

SILICON MOS N-CHANNEL POWER TRANSISTOR

600 W, up to 80 MHz, Enhancement Mode

MRF157

The silicon MOS transistor is designed for large-signal output stages to 80 MHz.

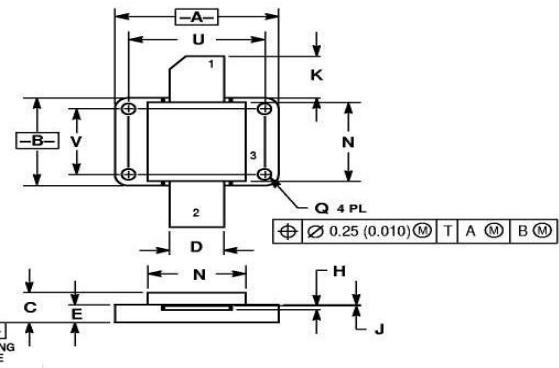
Features (at 30 MHz):

- Power Gain: 15 dB Min
- Output Power: 600 W
- Efficiency: 40% Min

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	V _{DSS}	125	V _{DC}
Drain Current-Continuous	I _D	60	A _{DC}
Gate-Source Voltage	V _{GS}	±40	V _{DC}
Operation Junction Temperature	T _j	-65 ÷ +200	°C
Storage Temperature Range	T _{STG}	-65 ÷ +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	0.13	°C/W
Total Power Dissipation	P _D	1350	W

CASE 368-03



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

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

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	1.490	1.510	37.95	38.35
B	0.990	1.010	25.15	25.65
C	0.330	0.365	8.38	9.27
D	0.490	0.510	12.45	12.95
E	0.195	0.205	4.95	5.21
H	0.045	0.055	1.14	1.39
J	0.004	0.006	0.10	0.15
K	0.425	0.500	10.80	12.70
N	0.890	0.910	22.87	23.11
Q	0.120	0.130	3.05	3.30
U	1.250 BSC		31.75 BSC	
V	0.750 BSC		19.05 BSC	

Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage (I _{DS} = 100 mA, V _{GS} = 0 V)	V _{(BR)DSS}	125	—	—	V _{DC}
Gate-Source Leakage Current (V _{GS} =20 V, V _{DS} =0 V)	I _{GSS}	—	—	5	μA _{DC}
Zero Gate Voltage Drain Leakage Current (V _{DS} = 50 V, V _{GS} =0 V)	I _{DSS}	—	—	20	mA _{DC}
Gate Threshold Voltage (V _{DS} = 10 V, I _D = 100 mA)	V _{GS(TH)}	1	3	5	V _{DC}
Forward Transconductance (V _{DS} = 10 V, I _D = 20 A)	G _{FS}	16	24	—	mhos
Input Capacitance (V _{DS} = 50 V, V _{GS} =0 V, f = 1 MHz)	C _{ISS}	—	1800	—	pF
Output Capacitance (V _{DS} = 50 V, V _{GS} =0 V, f = 1 MHz)	C _{OSS}	—	750	—	pF
Reverse Transfer Capacitance (V _{DS} = 50 V, V _{GS} =0 V, f = 1 MHz)	C _{RSS}	—	75	—	pF
Power Gain (V _{DS} = 50 V, P _{OUT} = 600 W, I _{DQ} = 800 mA, f = 30 MHz)	G _p	15	20	—	dB
Drain Efficiency (V _{DS} = 50 V, P _{OUT} = 600 W, I _{DQ} = 800 mA, f = 30 MHz)	η _D	40	45	—	%

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Specification is subject to change without notice