

## isc N-Channel MOSFET Transistor

## SPP11N60C3, ISPP11N60C3

### • FEATURES

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 0.38\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • DESCRIPTION

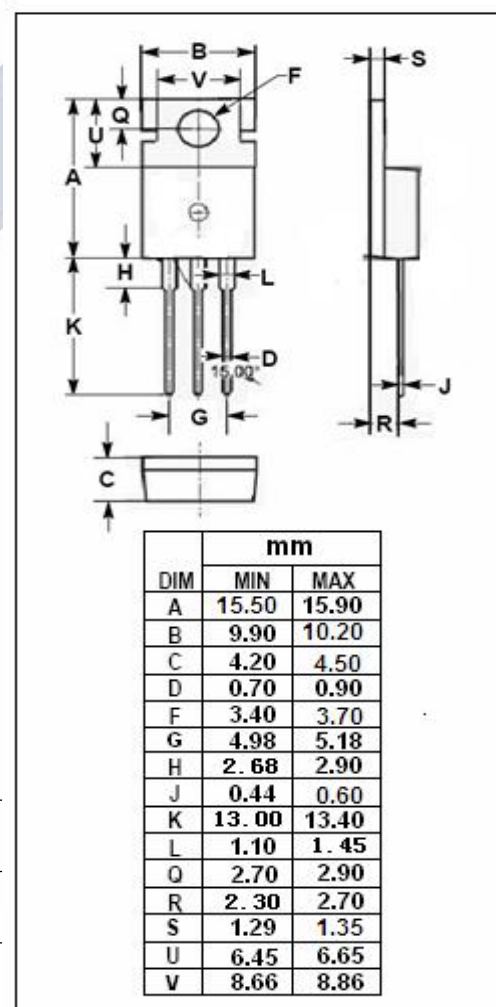
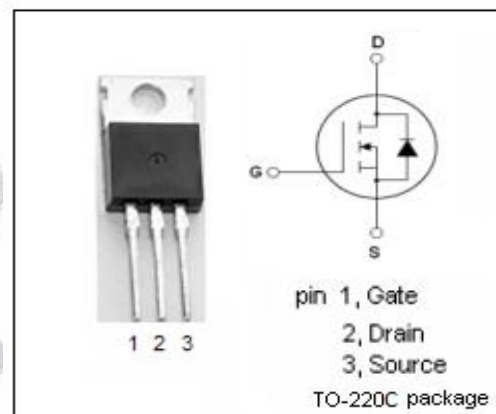
- Ultra low gate charge
- High peak current capability
- Improved transconductance

### • ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

| SYMBOL    | PARAMETER                                  | VALUE    | UNIT             |
|-----------|--------------------------------------------|----------|------------------|
| $V_{DS}$  | Drain-Source Voltage                       | 600      | V                |
| $V_{GS}$  | Gate-Source Voltage                        | $\pm 20$ | V                |
| $I_D$     | Drain Current-Continuous                   | 11       | A                |
| $I_{DM}$  | Drain Current-Single Pulsed                | 33       | A                |
| $P_D$     | Total Dissipation @ $T_c=25^\circ\text{C}$ | 125      | W                |
| $T_j$     | Max. Operating Junction Temperature        | 150      | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature                        | -55~150  | $^\circ\text{C}$ |

### • THERMAL CHARACTERISTICS

| SYMBOL         | PARAMETER                             | MAX | UNIT               |
|----------------|---------------------------------------|-----|--------------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance    | 1   | $^\circ\text{C/W}$ |
| $R_{th(ch-a)}$ | Channel-to-ambient thermal resistance | 62  | $^\circ\text{C/W}$ |



## isc N-Channel MOSFET Transistor

## SPP11N60C3, ISPP11N60C3

## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

| SYMBOL       | PARAMETER                      | CONDITIONS                    | MIN | TYP | MAX  | UNIT     |
|--------------|--------------------------------|-------------------------------|-----|-----|------|----------|
| $BV_{DSS}$   | Drain-Source Breakdown Voltage | $V_{GS}=0V$ ; $I_D=0.25mA$    | 600 |     |      | V        |
| $V_{GS(th)}$ | Gate Threshold Voltage         | $V_{DS}=V_{GS}$ ; $I_D=0.5mA$ | 2.1 |     | 3.9  | V        |
| $R_{DS(on)}$ | Drain-Source On-Resistance     | $V_{GS}=10V$ ; $I_D=7A$       |     |     | 0.38 | $\Omega$ |
| $I_{GSS}$    | Gate-Source Leakage Current    | $V_{GS}=30V$ ; $V_{DS}=0V$    |     |     | 0.1  | $\mu A$  |
| $I_{DSS}$    | Drain-Source Leakage Current   | $V_{DS}=600V$ ; $V_{GS}=0V$   |     |     | 1    | $\mu A$  |
| $V_{SD}$     | Diode forward voltage          | $I_F=I_S$ ; $V_{GS}=0V$       |     |     | 1.2  | V        |