

TECHNICAL DATA
DATA SHEET 338, REV B

HERMETIC POWER MOSFET P-CHANNEL

FEATURES:

- 55 Volt, 0.02, Ohm MOSFET
- Isolated and Hermetically Sealed
- Surface Mount Package

MAXIMUM RATINGS

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

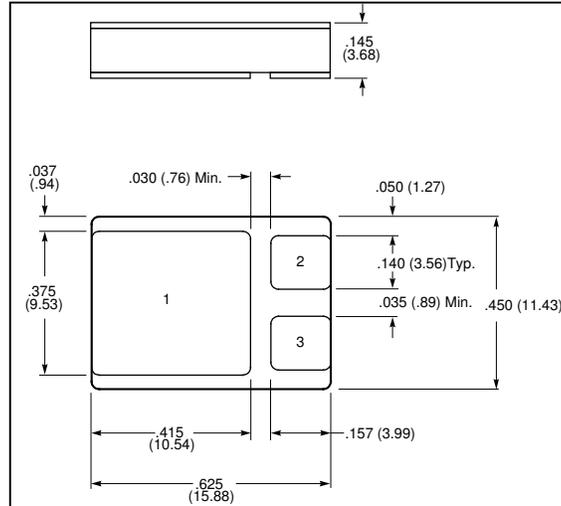
| RATING | SYMBOL | MIN. | TYP. | MAX. | UNITS |
|--|------------------|------|------|------------|---------------------------|
| GATE TO SOURCE VOLTAGE | V_{GS} | - | - | ± 20 | Volts |
| CONTINUOUS DRAIN CURRENT $V_{GS} = -10\text{V}$, $T_C = 25^\circ\text{C}$ $V_{GS} = -10\text{V}$, $T_C = 100^\circ\text{C}$ | I_D | - | - | -74 -52 | Amps |
| PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$ | I_{DM} | - | - | -260 | Amps |
| OPERATING AND STORAGE TEMPERATURE | T_{OP}/T_{STG} | -55 | - | +175 | $^\circ\text{C}$ |
| TERMAL RESISTANCE JUNCTION TO CASE | $R_{\theta JC}$ | - | - | 0.75 | $^\circ\text{C}/\text{W}$ |
| TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$ | P_D | - | - | 200 | Watts |

ELECTRICAL CHARACTERISTICS

| | | | | | |
|--|---|-----|----------------------|-----------------|-----------------------|
| DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}$, $I_D = -1.0\text{mA}$ | BV_{DSS} | -50 | - | - | Volts |
| DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10\text{V}$, $I_D = -38\text{A}$ $V_{GS} = 10\text{V}$, $I_D = -38\text{A}$, $T_C = 125^\circ\text{C}$ | $R_{DS(ON)}$ | - | - | 0.02 0.035 | Ω |
| GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}$, $I_D = -250\mu\text{A}$ | $V_{GS(th)}$ | 2.0 | - | 4.0 | Volts |
| FORWARD TRANSCONDUCTANCE $V_{DS} \geq 10\text{V}$, $I_D = -38\text{A}$ | g_{fs} | 21 | - | - | $\text{S}(1/\Omega)$ |
| ZERO GATE VOLTAGE DRAIN CURRENT, $T_J = 25^\circ\text{C}$ ($V_{DS} = -44\text{V}$, $V_{GS} = 0\text{V}$), $T_J = 125^\circ\text{C}$ | I_{DSS} | - | - | 25 250 | μA |
| GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20\text{V}$ GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20\text{V}$ | I_{GSS} | - | - | 100 -100 | nA |
| TOTAL GATE CHARGE $V_{GS} = -10\text{V}$, GATE TO SOURCE CHARGE $V_{DS} = -44\text{V}$, GATE TO DRAIN CHARGE $I_D = 5.5\text{A}$ | Q_g Q_{gs} Q_{gd} | - | - | 180 32 86 | nC |
| TURN ON DELAY TIME $V_{DD} = -28\text{V}$, RISE TIME $I_D = -38\text{A}$, TURN OFF DELAY TIME $R_G = 2.5\Omega$, FALL TIME $V_{GS} \geq 10\text{V}$ | $t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f | - | 18 99 61 96 | - | nsec |
| DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}$, $I_S = -38\text{V}$ $V_{GS} = 0\text{V}$ | V_{SD} | - | - | 1.6 | Volts |
| REVERSE RECOVERY TIME $T_J = 25^\circ\text{C}$, $I_S = -10\text{A}$, $di/dt \leq -100\text{A}/\mu\text{sec}$, REVERSE RECOVERY CHARGE $V_{DD} \leq 50\text{V}$ | t_{rr} Q_{rr} | - | - | 130 350 | nsec μC |
| INPUT CAPACITANCE $V_{GS} = 0\text{V}$, $V_{DS} = 25\text{V}$, OUTPUT CAPACITANCE $f = 1.0\text{MHz}$ REVERSE TRANSFER CAPACITANCE | C_{iss} C_{oss} C_{rss} | - | 3400 1400 640 | - | pF |

SENSITRON
DATA SHEET 338
REVISION B

MECHANICAL DIMENSIONS: in Inches / mm

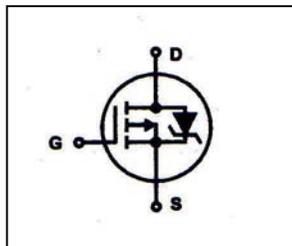


LCC-3P

PINOUT TABLE

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

SCHEMATIC



TECHNICAL DATA

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