



LET9060C

RF POWER TRANSISTORS *Ldmos Enhanced Technology*

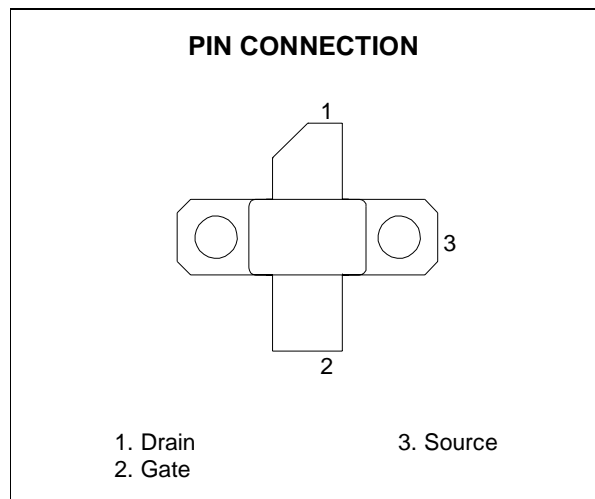
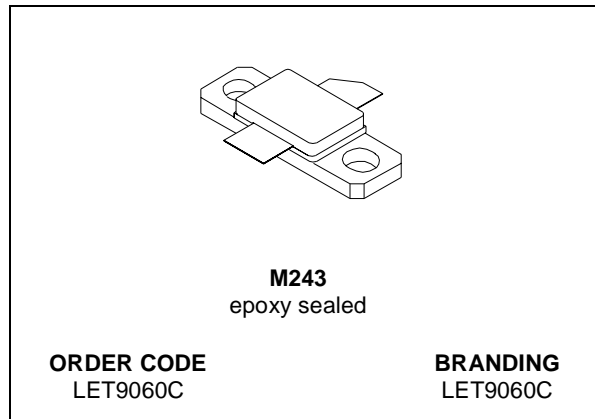
PRELIMINARY DATA

N-CHANNEL ENHANCEMENT-MODE LATERAL MOSFETs

- EXCELLENT THERMAL STABILITY
- COMMON SOURCE CONFIGURATION
- $P_{OUT} = 60$ W WITH 17.3 dB gain @ 945 MHz
- BeO FREE PACKAGE
- HIGH GAIN
- ESD PROTECTION

DESCRIPTION

The LET9060C is an N-Channel enhancement-mode lateral Field-Effect RF power transistor, designed for high gain broadband, commercial and industrial applications. It operates at 28 V in common source mode at frequencies up to 1.0 GHz. LET9060C boasts the excellent gain, linearity and reliability of the ST latest LDMOS technology. Its superior performances make it an ideal solution for base station applications.



ABSOLUTE MAXIMUM RATINGS ($T_{CASE} = 25^{\circ}C$)

Symbol	Parameter	Value	Unit
$V_{(BR)DSS}$	Drain-Source Voltage	65	V
V_{GS}	Gate-Source Voltage	-0.5 to +15	V
I_D	Drain Current	7	A
P_{DISS}	Power Dissipation (@ $T_c = 70^{\circ}C$)	118	W
T_j	Max. Operating Junction Temperature	200	$^{\circ}C$
T_{STG}	Storage Temperature	-65 to +150	$^{\circ}C$

THERMAL DATA

$R_{th(j-c)}$	Junction -Case Thermal Resistance	1.1	$^{\circ}C/W$
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LET9060C

ELECTRICAL SPECIFICATION (T_{CASE} = 25°C)

