

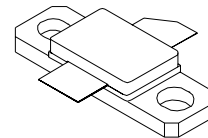
**SD60030****RF POWER TRANSISTORS***The LdmoST FAMILY***TARGET DATA**

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

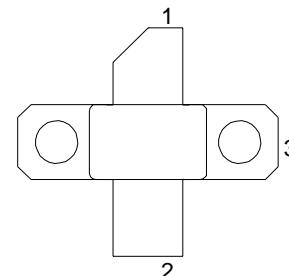
The SD60030 is a common source N-Channel enhancement-mode lateral Field-Effect RF power transistor designed for broadband commercial and industrial applications at frequencies up to 2.0 GHz. The SD60030 is designed for high gain and broadband performance operating in common source mode at 26 V. It is 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	± 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 ($T_{CASE} = 70\text{ }^{\circ}\text{C}$)

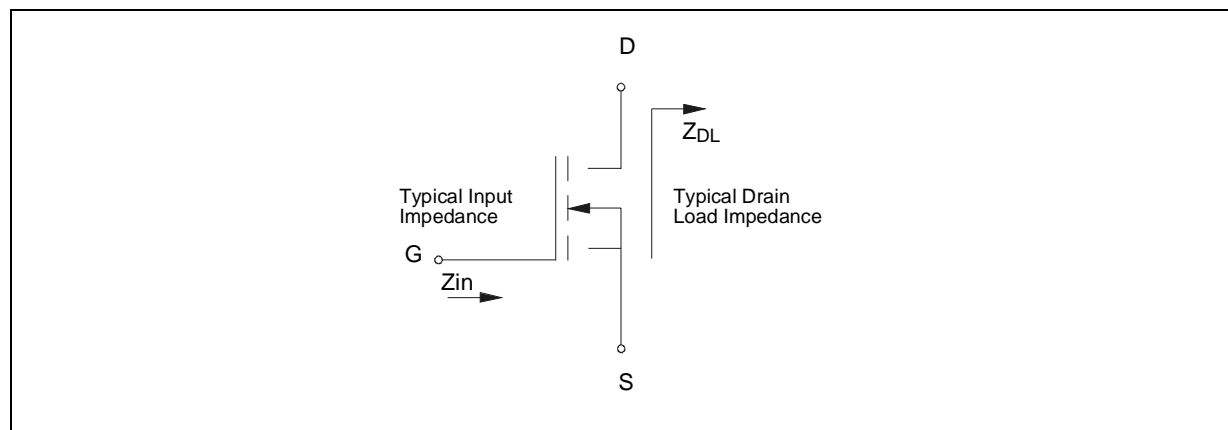
$R_{th(j-c)}$	Junction -Case Thermal Resistance	TBD	$^{\circ}\text{C/W}$
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ELECTRICAL SPECIFICATION ($T_{CASE} = 25\text{ }^{\circ}\text{C}$)**STATIC**

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}$	$I_{DS} = 1\text{ mA}$	65			V
I_{DSS}	$V_{GS} = 0\text{ V}$	$V_{DS} = 28\text{ V}$			1	μA
I_{GSS}	$V_{GS} = 20\text{ V}$	$V_{DS} = 0\text{ V}$			1	μA
$V_{GS(Q)}$	$V_{DS} = 28\text{ V}$	$I_D = 300\text{ mA}$	2.5		5.0	V
$V_{DS(ON)}$	$V_{GS} = 10\text{ V}$	$I_D = 3\text{ A}$		TBD		V
G_{FS}	$V_{DS} = 10\text{ V}$	$I_D = 3\text{ A}$	2.0	TBD		mho
C_{ISS}	$V_{GS} = 0\text{ V}$	$V_{DS} = 28\text{ V}$		TBD		pF
C_{OSS}	$V_{GS} = 0\text{ V}$	$V_{DS} = 28\text{ V}$		TBD		pF
C_{RSS}	$V_{GS} = 0\text{ V}$	$V_{DS} = 28\text{ V}$		TBD		pF

DYNAMIC

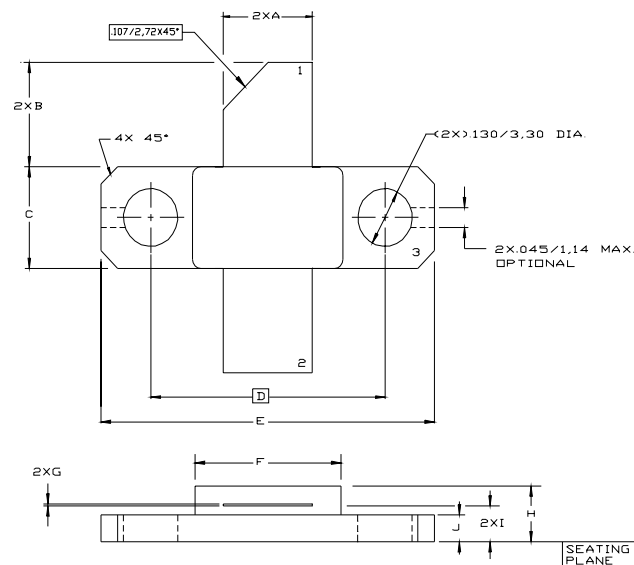
Symbol	Test Conditions			Min.	Typ.	Max.	Unit
P_{out}	$V_{DD} = 26\text{ V}$	$I_{DQ} = 300\text{ mA}$	$f = 2000\text{ MHz}$	30			W
IMD3	$V_{DD} = 26\text{ V}$	$I_{DQ} = 300\text{ mA}$	$P_{OUT} = 30\text{ W PEP}$		-32	-28	dBc
G _{PS}	$V_{DD} = 26\text{ V}$	$I_{DQ} = 300\text{ mA}$	$P_{OUT} = 30\text{ W PEP}$	10	11		dB
η_D	$V_{DD} = 26\text{ V}$	$I_{DQ} = 300\text{ mA}$	$P_{OUT} = 30\text{ W PEP}$		35		%
Load mismatch	$V_{DD} = 26\text{ V}$	$I_{DQ} = 300\text{ mA}$	$P_{OUT} = 30\text{ W}$	10:1			VSWR
ALL PHASE ANGLES							

note: $f_1 = 2000\text{ MHz}$ PEP $f_2 = 2000.1\text{ MHz}$ **IMPEDANCE DATA**

FREQ. MHz	$Z_{IN} (\Omega)$	$Z_{DL} (\Omega)$
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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