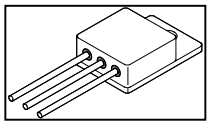
TECHNICAL DATA
DATA SHEET 665, REV -
Formerly Part Number SHD22510

HERMETIC POWER MOSFET N-CHANNEL



DESCRIPTION: 200 VOLT, 0.105 OHM, 27.4 A MOSFET IN A HERMETIC TO-254 PACKAGE.

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	-	-	27.4 17	Amps
PULSED DRAIN CURRENT @ T_C = 25°C	I_{DM}	-	-	110	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	150	°C
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	0.83	°C/W
TOTAL DEVICE DISSIPATION @ T_C = 25°C	P_D	-	-	150	Watts

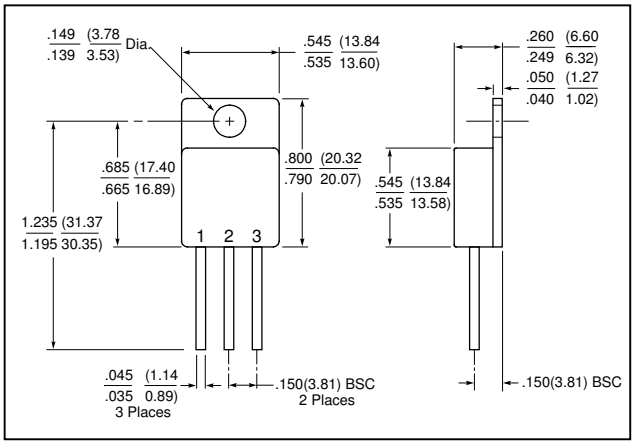
ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE V_{GS} = 0V, I_D = 1.0mA	BV_{DSS}	200	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE V_{GS} = 10V, I_D = 17A V_{GS} = 10V, I_D = 27.4A	$R_{DS(ON)}$	-	-	 0.100 0.105	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} = 17A	g_{fs}	9.0	-	-	S(1/Ω)
ZERO GATE VOLTAGE DRAIN CURRENT V_{DS} = 0.8xMax. Rating, V_{GS} = 0V V_{DS} = 0.8xMax. Rating V_{GS} = 0V, T_J = 125°C	I_{DSS}	-	-	 25 250	µA
GATE TO SOURCE LEAKAGE FORWARD @ RATED GATE TO SOURCE LEAKAGE REVERSE V_{GS}	I_{GSS}	-	-	100 -100	nA
TOTAL GATE CHARGE V_{GS} = 10 VOLTS GATE TO SOURCE CHARGE 50% RATED V_{DS} GATE TO DRAIN CHARGE RATED I_D	Q_g Q_{gs} Q_{gd}	55 8.0 30	-	115 22 60	nC
TURN ON DELAY TIME V_{DD} = 100V RISE TIME RATED I_D TURN OFF DELAY TIME R_G = 2.35Ω FALL TIME	$t_{d(ON)}$ t_r $t_{d(ON)}$ t_f	-	-	35 190 170 130	nsec
DIODE FORWARD VOLTAGE T_J = 25°C, I_S = 27.4A, V_{GS} = 0V	V_{SD}	-	-	1.9	Volts
DIODE REVERSE RECOVERY TIME T_J = 25°C REVERSE RECOVERY CHARGE I_f = RATED ID di/dt = 100A/sec	t_{rr} Q_{rr}	-	-	950 9.0	nsec µC
INPUT CAPACITANCE V_{GS} = 0 VOLTS OUTPUT CAPACITANCE V_{DS} = 25 VOLTS REVERSE TRANSFER CAPACITANCE f = 1 MHz	C_{iss} C_{oss} C_{rss}	-	3500 700 110	-	pF

SENSITRON

DATA SHEET 665, REV. -

MECHANICAL DIMENSIONS: in Inches / mm



TO-254

PINOUT TABLE

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

TECHNICAL DATA

DISCLAIMER:

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.
7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.