

TECHNICAL DATA
DATA SHEET 4156, Rev. –

HERMETIC POWER MOSFET N-CHANNEL

FEATURES:

- 100 Volt, .07 Ohm, 30A MOSFET
- Isolated Hermetic Metal Package
- Fast Switching
- Low $R_{DS(on)}$
- Equivalent to IRFM150

MAXIMUM RATINGS

ALL 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	-	-	34	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	136	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	-	-	150	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0V, I_D = 1.0$ mA	BV_{DSS}	100	-	-	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10V, I_D =$ 21A	$R_{DS(ON)}$	-	-	0.07	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, $I_{DS} =$ 21A	g_{fs}	9.0	-	-	S(1/ Ω)
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 GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = 20V$ $V_{GS} = -20V$	I_{GSS}	-	-	100 -100	nA

SENSITRON

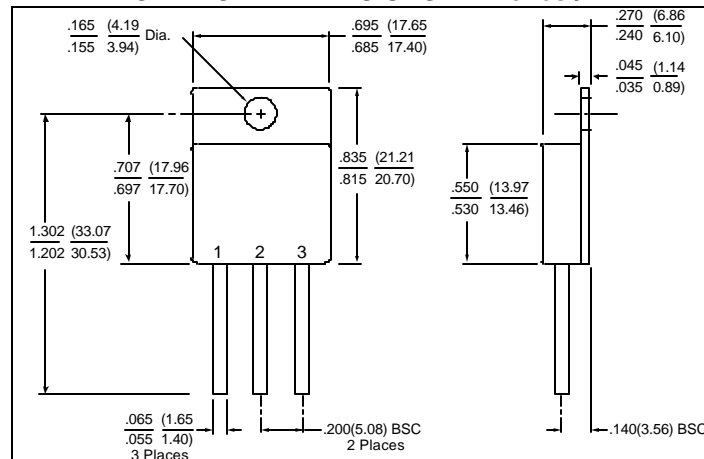
DATA SHEET 4156

REV. -

ELECTRICAL CHARACTERISTICS (Continued)

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS	
TURN ON DELAY TIME 50V, RISE TIME 34A, TURN OFF DELAY TIME 10V FALL TIME	$V_{DD} =$ $I_D =$ $V_{GS} =$	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	- - - -	- - - -	35 190 170 130	nsec
DIODE FORWARD VOLTAGE % REVERSE RECOVERY TIME 34A 100A/ μ sec	$I_S = 34A, V_{GS} = 0V$ Pulse test, $t \leq 300 \mu s$, duty cycle $d \leq 2$ $T_J = 25^\circ C,$ $I_f =$ $di/dt =$	V_{SD} t_{rr} Q_{rr}	- - -	- - -	1.8 600 2.9	Volts nsec μC
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE	$V_{GS} = 0 V$ $V_{DS} = 25 V$ $f = 1.0MHz$	C_{iss} C_{oss} C_{rss}	- - -	3700 1100 350	- - -	pF
THERMAL RESISTANCE, JUNCTION TO CASE		R_{thJC}	-	-	0.83	$^\circ C/W$

MECHANICAL DIMENSIONS: in Inches / mm



TO-258

DEVICE TYPE	PIN-1	PIN-2	PIN-3
N-CHANNEL MOSFET TO-258 PACKAGE	DRAIN	SOURCE	GATE

TECHNICAL DATA

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