



LDMOS RF Power Transistors

700 Watts, 800 - 1000 MHz, 26 Volts



Features

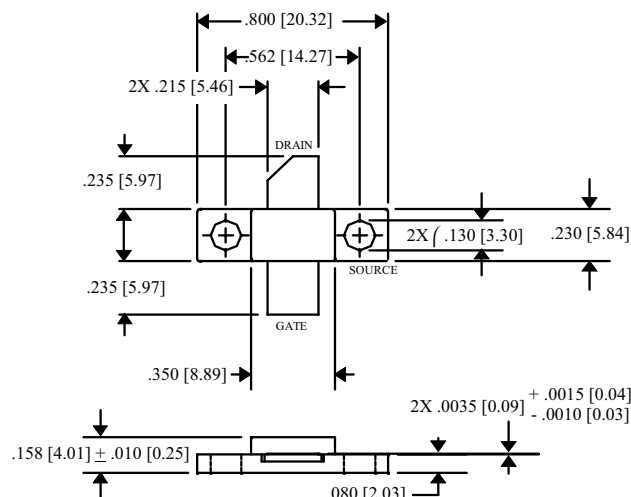
- New LDMOS Technology
- Broadband Class AB Operation
- Characterized for GSM TDMA Applications
- Gold Metalization System for Reliability
- Excellent Thermal Characteristics
- -30 dBc Third Order IMD at 49 dBm
- No Internal Matching

Absolute Maximum Ratings¹

Parameter	Symbol	Rating	Units
Drain-Source Voltage	V_{DS}	60 ¹	V
Gate-Source Voltage	V_{GS}	20	V
Drain Current	I_D	15.0	A
Total Power Dissipation @ +80°C	P_{TOT}	TBD	W
Storage Temperature	T_{STG}	-65 to +175	°C
Operating Temperature	T_{OPR}	-40 to +80	°C
Junction Temperature	T_j	200	°C

1. Preliminary parts meet a 55V Specification. No other specifications are affected.

Outline Drawing^{1,2}



Notes: (unless otherwise specified)

1. Dimensions are in (mm)
2. Tolerance: inches $\pm .005$ " (millimeters ± 0.13 mm)

Large Signal Device Impedance

F (MHz)	Z_{IF}^1 (Ω)	Z_{OF}^2 (Ω)
850	1.2 - j1.2	1.7 + j0.2
900	1.4 - j1.4	1.6 - j0.5
950	1.2 - j1.9	1.8 - j0.8

1. Z_{IF} - The impedance measured looking into the Gate side of the optimally tuned test fixture.
2. Z_{OF} - The impedance measured looking into the Drain side of the optimally tuned test fixture.

Electrical Specifications at 25°C

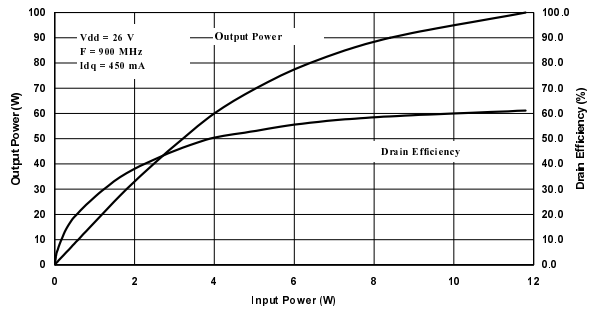
Symbol	Parameters	Test Conditions	Units	Min.	Max.
BV_{DSS}	Drain-Source Breakdown	$I_D = 20.0$ mA	V	60 ¹	-
I_{DSS}	Drain-Source Leakage	$V_{DS} = 25$ V	mA	-	3.0
BV_{GSS}	Gate-Source Breakdown	$I_{GS} = 1$ μ A, $V_{DS} = 0.0$ V	V	20	-
$V_{GS(ON)}$	Gate "On" Voltage	$I_{DS} = 450$ mA, $V_{DS} = 10$ V	V	2.5	5.0
G_M	Transconductance	$I_{DS} = 1500$ mA, $V_{DS} = 10$ V	S	0.75	-
$R_{DS(ON)}$	On-State Resistance	$I_{DS} = 200$ mA, $V_{DS} = 10$ V	Ω	-	0.25
P_G	Power Gain	$V_{CC}=26$ V, $P_O=70$ W, F=960 MHz, $I_{DQ}=600$ mA	dB	11	-
P_{IN}	Input Power	$V_{CC}=26$ V, $P_O=70$ W, F=960 MHz, $I_{DQ}=600$ mA	W	-	5.6
η_D	Drain Efficiency	$V_{CC}=26$ V, $P_O=70$ W, F=960 MHz, $I_{DQ}=600$ mA	%	50	-
VSWR-T	Load Mismatch Tolerance	$V_{CC}=26$ V, $P_O=70$ W, F=960 MHz, $I_{DQ}=600$ mA	-	-	TBD
$R_{TH(JC)}$	Thermal Resistance	$V_{CC}=26$ V, $P_O=70$ W, F=960 MHz, $I_{DQ}=600$ mA	°C/W	-	TBD

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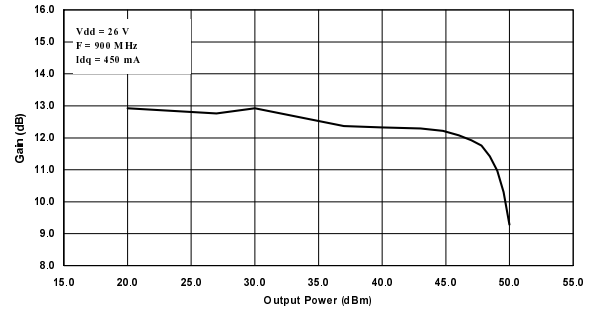
V1.00

Typical Performance Curves

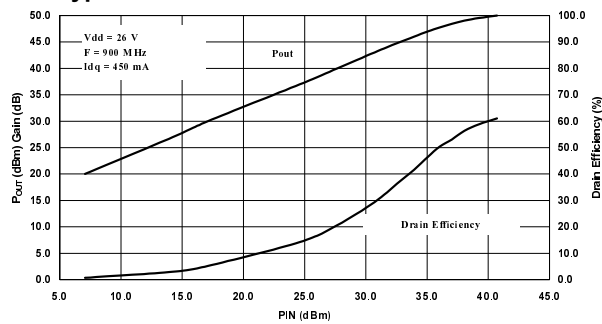
Output Power and Drain Efficiency vs Input Power



Gain vs Output Power



Typical Power Transfer Curve



V1.00