

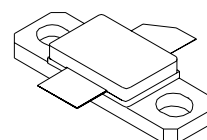
**SD60030****RF POWER TRANSISTORS***The LdmoST FAMILY***TARGET DATA**

Designed for GSM / EDGE / IS-97 applications

- EXCELLENT THERMAL STABILITY
- COMMON SOURCE CONFIGURATION
- $P_{OUT} = 30\text{ W}$  with 10 dB gain @ 2000 MHz

**DESCRIPTION**

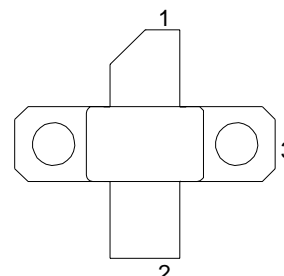
The SD60030 is a common source N-Channel enhancement-mode lateral Field-Effect RF power transistor designed for broadband commercial and industrial applications at frequencies up to 2.0 GHz. The SD60030 is designed for high gain and broadband performance operating in common source mode at 26 V. It is ideal for base station applications requiring high linearity.



**M243**  
epoxy sealed

**ORDER CODE**  
SD60030

**BRANDING**  
SD60030

**PIN CONNECTION**

1. Drain  
2. Gate

3. Source

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

Symbol	Parameter	Value	Unit
$V_{(BR)DSS}$	Drain-Source Voltage	65	V
$V_{DGR}$	Drain-Gate Voltage ( $R_{GS} = 1\text{ M}\Omega$ )	65	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current	TBD	A
$P_{DISS}$	Power Dissipation (@ $T_c = 70\text{ }^{\circ}\text{C}$ )	TBD	W
$T_j$	Max. Operating Junction Temperature	200	$^{\circ}\text{C}$
$T_{STG}$	Storage Temperature	-65 to +200	$^{\circ}\text{C}$

**THERMAL DATA** ( $T_{CASE} = 70\text{ }^{\circ}\text{C}$ )

$R_{th(j-c)}$	Junction -Case Thermal Resistance	TBD	$^{\circ}\text{C/W}$
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ELECTRICAL SPECIFICATION (T<sub>CASE</sub> = 25 °C)

STATIC

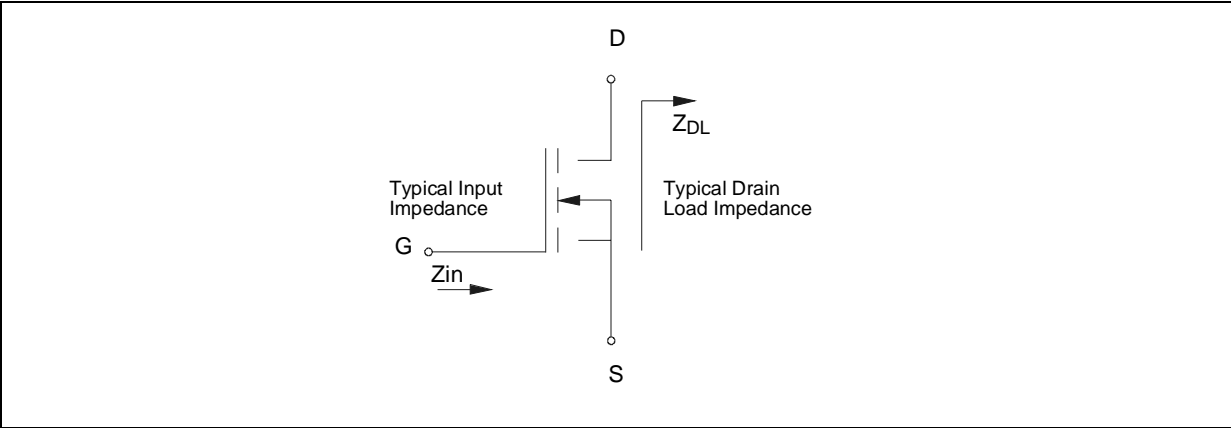
Symbol	Test Conditions		Min.	Typ.	Max.	Unit
V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0 V	I <sub>DS</sub> = 1 mA	65			V
I <sub>DSS</sub>	V <sub>GS</sub> = 0 V	V <sub>DS</sub> = 28 V			1	μA
I <sub>GSS</sub>	V <sub>GS</sub> = 20 V	V <sub>DS</sub> = 0 V			1	μA
V <sub>GS(Q)</sub>	V <sub>DS</sub> = 28 V	I <sub>D</sub> = 300 mA	2.5		5.0	V
V <sub>DS(ON)</sub>	V <sub>GS</sub> = 10 V	I <sub>D</sub> = 3 A		TBD		V
G <sub>FS</sub>	V <sub>DS</sub> = 10 V	I <sub>D</sub> = 3 A	2.0	TBD		mho
C <sub>ISS</sub>	V <sub>GS</sub> = 0 V	V <sub>DS</sub> = 28 V	f = 1 MHz		TBD	pF
C <sub>OSS</sub>	V <sub>GS</sub> = 0 V	V <sub>DS</sub> = 28 V	f = 1 MHz		TBD	pF
C <sub>RSS</sub>	V <sub>GS</sub> = 0 V	V <sub>DS</sub> = 28 V	f = 1 MHz		TBD	pF

