

1 Maximum ratings

Table 2. Absolute maximum ratings ($T_{CASE} = 25\text{ °C}$)

Symbol	Parameter	Value	Unit
$V_{(BR)DSS}$	Drain-source voltage	80	V
V_{GS}	Gate-source voltage	-10 to +15	V
I_D	Drain current	12	A
P_{DISS}	Power dissipation (@ $T_C = 70\text{ °C}$)	130	W
T_J	Max. operating junction temperature	200	°C
T_{STG}	Storage temperature	-65 to +150	°C

Table 3. Thermal data

Symbol	Parameter	Value	Unit
$R_{th(JC)}$	Junction-case thermal resistance	1.0	°C/W

2 Electrical characteristics

$T_C = 25\text{ }^\circ\text{C}$

Table 4. Static

Symbol	Test conditions	Min.	Typ.	Max.	Unit
$V_{(BR)DSS}$	$V_{GS} = 0; I_{DS} = 10\text{ mA}$	80			V
I_{DSS}	$V_{GS} = 0; V_{DS} = 28\text{ V}$			1	μA
I_{GSS}	$V_{GS} = 5; V_{DS} = 0$			1	μA
$V_{GS(Q)}$	$V_{DS} = 28; I_D = 100\text{ mA}$	2.0		5.0	V
$V_{DS(ON)}$	$V_{GS} = 10\text{ V}; I_D = 3\text{ A}$		0.8	1.2	V
G_{FS}	$V_{DS} = 10\text{ V}; I_D = 3\text{ A}$	2.5			mho
C_{ISS}	$V_{GS} = 0; V_{DS} = 28\text{ V}; f = 1\text{ MHz}$		78		pF
C_{OSS}	$V_{GS} = 0; V_{DS} = 28\text{ V}; f = 1\text{ MHz}$		42		pF
C_{RSS}	$V_{GS} = 0; V_{DS} = 28\text{ V}; f = 1\text{ MHz}$		2.7		pF

Table 5. Dynamic

Symbol	Test conditions	Min.	Typ.	Max.	Unit
P_{OUT}	$V_{DD} = 28\text{ V}; I_{DQ} = 400\text{ mA}; P_{IN} = 2.5\text{ W}; f = 945\text{ MHz}$	70	80		W
G_{PS}	$V_{DD} = 28\text{ V}; I_{DQ} = 400\text{ mA}; P_{OUT} = 70\text{ W}; f = 945\text{ MHz}$		16		dB
h_D	$V_{DD} = 28\text{ V}; I_{DQ} = 400\text{ mA}; P_{IN} = 2.5\text{ W}; f = 945\text{ MHz}$	60	65		%
Load mismatch	$V_{DD} = 35\text{ V}; I_{DQ} = 400\text{ mA}; P_{OUT} = 100\text{ W}; f = 945\text{ MHz}$ All phase angles		20:1		VSWR

3 Impedance data

Figure 2. Impedance data

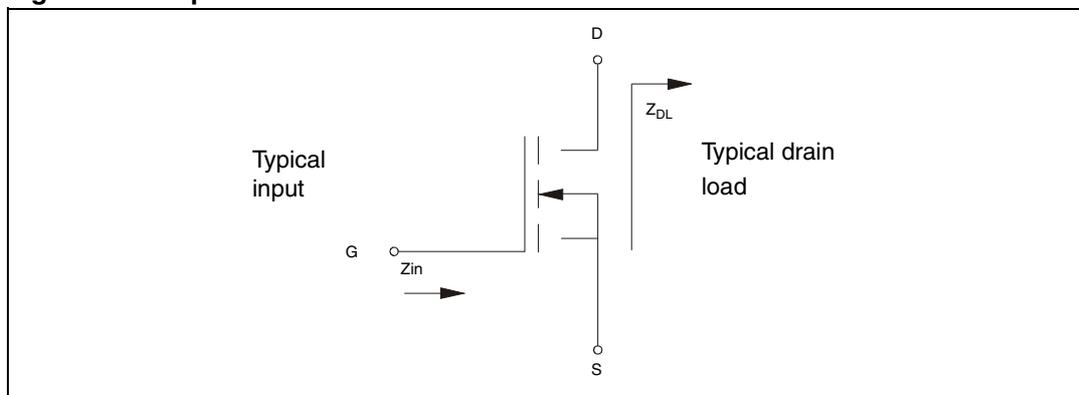
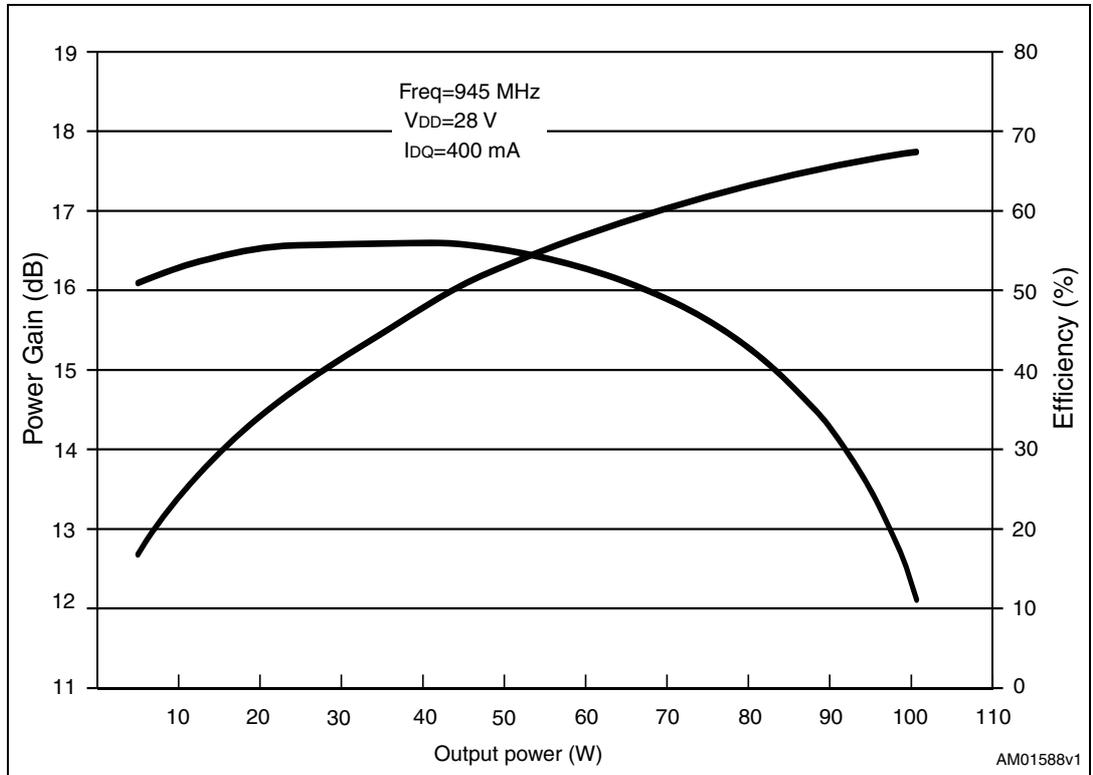


