

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	$V_{GS}$	-	-	$\pm 20$	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	$\Omega$
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/ $\Omega$ )
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	$\mu A$
GATE TO SOURCE LEAKAGE FORWARD GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = 20V$ $V_{GS} = -20V$	$I_{GSS}$	-	-	100 -100	nA

**SENSITRON**

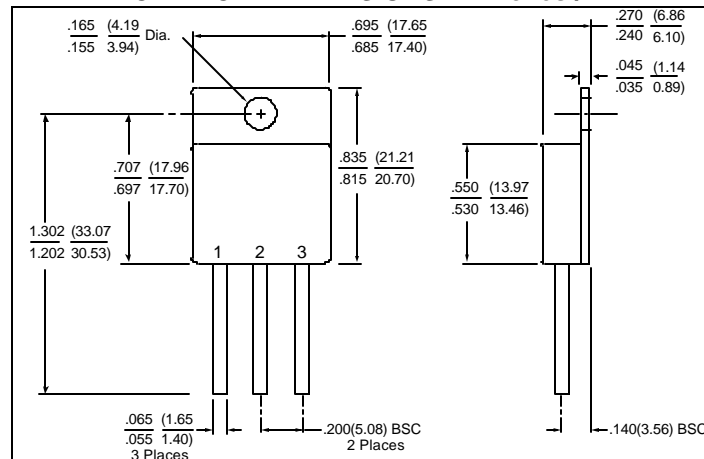
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REV. -

**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/ $\mu$ 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 $\mu C$
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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