TECHNICAL DATA
DATA SHEET 682, REV -
Formerly part number SHD2199

HERMETIC POWER MOSFET
P-CHANNEL

FEATURES:

- **-100 Volt, 0.2 Ohm, -18A MOSFET**
- **Electrically Isolated Hermetically Sealed**
- **Low $R_{DS\ (on)}$**
- **Equivalent to IRF9140 Series**

MAXIMUM RATINGS

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

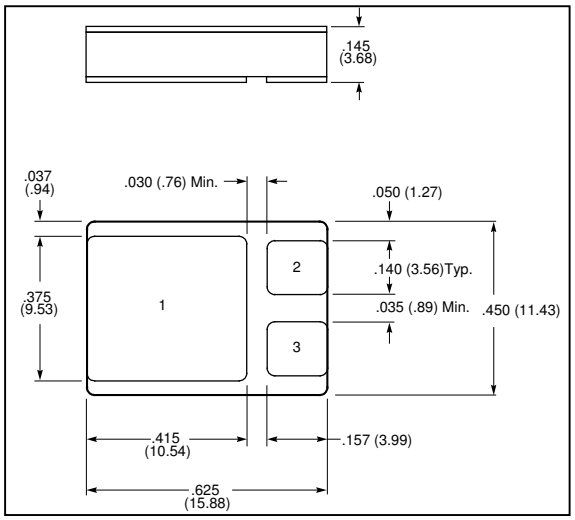
RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	±20	Volts
CONTINUOUS DRAIN CURRENT V_{GS}=10V, T_C = 25°C V_{GS}=10V, T_C = 100°C	I_D	-	-	-18 -11	Amps
PULSED DRAIN CURRENT @ T_C = 25°C	I_{DM}	-	-	-72	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	°C
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	0.78	°C/W
TOTAL DEVICE DISSIPATION @ T_C = 25°C	P_D	-	-	160	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE V_{GS} = 0V, I_D = 1.0mA	BV_{DSS}	-100	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE V_{GS} = -10V, I_D = -11A V_{GS} = -10V, I_D = -18A	$R_{DS(ON)}$	-	-	0.20 0.22	Ω
GATE THRESHOLD VOLTAGE V_{DS} = V_{GS}, I_D = -250µA	$V_{GS(th)}$	-2.0	-	-4.0	Volts
FORWARD TRANSCONDUCTANCE V_{DS} ≥ -15V, I_{DS} = -11A	g_{fs}	6.2	-	-	S(1/Ω)
ZERO GATE VOLTAGE DRAIN CURRENT V_{DS} = 0.8x Max. Rating, V_{GS} = 0V V_{DS} = 0.8x Max. Rating V_{GS} = 0V, T_J = 125°C	I_{DSS}	-	-	 -25 -250	µA
GATE TO SOURCE LEAKAGE FORWARD V_{GS} = -20V GATE TO SOURCE LEAKAGE REVERSE V_{GS} = 20V	I_{GSS}	-	-	-100 100	nA
TOTAL GATE CHARGE V_{GS} = -10V GATE TO SOURCE CHARGE V_{DS} = Max. Ratingx0.5 GATE TO DRAIN CHARGE I_D = -18A	Q_g Q_{gs} Q_{gd}	31 3.7 7.0	-	60 13 35.2	nC
TURN ON DELAY TIME V_{DD} = -50V, RISE TIME I_D =-11A, TURN OFF DELAY TIME R_G = 9.1Ω FALL TIME	$t_{d(on)}$ t_r $t_{d(off)}$ t_f	-	-	35 85 85 65	nsec
DIODE FORWARD VOLTAGE T_J = 25°C, I_S = -18A, V_{GS} = 0V	V_{SD}	-	-	-4.2	Volts
DIODE REVERSE RECOVERY TIME T_J = 25°C, REVERSE RECOVERY CHARGE I_F = -18A, di/dt = -100A/µsec, V_{DD} ≤ -50V	t_{rr} Q_{rr}	-	-	280 3.6	nsec µC
INPUT CAPACITANCE V_{GS} = 0 V, OUTPUT CAPACITANCE V_{DS} = 25 V, REVERSE TRANSFER CAPACITANCE f = 1.0MHz DRAIN TO CASE CAPACITANCE	C_{iss} C_{oss} C_{rss} C_{DC}	-	1400 600 200 12	-	pF

SENSITRON
DATA SHEET 682
REVISION -

MECHANICAL DIMENSIONS: in Inches / mm



LCC-3P

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET LCC-3P PACKAGE	DRAIN	SOURCE	GATE

TECHNICAL DATA

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