Table 6. Impedance data

Frequency	Z_{IN} (Ω)	Z_{OUT} (Ω)
945	TBD	TBD

4 Typical performance

Figure 3. Power gain and efficiency vs. output power



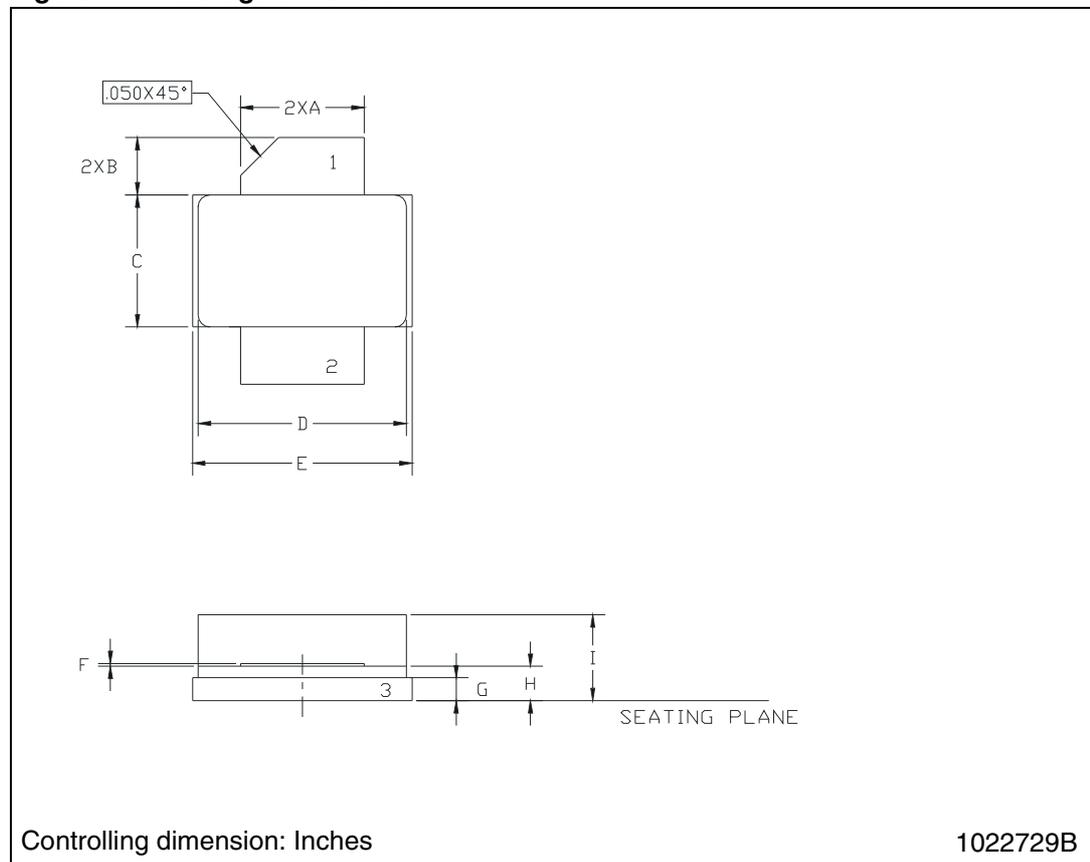
5 Package mechanical data

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Table 7. M250 (.230 x .360 2L N/HERM W/FLG) mechanical data

Dim.	mm.			Inch		
	Min	Typ	Max	Min	Typ	Max
A	5.21		5.71	0.205		0.225
B	2.16		2.92	0.085		0.115
C	5.59		6.09	0.220		0.240
D	8.89		9.40	0.350		0.370
E	9.40		9.91	0.370		0.390
F	0.11		0.15	0.004		0.006
G	0.89		1.14	0.035		0.045
H	1.45		1.70	0.057		0.067
I	2.67		3.94	0.105		0.155

Figure 4. Package dimension



6 Revision history

Table 8. Document revision history

Date	Revision	Changes
20-Dec-2012	1	Initial release.

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