

isc N-Channel MOSFET Transistor

4N60

DESCRIPTION

- Drain Current  $I_D = 4A @ T_C = 25^{\circ}C$
- Drain Source Voltage-  
:  $V_{DSS} = 600V (Min)$
- Fast Switching Speed

APPLICATIONS

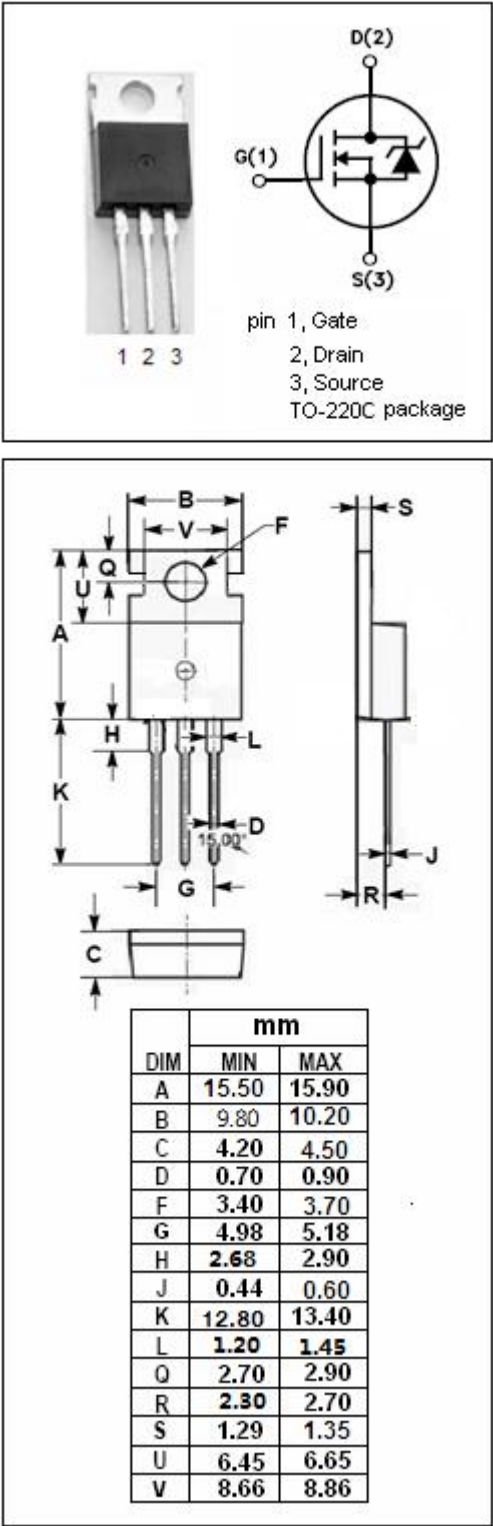
- General purpose power amplifier

ABSOLUTE MAXIMUM RATINGS( $T_C = 25^{\circ}C$ )

| SYMBOL        | PARAMETER                                     | VALUE    | UNIT        |
|---------------|-----------------------------------------------|----------|-------------|
| $V_{DSS}$     | Drain-Source Voltage ( $V_{GS} = 0$ )         | 600      | V           |
| $V_{GS}$      | Gate-Source Voltage                           | $\pm 30$ | V           |
| $I_D$         | Drain Current-continuous@ $T_C = 25^{\circ}C$ | 4        | A           |
| $I_{D(puls)}$ | Pulse Drain Current                           | 16       | A           |
| $P_{tot}$     | Total Dissipation@ $T_C = 25^{\circ}C$        | 106      | W           |
| $T_j$         | Max. Operating Junction Temperature           | 150      | $^{\circ}C$ |
| $T_{stg}$     | Storage Temperature Range                     | -55~150  | $^{\circ}C$ |

• THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                               | MAX  | UNIT          |
|---------------|-----------------------------------------|------|---------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case    | 3    | $^{\circ}C/W$ |
| $R_{th\ j-a}$ | Thermal Resistance, Junction to Ambient | 62.5 | $^{\circ}C/W$ |



**isc N-Channel MOSFET Transistor****4N60**• ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$ )

| SYMBOL        | PARAMETER                       | CONDITIONS                                                    | MIN | TYPE | MAX       | UNIT          |
|---------------|---------------------------------|---------------------------------------------------------------|-----|------|-----------|---------------|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage  | $V_{GS}=0$ ; $I_D=250\mu\text{A}$                             | 600 |      |           | V             |
| $V_{GS(th)}$  | Gate Threshold Voltage          | $V_{DS}=V_{GS}$ ; $I_D=250\mu\text{A}$                        | 2.0 |      | 4.0       | V             |
| $V_{SD}$      | Diode Forward On-Voltage        | $I_S=4.4\text{A}$ ; $V_{GS}=0$                                |     |      | 1.4       | V             |
| $R_{DS(on)}$  | Drain-Source On-Resistance      | $V_{GS}=10\text{V}$ ; $I_D=2.2\text{A}$                       |     |      | 2.5       | $\Omega$      |
| $I_{GSS}$     | Gate-Body Leakage Current       | $V_{GS}=\pm 30\text{V}$ ; $V_{DS}=0$                          |     |      | $\pm 100$ | nA            |
| $I_{DSS}$     | Zero Gate Voltage Drain Current | $V_{DS}=600\text{V}$ ; $V_{GS}=0$                             |     |      | 10        | $\mu\text{A}$ |
| $t_r$         | Rise Time                       | $I_D=4\text{A}$ ;<br>$V_{DD}=300\text{V}$ ;<br>$R_L=25\Omega$ |     | 45   | 100       | ns            |
| $t_{d(on)}$   | Turn-on Delay Time              |                                                               |     | 13   | 35        |               |
| $t_f$         | Fall Time                       |                                                               |     | 35   | 80        |               |
| $t_{d(off)}$  | Turn-off Delay Time             |                                                               |     | 25   | 60        |               |