

TECHNICAL DATA
DATA SHEET 579, REV -

HERMETIC POWER MOSFET N-CHANNEL

FEATURES:

- 500 Volt, 0.85, Ohm, 5.5Amp MOSFET
- Isolated and Hermetically Sealed
- Surface Mount Package

MAXIMUM RATINGS

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

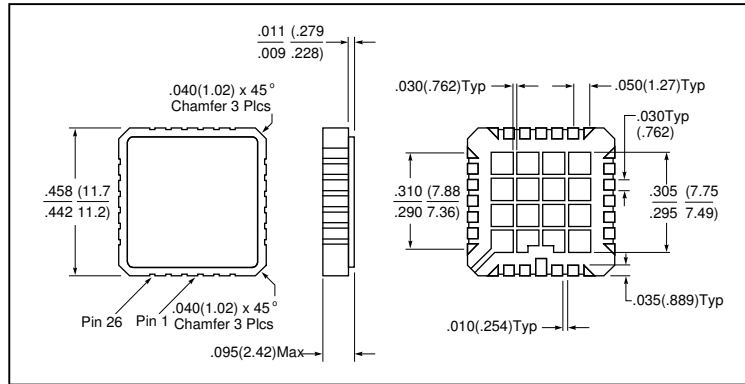
| RATING | SYMBOL | MIN. | TYP. | MAX. | UNITS |
|--|------------------|------|------|----------|---------------------------|
| GATE TO SOURCE VOLTAGE | V_{GS} | - | - | ± 20 | Volts |
| CONTINUOUS DRAIN CURRENT $T_C = 25^\circ\text{C}$ | I_D | - | - | 5.5 | Amps |
| PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$ | I_{DM} | - | - | 22 | Amps |
| OPERATING AND STORAGE TEMPERATURE | T_{OP}/T_{STG} | -55 | - | +150 | $^\circ\text{C}$ |
| TERMAL RESISTANCE JUNCTION TO CASE | $R_{\theta JC}$ | - | - | 2.1 | $^\circ\text{C}/\text{W}$ |
| TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$ | P_D | - | - | 60 | Watts |

ELECTRICAL CHARACTERISTICS

| | | | | | |
|---|--------------|-----|------|-----------|----------------------|
| DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 1.0\text{mA}$ | BV_{DSS} | 500 | - | - | Volts |
| DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = 10\text{V}, I_D = 3.5\text{A}$ | $R_{DS(ON)}$ | - | - | 0.85 | Ω |
| GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = 250\mu\text{A}$ | $V_{GS(th)}$ | 2.0 | - | 4.0 | Volts |
| FORWARD TRANSCONDUCTANCE $V_{DS} \geq 15\text{V}, I_D = 3.5\text{A}$ | g_{fs} | 4.7 | - | - | $\text{S}(1/\Omega)$ |
| ZERO GATE VOLTAGE DRAIN CURRENT, $(V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0\text{V}), T_J = 125^\circ\text{C}$ | I_{DSS} | - | - | 25 250 | μA |
| GATE TO SOURCE LEAKAGE FORWARD $V_{GS} = 20\text{V}$ | I_{GSS} | - | - | 100 | nA |
| GATE TO SOURCE LEAKAGE REVERSE $V_{GS} = -20\text{V}$ | | | | -100 | |
| TOTAL GATE CHARGE $V_{GS} = 10\text{V},$ | Q_g | - | - | 68.5 | nC |
| GATE TO SOURCE CHARGE $V_{DS} = 250\text{V},$ | Q_{gs} | | | 12.5 | |
| GATE TO DRAIN CHARGE $I_D = 5.5\text{A}$ | Q_{gd} | | | 40.5 | |
| TURN ON DELAY TIME $V_{DD} = 250\text{V},$ | $t_{d(ON)}$ | - | 21 | - | nsec |
| RISE TIME $I_D = 5.5\text{A},$ | t_r | | 73 | | |
| TURN OFF DELAY TIME $R_G = 9.1\Omega,$ | $t_{d(OFF)}$ | | 72 | | |
| FALL TIME $V_{GS} = 10\text{V}$ | t_f | | 51 | | |
| CONTINUOUS SOURCE CURRENT | I_S | - | 5.5 | - | Amps |
| DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}, I_S = 5.5\text{V}$ $V_{GS} = 0\text{V}$ | V_{SD} | - | - | 1.5 | Volts |
| REVERSE RECOVERY TIME $T_J = 25^\circ\text{C},$ $I_S = 5.5\text{A},$ $di/dt \leq -100\text{A}/\mu\text{sec},$ | t_{rr} | - | - | 700 | nsec |
| REVERSE RECOVERY CHARGE $V_{DD} \leq 50\text{V}$ | Q_{rr} | | | 8.9 | μC |
| INPUT CAPACITANCE $V_{GS} = 0\text{V}, V_{DS} = 25\text{V},$ | C_{iss} | - | 1300 | - | pF |
| OUTPUT CAPACITANCE $f = 1.0\text{MHz}$ | C_{oss} | | 310 | | |
| REVERSE TRANSFER CAPACITANCE | C_{rss} | | 120 | | |

SENSITRON
DATA SHEET 579
REVISION -

MECHANICAL DIMENSIONS: in Inches / mm



LCC-28T

PINOUTS

| DEVICE TYPE | PIN(S) 1 & 15~28 | PINS 5~11 | PINS 2, 3, 13, 14 |
|------------------|------------------|-----------|-------------------|
| MOSFET - LCC-28T | SOURCE | DRAIN | GATE |

TECHNICAL DATA

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