

TECHNICAL DATA
DATA SHEET 336, REV. B

HERMETIC POWER MOSFET N-CHANNEL

FEATURES:

- 500 Volt, 1.5 Ohm MOSFET
- Isolated and Hermetically Sealed
- Equivalent to IRFY430M

MAXIMUM RATINGS

ALL RATINGS ARE AT $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
CONTINUOUS DRAIN CURRENT $V_{GS}=10\text{V}, T_C = 25^\circ\text{C}$ $V_{GS}=10\text{V}, T_C = 100^\circ\text{C}$	I_D	-	-	4.5 2.8	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	18	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	1.67	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	80	Watts

ELECTRICAL CHARACTERISTICS

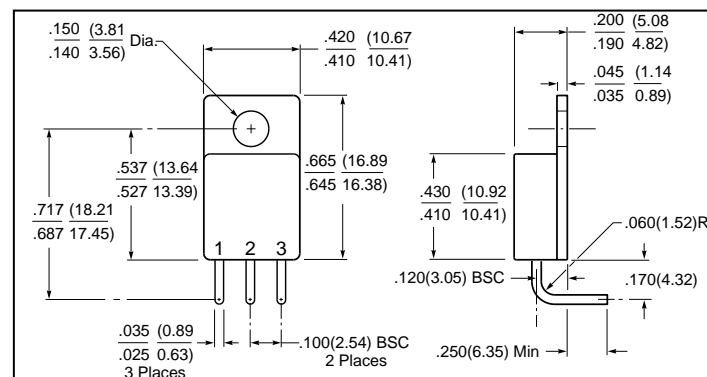
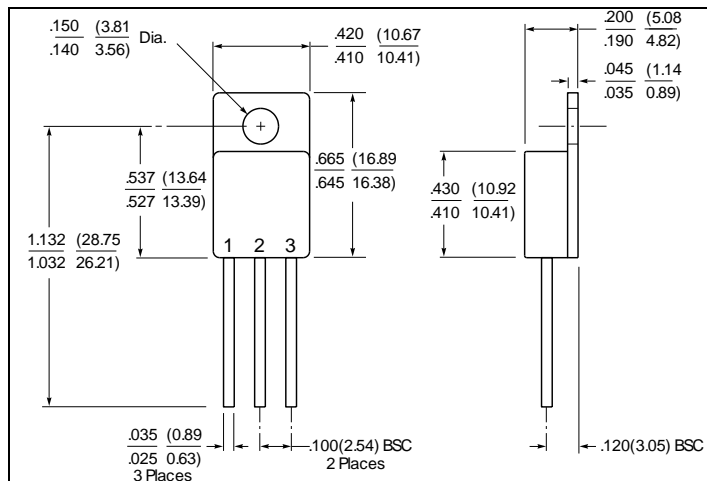
All Characteristics are at 25°C unless otherwise specified.

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 1.0\text{mA}$	BV_{DSS}	500	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10\text{V}, I_D = 2.8\text{A}$	$R_{DS(ON)}$	-	-	1.5	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq 15\text{V}, I_D = 2.8\text{A}$	g_{fs}	1.5	-	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT, $T_J = 25^\circ\text{C}$ $(V_{DS} = 400\text{V}, V_{GS} = 0\text{V}), T_J = 125^\circ\text{C}$	I_{DSS}	-	-	25 250	μA
GATE TO SOURCE LEAKAGE FORWARD GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20\text{V}$	I_{GSS}	-	-	100 -100	nA
TOTAL GATE CHARGE GATE TO SOURCE CHARGE GATE TO DRAIN CHARGE $I_D = 4.5\text{A}$	Q_g Q_{gs} Q_{gd}	-	-	29.5 4.6 19.7	nC
TURN ON DELAY TIME RISE TIME TURN OFF DELAY TIME FALL TIME $V_{GS} = 10\text{V}$	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	-	35 30 55 30	nsec
DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}, I_S = 4.5\text{A}, V_{GS} = 0\text{V}$	V_{SD}	-	-	1.4	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C}, I_S = 4.5\text{A}, di/dt \leq 100\text{A}/\mu\text{sec}, V_{DD} \leq 50\text{V}$	t_{rr}	-	-	900	nsec
REVERSE RECOVERY CHARGE	Q_{rr}	-	-	7.0	μC
INPUT CAPACITANCE $V_{GS} = 0\text{V}, V_{DS} = 25\text{V}$	C_{iss}	-	650	-	pF
OUTPUT CAPACITANCE $f=1\text{MHz}$	C_{oss}	-	135	-	pF
REVERSE TRANSFER CAPACITANCE	C_{rss}	-	65	-	pF

SENSITRON
DATASHEET 336, REV B

TO-257

MECHANICAL DIMENSIONS: in Inches / mm



Lead Form Option B

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET TO-257 PACKAGE	DRAIN	SOURCE	GATE

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