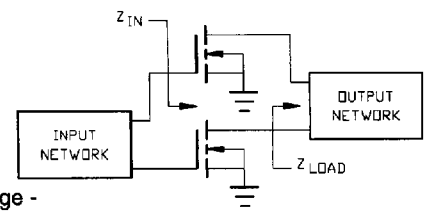
Electrical Characteristics at 25°C

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_{DD}=26.0 V, I_{DQ}=400 mA, P_{OUT}=80 W, F=960 MHz
Drain Efficiency	η_D	50	-	%	V_{DD}=26.0 V, I_{DQ}=400 mA, P_{OUT}=80 W, F=960 MHz
Load Mismatch Tolerance	VSWR-T	-	3.0:1	-	V_{DD}=26.0 V, I_{DQ}=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



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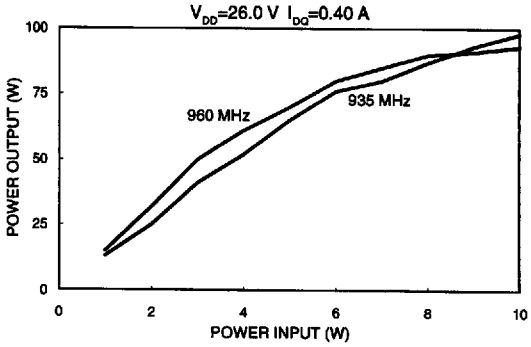
Typical Broadband Performance Curves

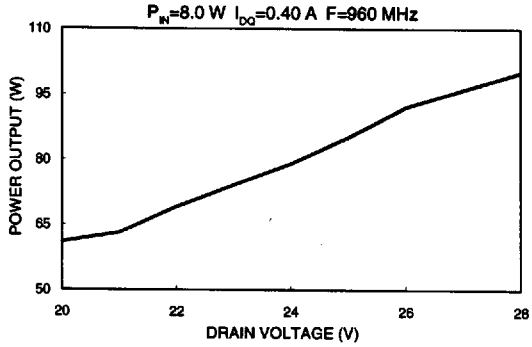
OUTPUT POWER vs INPUT POWER

V_{DD}=26.0 V I_{DQ}=0.40 A

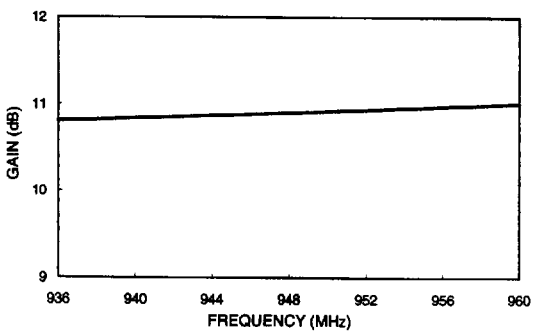


OUTPUT vs DRAIN VOLTAGE

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

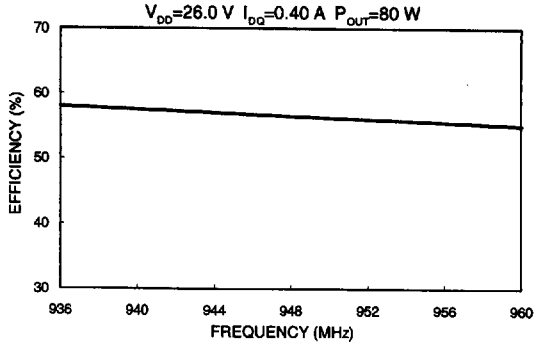


GAIN vs FREQUENCY



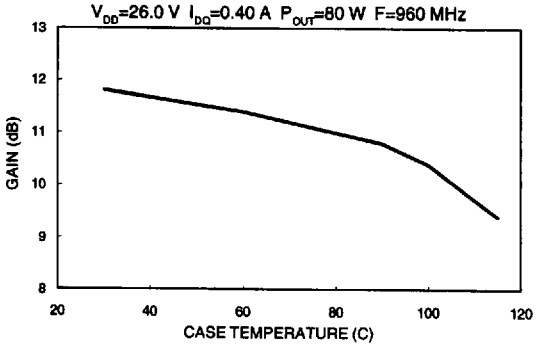
EFFICIENCY vs FREQUENCY

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



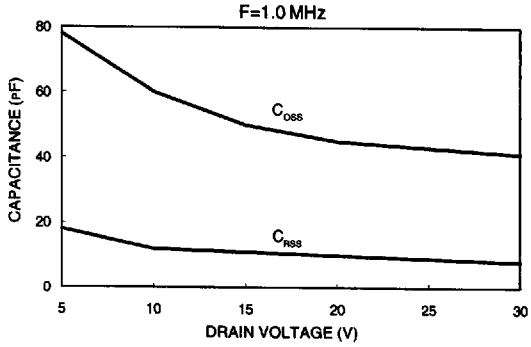
GAIN vs TEMPERATURE

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



CAPACITANCE vs VOLTAGE

F=1.0 MHz



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