

SILICON MOS N-CHANNEL POWER TRANSISTOR 80 W, up to 200 MHz, Enhancement Mode

The silicon MOS transistor designed for broadband commercial and military applications at frequencies up to 200 MHz. The high power, high gain and broadband performance of this device makes possible solid state transmitters for FM broadcast or TV channel frequency bands.

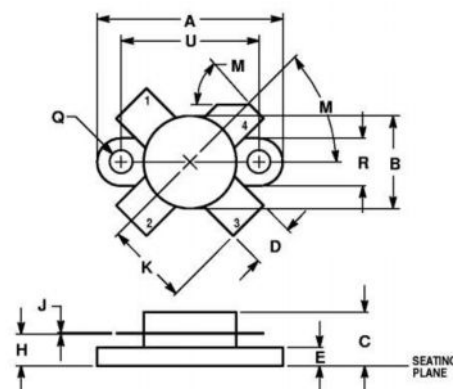
Features (at 150 MHz):

- Power Gain: 11 dB Min
- Output Power: 80 W
- Efficiency: 55% Min

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	V_{DSS}	65	V_{DC}
Drain Current-Continuous	I_D	9	A_{DC}
Gate-Source Voltage	V_{GS}	± 40	V_{DC}
Operation Junction Temperature	T_j	$-65 \div +200$	$^{\circ}C$
Storage Temperature Range	T_{STG}	$-65 \div +150$	$^{\circ}C$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.8	$^{\circ}C/W$
Total Power Dissipation	P_D	220	W

CASE 211-11



STYLE 2:
PIN 1. SOURCE
2. GATE
3. SOURCE
4. DRAIN

NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.960	0.990	24.39	25.14
B	0.465	0.510	11.82	12.95
C	0.229	0.275	5.82	6.98
D	0.216	0.235	5.49	5.96
E	0.084	0.110	2.14	2.79
H	0.144	0.178	3.66	4.52
J	0.003	0.007	0.08	0.17
K	0.435	—	11.05	—
M	45°NOM	—	45°NOM	—
Q	0.115	0.130	2.93	3.30
R	0.246	0.255	6.25	6.47
U	0.720	0.730	18.29	18.54

Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage ($I_{DS}=50$ mA, $V_{GS}=0$ V)	$V_{(BR)DSS}$	65	—	—	V_{DC}
Gate-Source Leakage Current ($V_{GS}=40$ V, $V_{DS}=0$ V)	I_{GSS}	—	—	1	μA_{DC}
Zero Gate Voltage Drain Leakage Current ($V_{DS} = 28$ V, $V_{GS}=0$ V)	I_{DSS}	—	—	2	mA_{DC}
Gate Threshold Voltage ($V_{DS} = 10$ V, $I_D = 50$ mA)	$V_{GS(TH)}$	1	3	6	V_{DC}
Forward Transconductance ($V_{DS} = 10$ V, $I_D = 2$ A)	G_{FS}	1.8	2.2	—	mhos
Input Capacitance ($V_{DS} = 28$ V, $V_{GS}=0$ V, $f = 1$ MHz)	C_{ISS}	—	110	—	pF
Output Capacitance ($V_{DS} = 28$ V, $V_{GS}=0$ V, $f = 1$ MHz)	C_{OSS}	—	105	—	pF
Reverse Transfer Capacitance ($V_{DS} = 28$ V, $V_{GS}=0$ V, $f = 1$ MHz)	C_{RSS}	—	10	—	pF
Power Gain ($V_{DS} = 28$ V, $P_{OUT} = 80$ W, $I_{DQ} = 50$ mA, $f = 150$ MHz)	G_p	11	13	—	dB
Drain Efficiency ($V_{DS} = 28$ V, $P_{OUT} = 80$ W, $I_{DQ} = 50$ mA, $f = 150$ MHz)	η_D	55	60	—	%

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