

TECHNICAL DATA
DATA SHEET 4167, REV -**HERMETIC POWER MOSFET
N-CHANNEL****FEATURES:**

- 400 Volt, .20 Ohm, 23A MOSFET
- Isolated Hermetic Metal Package
- Fast Switching
- Low $R_{DS(on)}$
- Similar to IRFM360

MAXIMUM RATINGSALL RATINGS ARE AT $T_C = 25^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
ON-STATE DRAIN CURRENT	I_D	-	-	23	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	92	Amps
OPERATING AND STORAGE TEMPERATURE	T_J/T_{STG}	-55	-	+150	$^\circ\text{C}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	250	Watts

ELECTRICAL CHARACTERISTICS

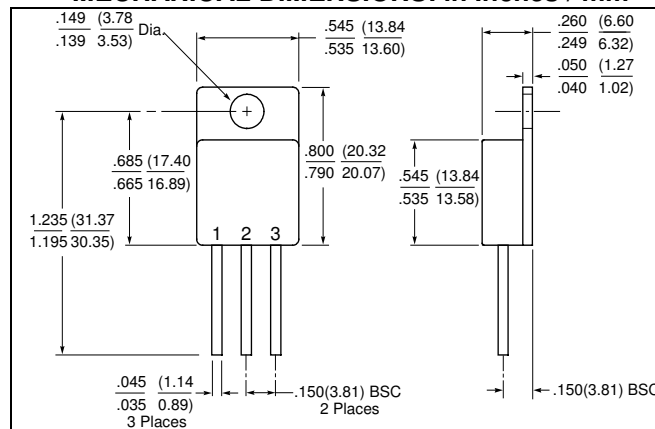
DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 1.0 \text{ mA}$	BV_{DSS}	400	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10V, I_D = 14A$ $V_{GS} = 10V, I_D = 23A$	$R_{DS(ON)}$	-	-	0.20 0.23	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu A$	$V_{GS(th)}$	2.0	-	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq 15V,$ $I_{DS} = 14A$	g_{fs}	1.4	-	-	$S(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. rating}, V_{GS} = 0V$ $T_J = 125^\circ\text{C}$	I_{DSS}	-	-	25 250	μA
GATE TO SOURCE LEAKAGE FORWARD 20V	I_{GSS}	-	-	100 -100	nA
GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20V$					

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ELECTRICAL CHARACTERISTICS (Continued)

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
TURN ON DELAY TIME 200V, RISE TIME	$V_{DD} =$ $I_D = 23A,$ $t_{d(ON)}$ t_r	-	18 79	33 140	nsec
TURN OFF DELAY TIME 10V FALL TIME	$V_{GS} =$ $t_{d(OFF)}$ t_f		100 67	120 100	
DIODE FORWARD VOLTAGE % Pulse test, $t \leq 300 \mu s$, duty cycle $d \leq 2$	$I_S = 23A, V_{GS} = 0V$ V_{SD}	-	-	1.8	Volts
REVERSE RECOVERY TIME	$T_J = 25^\circ C,$ $I_f = 23A$ $di/dt = 100A/\mu sec$ t_{rr} Q_{rr}	-	420	630 8.4	nsec μC
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE	$V_{GS} = 0V$ $V_{DS} = 25V$ $f = 1.0MHz$ C_{iss} C_{oss} C_{rss}	-	4500 1100 490	-	μF
THERMAL RESISTANCE, JUNCTION TO CASE	R_{thJC}	-	-	0.83	$^\circ C/W$

MECHANICAL DIMENSIONS: in Inches / mm



TO-254

DEVICE TYPE	PIN-1	PIN-2	PIN-3
N-CHANNEL MOSFET TO-254 PACKAGE	DRAIN	SOURCE	GATE

TECHNICAL DATA

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