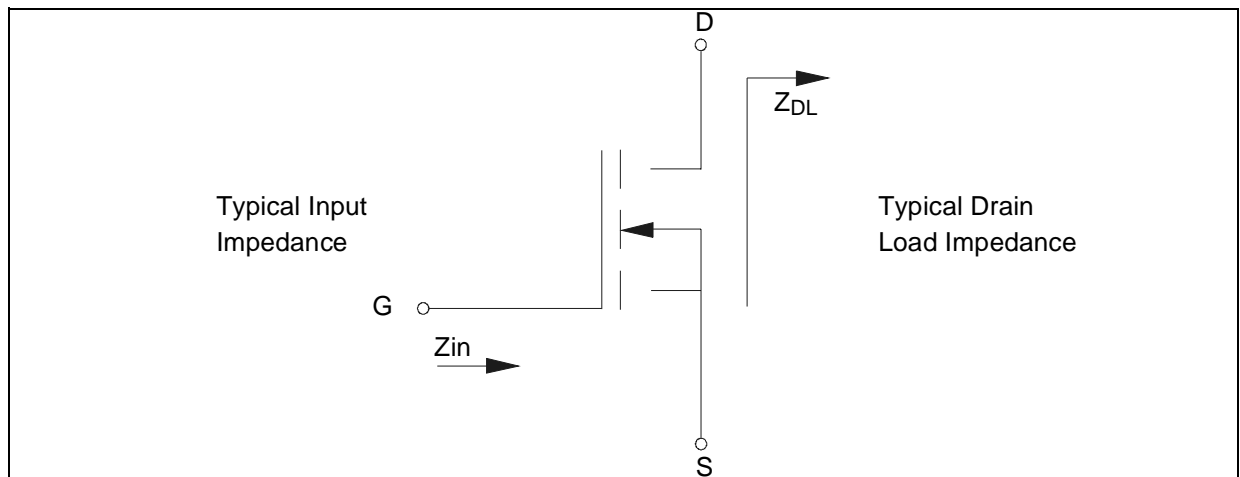
STATIC

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
V _{(BR)DSS}	V _{GS} = 0 V	I _{DS} = 1 mA	65			V
I _{DSS}	V _{GS} = 0 V	V _{DS} = 28 V			1	μA
I _{GSS}	V _{GS} = 5 V	V _{DS} = 0 V			1	μA
V _{GS(Q)}	V _{DS} = 28 V	I _D = 100 mA	2.0		5.0	V
V _{DS(ON)}	V _{GS} = 10 V	I _D = 3 A		0.7	0.8	V
G _{FS}	V _{DS} = 10 V	I _D = 3 A		2.3		mho
C _{ISS}	V _{GS} = 0 V	V _{DS} = 28 V		69.5		pF
C _{OSS}	V _{GS} = 0 V	V _{DS} = 28 V		38		pF
C _{RSS}	V _{GS} = 0 V	V _{DS} = 28 V		1.6		pF

DYNAMIC

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
P _{1dB}	V _{DD} = 26 V	I _{DQ} = 250 mA	f = 945 MHz	60	65		W
G _P	V _{DD} = 26 V	I _{DQ} = 250 mA	P _{OUT} = 60 W		17.3		dB
η _D	V _{DD} = 26 V	I _{DQ} = 250 mA	P _{OUT} = 60 W		60		%
Load mismatch	V _{DD} = 26 V	I _{DQ} = 250 mA	P _{OUT} = 60 W	5:1			VSWR
	ALL PHASE ANGLES						

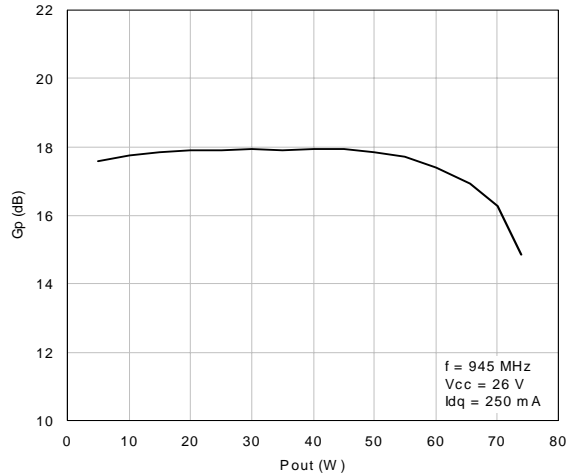
IMPEDANCE DATA



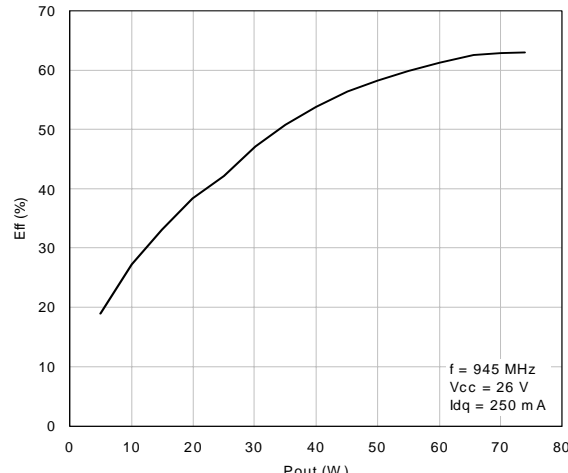
FREQ.	Z _{IN} (Ω)	Z _{DL} (Ω)
925 MHz	TBD	TBD
945 MHz	TBD	TBD
960 MHz	TBD	TBD

