TECHNICAL DATA
DATA SHEET 317, REV -

HERMETIC POWER MOSFET
N-CHANNEL

FEATURES:

- **100 Volt, 0.16 Ohm, 14A MOSFET**
- **Fast Switching**
- **Low $R_{DS\ (on)}$**
- **Equivalent to IRF130 Series**

MAXIMUM RATINGS

ALL RATINGS ARE AT T_C = 25°C UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	±20	Volts
ON-STATE DRAIN CURRENT @ T_C = 100°C	I_D	-	-	14	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	°C
TOTAL DEVICE DISSIPATION @ T_C = 25°C	P_D	-	-	96	Watts
THERMAL RESISTANCE, JUNCTION TO CASE	R_{thJC}	-	-	1.3	°C/W

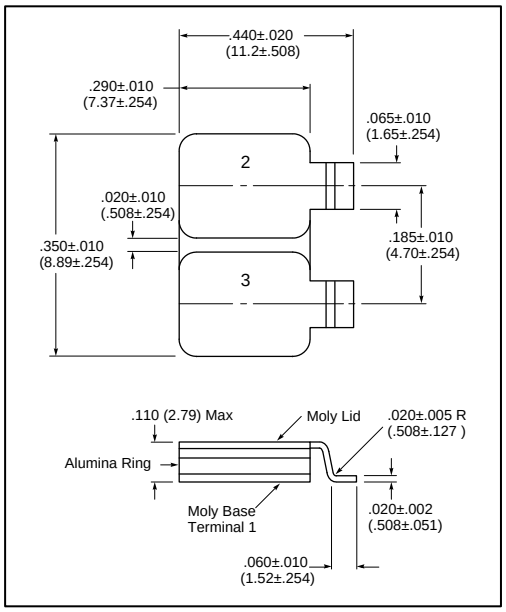
ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE V_{GS} = 0V, I_D = 1.0mA	BV_{DSS}	100	-	-	Volts
DRAIN TO SOURCE ON-STATE VOLTAGE V_{GS} = 10V, I_D = 10A	$V_{DS(ON)}$	-		100	Volts
STATIC DRAIN TO SOURCE ON STATE RESISTANCE V_{GS} = 10V, I_D = 20A	$R_{DS(ON)}$	-	0.14	0.16	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}$, I_D = 250μA	$V_{GS(th)}$	2.0	2.8	4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq I_{D\ (ON)}$ X, $R_{DS\ (ON)}$ Max., I_{DS} = 0.6 X I_D	g_{fs}	4.6	7.0	-	S(1/Ω)
ZERO GATE VOLTAGE DRAIN CURRENT V_{DS} = Max. Rating, V_{GS} = 0V V_{DS} = 0.8xMax. Rating, V_{GS} = 0V, T_J = 125°C	I_{DSS}	-	-	 250 1000	μA
GATE TO SOURCE LEAKAGE FORWARD V_{GS} = 20V GATE TO SOURCE LEAKAGE REVERSE V_{GS} = -20V	I_{GSS}	-	-	100 -100	nA
TURN ON DELAY TIME V_{DD} = 50V, RISE TIME I_D = 7.0A, TURN OFF DELAY TIME R_G = 12Ω, FALL TIME V_{GS} = 10V	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	9.5 42 22 25	14 63 33 38	nsec
DIODE FORWARD VOLTAGE T_C = 25°C, I_S = 14A, V_{GS} = 0V	V_{SD}	-	1.0	2.5	Volts
REVERSE RECOVERY TIME T_J = 25°C, I_f = 14A, di_F/ds = 100A/μsec,	t_{rr}	-	-	250	nsec
INPUT CAPACITANCE V_{GS} = 0 V OUTPUT CAPACITANCE V_{DS} = 25 V REVERSE TRANSFER CAPACITANCE f = 1.0MHz	C_{iss} C_{oss} C_{rss}	-	650 240 44	-	pF

SENSITRON

DATA SHEET 317
REVISION -

MECHANICAL DIMENSIONS: in Inches / m



SHD-4A

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
N-CHANNEL MOSFET SHD-4A PACKAGE	DRAIN	SOURCE	GATE