

| ABSOLUTE MAXIMUM RATINGS | | | |
|--|----------------------------------|-------------|-----------------|
| PARAMETER | SYMBOL | | UNITS |
| Drain-source Volt.(1) | V _{DSS} | 1000 | V _{dc} |
| Drain-Gate Voltage (R _{GS} =1.0M Ω) (1) | V _{DGR} | 1000 | V _{dc} |
| Gate-Source Voltage Continuous | V _{GS} | ± 20 | V _{dc} |
| Drain Current Continuous (T _c = 25°C) | I _D | 2 | A _{dc} |
| Drain Current Pulsed(3) | I _{DM} | 8 | A |
| Total Power Dissipation | PD | 75 | W |
| Power Dissipation Derating > 25°C | | 0.6 | W/°C |
| Operating & Storage Temp. | T _J /T _{stg} | -55 TO +150 | °C |
| Thermal Resistance | R _{thJc} | 1.7 | °C/W |
| Max. Lead temperature | TL | 300 | °C |

1000V, 2.0A, 6.0 Ω

SD10425

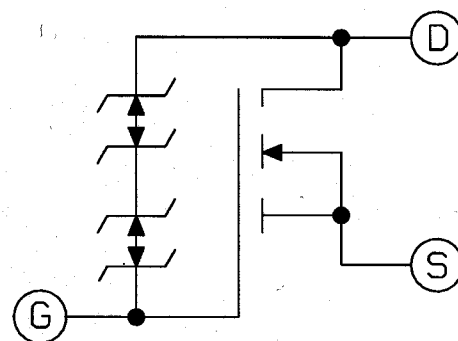
FEATURES

- RUGGED PACKAGE
- HI-REL CONSTRUCTION
- CERAMIC EYELETS
- LEAD BENDING OPTIONS
- COPPER CORED 52 ALLOY PINS
- LOW IR LOSSES
- LOW THERMAL RESISTANCE
- OPTIONAL MIL-S-19500 SCREENING

ELECTRICAL CHARACTERISTICS T_c = 25°C (UNLESS OTHERWISE SPECIFIED)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN. | TYP. | MAX. | UNITS |
|---|----------------------|--|------|------|------|----------|
| Drain-source Breakdown Volt. | V _{(BR)DSS} | V _{GS} =0V I _D =250 μ A | 667 | - | - | V |
| Gate Threshold Voltage | V _{GS(TH)} | V _D =V _{GS} I _D =250 μ A | 2.0 | - | 4.5 | V |
| Zero Gate Voltage Drain Current | I _{DSS} | V _D =667 V, V _{GS} =0 | - | - | 250 | μ A |
| | | V _D =535 V V _{GS} =0 T _J =125°C | - | - | 1000 | μ A |
| Static Drain-Source On-State Resistance(1) | R _{DS(ON)} | V _{GS} =10 V I _D =1.0A | - | - | 6.0 | Ω |
| Forward Trans-Conductance (2) | g _{fs} | V _D \geq 15 V I _D =1.0A | 1.5 | - | - | S(O) |
| Input Capacitance | C _{ISS} | V _{GS} =0V V _D =25 V f=1.0 MHz | - | 720 | - | pF |
| Output Capacitance | C _{OSS} | | - | 60 | - | pF |
| Reverse Transfer Capacitance | C _{RSS} | | - | 15 | - | pF |
| Turn-On Delay | t _{d(on)} | V _D =333V Z _o =20 Ω I _D =1.0A | - | - | 30 | ns |
| Rise Time | t _r | (MOSFET switching times are essentially independent of operating temp.) | - | - | 35 | ns |
| Turn-Off Delay | t _{d(off)} | | - | - | 80 | ns |
| Fall Time | t _f | | - | - | 55 | ns |
| Total Gate Charge (Gate-Source Plus Gate-Drain) | Q _g | V _{GS} =10V, I _D =2.0A | - | - | 40 | nC |
| Gate-Source Charge | Q _{gs} | V _D =333 V (Gate charge is essentially independent of the operating temperature) | - | - | 10 | nC |
| Gate-Drain ("Miller") Charge | Q _{gd} | | - | - | 15 | nC |

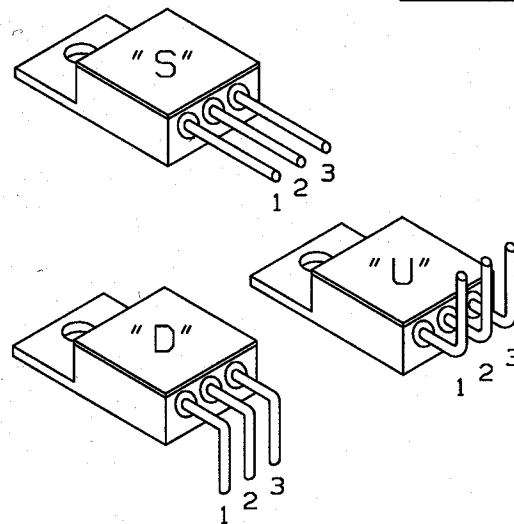
SCHEMATIC



| TERMINAL CONNECTIONS | |
|----------------------|----------|
| G | H |
| 1 GATE | 1 DRAIN |
| 2 DRAIN | 2 SOURCE |
| 3 SOURCE | 3 GATE |

STANDARD BEND CONFIGURATIONS

JAA



(CUSTOM BEND OPTIONS AVAILABLE)

SOURCE-DRAIN DIODE RATINGS & CHARACT. T_c = 25°C (UNLESS OTHERWISE SPECIFIED)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN. | TYP. | MAX. | UNITS |
|--|-----------------|--|------|------|------|-------|
| Continuous Source Current (Body Diode) | I _S | Modified MOSFET symbol showing the integral reverse P-N junction rectifier (See schematic) | - | - | 2.0 | A |
| Pulse Source Current (Body Diode) (1) | I _{SM} | | - | - | 8.0 | A |
| Diode Forward Voltage (2) | V _{SD} | I _F =2.0A V _{GS} =0V T _c =+25°C | - | - | 1.5 | V |
| Reverse Recovery Time | t _{rr} | T _c =+25° C I _F =2.0A di/dt=100A/ μ S | - | 800 | - | ns |

(1) T_J = 25°C to 150°C.
 (2) Pulse test: Pulse Width < 300 μ S, Duty Cycle < 2%.
 (3) Repetitive Rating: Pulse Width limited By Max. junction Temperature.