

SENSITRON

SEMICONDUCTOR

TECHNICAL DATA
DATA SHEET 4302, REV -

HERMETIC DEPLETION MODE DMOS N-CHANNEL

- FEATURES:**
- 250 V, 6 Ω , 300 mA DMOS N-Channel FET
 - Hermetically Sealed
 - Surface Mount Package: Ceramic LCC-3

MAXIMUM RATINGS

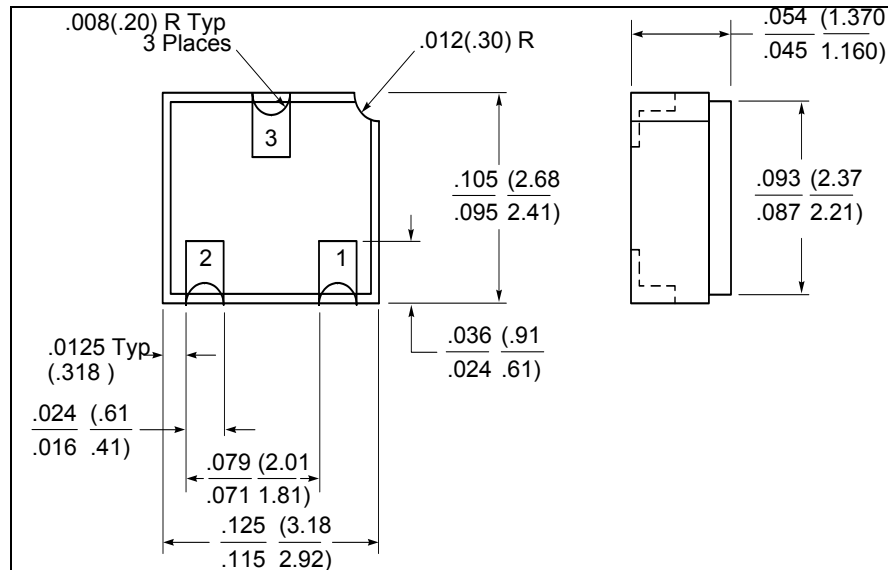
ALL RATINGS ARE AT $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	V
SATURATED DRAIN SOURCE CURRENT $V_{GS} = 0V$, $V_{DS} = 15V$ $T_C = 25^\circ\text{C}$	I_{DSS}	-	-	300	mA
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	1000	mA
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	+150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	15	$^\circ\text{C}/\text{W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	1.6	W

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = -5V$, $I_D = 100 \mu\text{A}$	BV_{DSX}	250	-	-	V
DRAIN TO GATE BREAKDOWN VOLTAGE $V_{GS} = -5V$, $I_D = 100 \mu\text{A}$	BV_{DGX}	250	-	-	V
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 0V$, $I_D = 200 \text{mA}$	$R_{DS(ON)}$	-	-	6	Ω
GATE SOURCE OFF VOLTAGE $V_{DS} = 15V$, $I_D = 1 \text{mA}$	$V_{GS(OFF)}$	-1.5	-	-3.5	V
FORWARD TRANSCONDUCTANCE $V_{DS} = 10V$, $I_D = 150 \text{mA}$	g_{fs}	225	-	-	S(1/ Ω)
DRAIN SOURCE LEAKAGE CURRENT, $V_{DS} = 0.8 \times \text{Max Rating}$, $V_{GS} = -5V$ $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	$I_{D(OFF)}$	-	-	1 1	μA mA
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 $V_{DD} = 25V$, RISE TIME $I_D = 150 \text{mA}$, TURN OFF DELAY TIME $R_G = 25\Omega$, FALL TIME $V_{GS} = 0V$ to $-10V$	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	20 25 25 40	-	ns
DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}$, $I_{SD} = 150 \text{mA}$ $V_{GS} = -5V$	V_{SD}	-	-	1.8	V
REVERSE RECOVERY TIME $T_J = 25^\circ\text{C}$, $V_{GS} = -5V$, $I_{SD} = 150 \text{mA}$	t_{rr}	-	800	-	ns
INPUT CAPACITANCE $V_{GS} = -5V$, $V_{DS} = 25V$, OUTPUT CAPACITANCE $f = 1.0 \text{MHz}$ REVERSE TRANSFER CAPACITANCE	C_{iss} C_{oss} C_{rss}	-	-	350 60 20	pF

MECHANICAL DIMENSIONS - in inches / mm

**LCC-3**

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
N Channel Depletion Mode FET	Gate	Source	Drain

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