

TECHNICAL DATA
DATA SHEET 4322, REV. A

HERMETIC POWER MOSFET N-CHANNEL

SHD231006S -- S-100 (JANTX level room temp) Screening per Sensitron datasheet

FEATURES:

- 60 Volt, 3.0 Ohm, 0.25 A MOSFET
- Isolated Hermetic, Ceramic Package
- Fast Switching
- Low $R_{DS(on)}$

MAXIMUM RATINGS

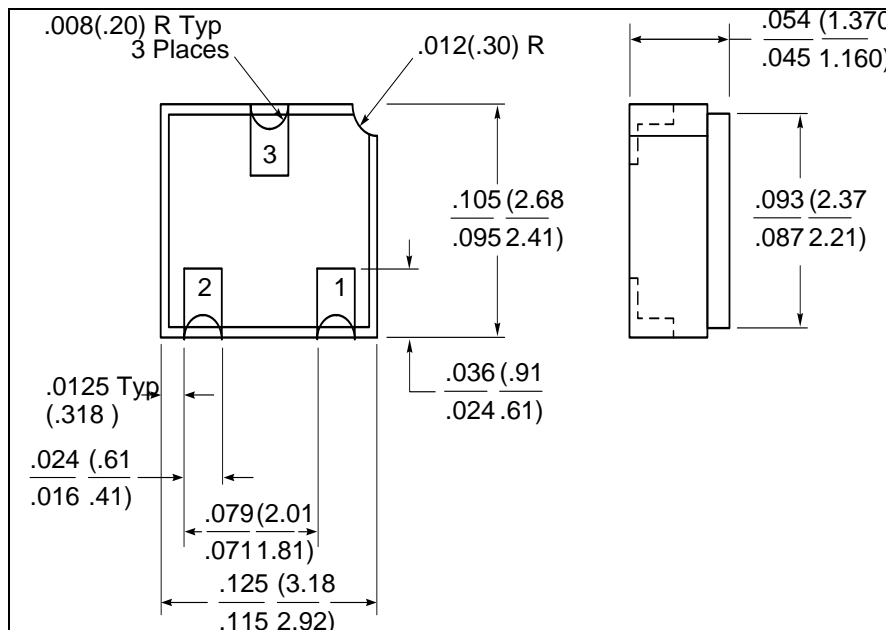
ALL RATINGS ARE AT $T_C = 25^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED.

| RATING | SYMBOL | MIN. | TYP. | MAX. | UNITS |
|---|------------------|------|------|----------|---------------------------|
| DRAIN TO SOURCE VOLTAGE | V_{DS} | - | - | 60 | Volts |
| GATE TO SOURCE VOLTAGE | V_{GS} | - | - | ± 20 | Volts |
| ON-STATE DRAIN CURRENT @ $T_C = 25^\circ\text{C}$ | $I_{D(on)}$ | - | - | 0.25 | Amps |
| PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$ | I_{DM} | - | - | 1.3 | Amps |
| OPERATING AND STORAGE TEMPERATURE | T_{OP}/T_{STG} | -55 | - | +150 | $^\circ\text{C}$ |
| TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$ | P_D | - | - | 2.5 | W |
| THERMAL RESISTANCE, JUNCTION TO CASE | R_{thJC} | - | - | 50 | $^\circ\text{C}/\text{W}$ |

ELECTRICAL CHARACTERISTICS

| | | | | | |
|--|---|-----|--------------------------|------------|-----------------|
| DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 10\mu\text{A}$ | BV_{DSS} | 60 | - | - | Volts |
| ON-STATE DRAIN CURRENT Pulse width = 300 μs , Duty cycle $\leq 2\%$ | $I_{D(on)}$ | - | 0.8 | - | Amp |
| STATIC DRAIN TO SOURCE ON STATE RESISTANCE Pulse width = 300 μs , Duty cycle $\leq 2\%$ | $R_{DS(ON)}$ | - | - | 3.0 4.0 | Ω |
| GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$ | $V_{GS(th)}$ | 1.0 | - | 2.5 | Volts |
| FORWARD TRANSCONDUCTANCE $V_{DS} = 15\text{V}, I_D = 200\text{mA}$ | g_{fs} | - | 250 | - | S(1/ Ω) |
| ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 60\text{V}, V_{GS} = 0\text{V}$ $V_{DS} = 60\text{V}, V_{GS} = 0\text{V}, T_C = 125^\circ\text{C}$ | I_{DSS} | - | - | 1 500 | μA |
| GATE TO SOURCE LEAKAGE FORWARD GATE TO SOURCE LEAKAGE REVERSE | I_{GSS} | - | - | 1 -1 | μA |
| TOTAL GATE CHARGE GATE-SOURCE CHARGE GATE-DRAIN CHARGE | Q_g Q_{gs} Q_{gd} | | 0.4 0.06 0.06 | 0.6 | nC |
| TURN ON DELAY TIME RISE TIME TURN OFF DELAY TIME FALL TIME | $t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f | - | 7.5 6.0 7.5 3.0 | 20 20 | nsec |
| INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE | C_{iss} C_{oss} C_{rss} | - | 25 6.0 1.2 | - | pF |

SENSITRON

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MECHANICAL DIMENSIONS: in Inches / mm

LCC-3
PINOUT TABLE

| DEVICE TYPE | PIN 1 | PIN 2 | PIN 3 |
|---------------|-------|--------|-------|
| N Channel FET | Gate | Source | Drain |

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