TYPICAL PERFORMANCE

Power Gain vs. Output Power

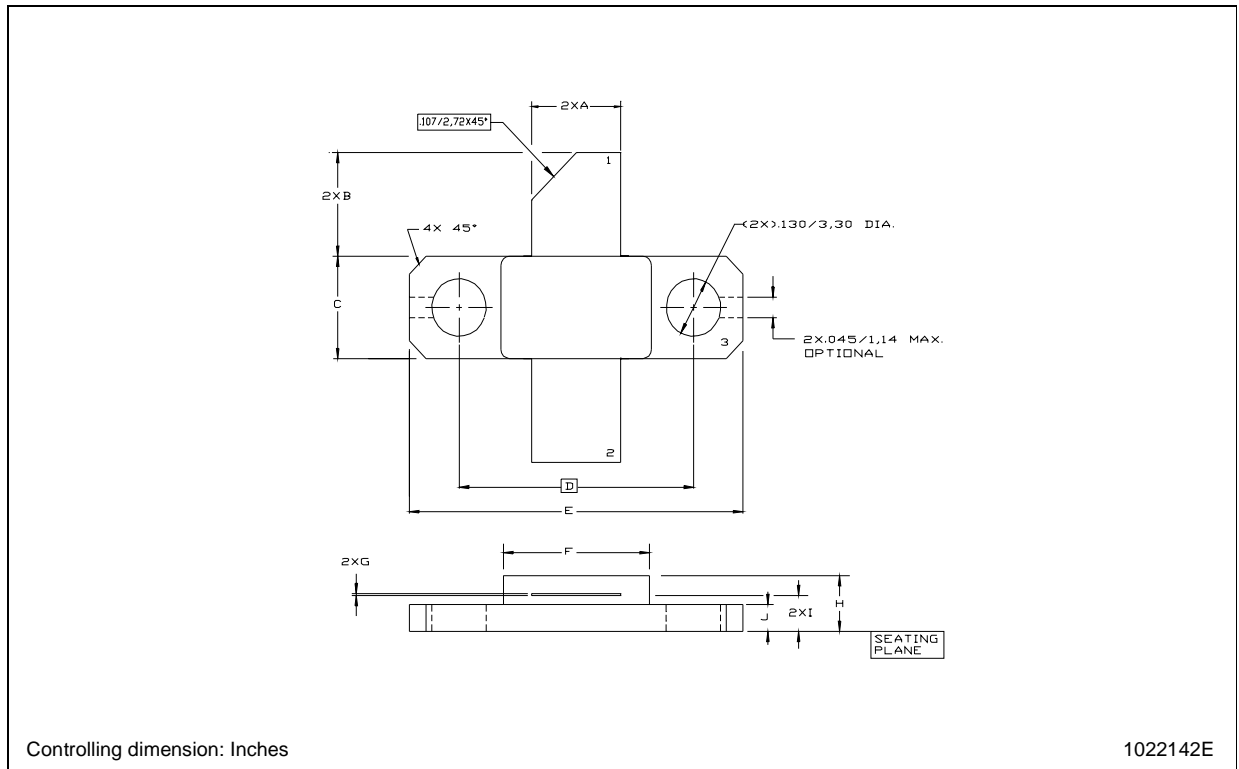


Efficiency vs. Output Power



M243 (.230 x .360 2L N/HERM W/FLG) MECHANICAL DATA

DIM.	mm			Inch		
	MIN.	TYP.	MAX	MIN.	TYP.	MAX
A	5.21		5.72	0.205		0.225
B	5.46		6.48	0.215		0.255
C	5.59		6.10	0.220		0.240
D		14.27			0.562	
E	20.07		20.57	0.790		0.810
F	8.89		9.40	0.350		0.370
G	0.10		0.15	0.004		0.006
H	3.18		4.45	0.125		0.175
I	1.83		2.24	0.072		0.088
J	1.27		1.78	0.050		0.070



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