

TECHNICAL DATA
DATA SHEET 2037, REV. C

HERMETIC POWER MOSFET N-CHANNEL

FEATURES:

- 500 Volt, 0.85, Ohm, 7A MOSFET
- Isolated
- Hermetically Sealed

MAXIMUM RATINGS

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

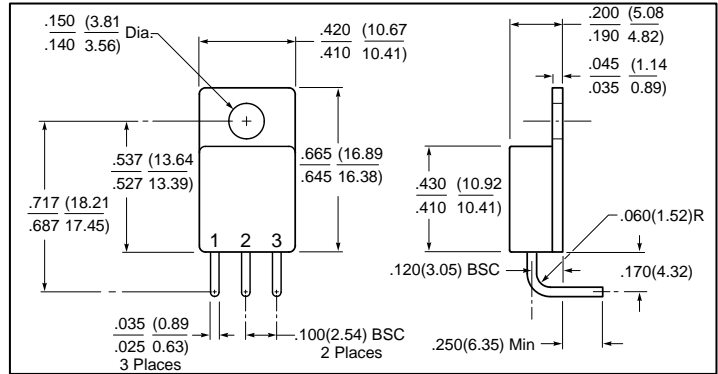
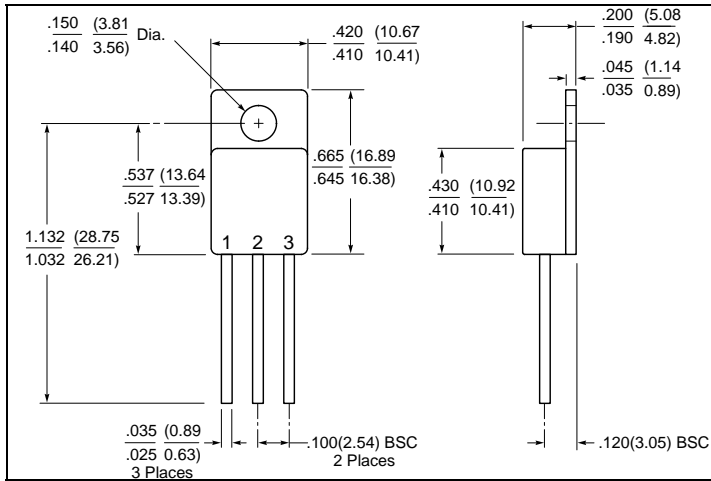
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
CONTINUOUS DRAIN CURRENT $T_C = 25^\circ\text{C}$	I_D	-	-	7	Amps
CONTINUOUS DRAIN CURRENT $T_C = 100^\circ\text{C}$	I_D	-	-	4.4	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	28	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	2.1	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	100	Watts

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNITS
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 $V_{GS} = 10\text{V}, I_D = 4.4\text{A}$	$R_{DS(ON)}$	-	-	0.85	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq 15\text{V}, I_D = 4.4\text{A}$	g_{fs}	-	7.7	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT, $T_J = 25^\circ\text{C}$ ($V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0\text{V}$), $T_J = 125^\circ\text{C}$	I_{DSS}	-	-	25 250	μA
GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20\text{V}$ GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20\text{V}$	I_{GSS}	-	-	100 -100	nA
TOTAL GATE CHARGE $V_{GS} = 10\text{V}$, GATE TO SOURCE CHARGE $V_{DS} = 250\text{V}$, GATE TO DRAIN CHARGE $I_D = 7\text{A}$	Q_g Q_{gs} Q_{gd}	-	-	68.5 12.5 42.4	nC
TURN ON DELAY TIME $V_{DD} = 250\text{V}$, RISE TIME $I_D = 7\text{A}$, TURN OFF DELAY TIME $R_G = 9.1\Omega$, FALL TIME $V_{GS} = 10\text{V}$	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	21 73 72 51	-	nsec
CONTINUOUS SOURCE CURRENT	I_S	-	7	-	Amps
DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}, I_S = 7\text{A}$ $V_{GS} = 0\text{V}$	V_{SD}	-	-	1.5	Volts
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C}$, $I_S = 7\text{A}$, $di/dt \leq -100\text{A}/\mu\text{sec}$,	t_{rr}	-	-	970	nsec
REVERSE RECOVERY CHARGE $V_{DD} \leq 50\text{V}$	Q_{rr}	-	-	8.9	μC
INPUT CAPACITANCE $V_{GS} = 0\text{V}, V_{DS} = 25\text{V}$, OUTPUT CAPACITANCE $f = 1.0\text{MHz}$	C_{iss} C_{oss} C_{rss}	-	1300 310 120	-	pF

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MECHANICAL DIMENSIONS: in Inches / mm



Lead Form Option B

TO-257

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET IN A TO-257 PACKAGE	DRAIN	SOURCE	GATE
SUFFIX "R" VERSION	GATE	DRAIN	SOURCE

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