DYNAMIC

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
P <sub>out</sub>	V <sub>DD</sub> = 26 V	I <sub>DQ</sub> = 300 mA	f = 2000 MHz	30			W
IMD3	V <sub>DD</sub> = 26 V	I <sub>DQ</sub> = 300 mA	P <sub>OUT</sub> = 30 W PEP		-32	-28	dBc
G <sub>PS</sub>	V <sub>DD</sub> = 26 V	I <sub>DQ</sub> = 300 mA	P <sub>OUT</sub> = 30 W PEP	10	11		dB
η <sub>D</sub>	V <sub>DD</sub> = 26 V	I <sub>DQ</sub> = 300 mA	P <sub>OUT</sub> = 30 W PEP		35		%
Load mismatch	V <sub>DD</sub> = 26 V	I <sub>DQ</sub> = 300 mA	P <sub>OUT</sub> = 30 W f = 2000 MHz ALL PHASE ANGLES	10:1			VSWR

note: f<sub>1</sub> = 2000 MHz  
PEP f<sub>2</sub> = 2000.1 MHz

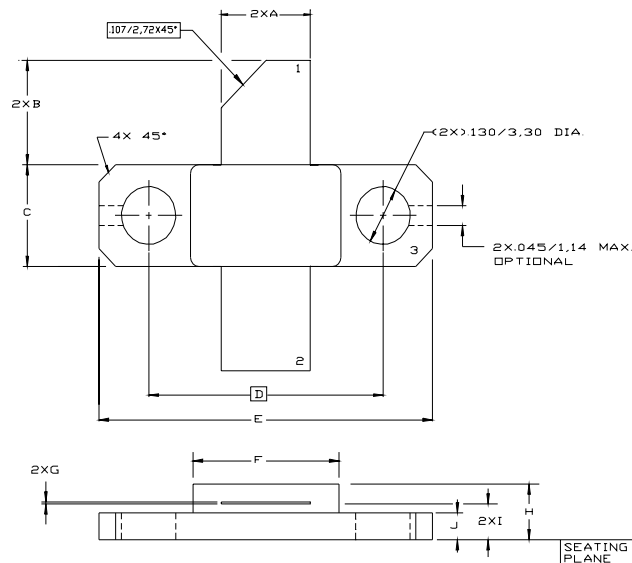
IMPEDANCE DATA



FREQ. MHz	Z <sub>IN</sub> (Ω)	Z <sub>DL</sub> (Ω)
1800		
1850		
1900		
1950		
2000		

## 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



Controlling dimension: Inches

1022142E

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