TECHNICAL DATA
DATA SHEET 704, REV. -

N-Channel Enhancement Mode Vertical DMOS FET

- **Free From Secondary Breakdown**
- **Low Power Drive Requirement**
- **Ease of Paralleling**
- **Low C_{ISS} and Fast Switching Speeds**
- **Excellent Thermal Stability**
- **Integral Source-Drain Diode**
- **High Input Impedance and High Gain**

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 @ T_C = 25°C LIMITED BY MAXIMUM RATED T_J	I_D	-	-	100	Amps
PULSED DRAIN CURRENT @ T_C = 25°C	I_{DM}	-	-	300	Amps(pk)
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	°C
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	23.5	°C/W
TOTAL DEVICE DISSIPATION @ T_C = 25°C	P_D	-	-	5.3	Watts

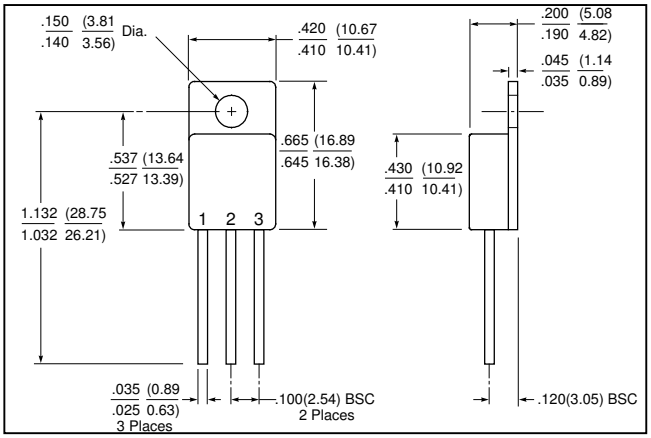
ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE V_{GS} = 0V, I_D = 1.0mA	BV_{DSS}	500	-	-	Volts
GATE THRESHOLD VOLTAGE V_{DS} = V_{GS}, I_D = 1.0mA	$V_{GS(th)}$	2.0	-	4.0	Volts
DRAIN TO SOURCE ON STATE RESISTANCE .V_{GS} = 5Vdc, I_D = 50mA V_{GS} = 10Vdc, I_D = 50mA	$R_{DS(ON)}$	-	45 40	 60	Ω
ZERO GATE VOLTAGE DRAIN CURRENT V_{DS} = Max. Rating, V_{GS} = 0Vdc V_{DS} = 0.8xMax. Rating V_{GS} = 0Vdc, T_A = 125°C	I_{DSS}	-	-	 10 1.0	 µA mA
GATE TO BODY LEAKAGE CURRENT V_{GS} = ±20Vdc, V_{DS} = 0	I_{GSS}	-	-	±100	nA
TURN ON DELAY TIME V_{DD} = 25V, RISE TIME I_D = 150mA, TURN OFF DELAY TIME R_G = 25Ω FALL TIME	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	-	10 15 10 10	nsec
FORWARD TRANSCONDUCTANCE V_{DS} = 25V, I_D = 50mA	g_{fs}	50	100	-	S(1/Ω)
REVERSE RECOVERY TIME I_S = 0.5A, REVERSE RECOVERY CHARGE V_{GS} = 0	t_{rr}	-	300	-	nsec
INPUT CAPACITANCE V_{DS} = 25 Vdc, OUTPUT CAPACITANCE V_{GS} = 0 Vdc, REVERSE TRANSFER CAPACITANCE f = 1 MHz	C_{iss} C_{oss} C_{rss}	-	45 8.0 2.0	55 10 5.0	pF

SENSITRON

DATA SHEET 704, REV. -

MECHANICAL DIMENSIONS: in Inches / mm



TO-257

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
N CHANNEL MOSFET IN A TO-257 PACKAGE	DRAIN	SOURCE	GATE

TECHNICAL DATA

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