

isc N-Channel MOSFET Transistor

CSD18535KCS

FEATURES

- Drain Current : $I_D = 200A @ T_C = 25^\circ C$
- Drain Source Voltage
: $V_{DS} = 60V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 2.0m\Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

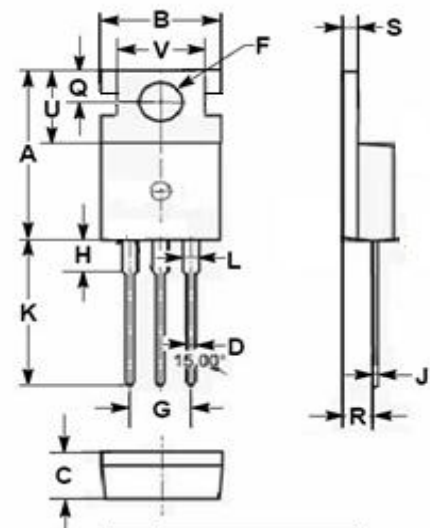
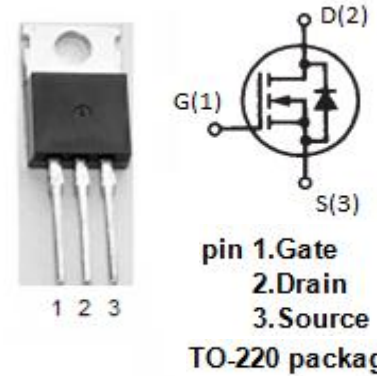
- motor drive, DC-DC converter, power switch and solenoid drive.

ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ C$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------|
| V_{DS} | Drain-Source Voltage | 60 | V |
| V_{GS} | Gate-Source Voltage-Continuous | ± 20 | V |
| I_D | Drain Current-Continuous | 200 | A |
| I_{DM} | Drain Current-Single Pluse | 400 | A |
| P_D | Total Dissipation @ $T_C = 25^\circ C$ | 300 | W |
| T_J | Max. Operating Junction Temperature | -55~175 | $^\circ C$ |
| T_{stg} | Storage Temperature | -55~175 | $^\circ C$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|--------------|--------------------------------------|-----|--------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 0.5 | $^\circ C/W$ |



| DIM | mm | |
|-----|-------|-------|
| | MIN | MAX |
| A | 15.50 | 15.90 |
| B | 9.80 | 10.20 |
| C | 4.20 | 4.50 |
| D | 0.70 | 0.90 |
| F | 3.40 | 3.70 |
| G | 4.98 | 5.18 |
| H | 2.68 | 2.90 |
| J | 0.44 | 0.60 |
| K | 12.80 | 13.40 |
| L | 1.20 | 1.45 |
| Q | 2.70 | 2.90 |
| R | 2.30 | 2.70 |
| S | 1.29 | 1.35 |
| U | 6.45 | 6.65 |
| V | 8.66 | 8.86 |

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ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|---------------|---------------------------------|--|-----|-----------|------------------|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage | $V_{GS}=0$; $I_D=0.25\text{mA}$ | 60 | - | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}=V_{GS}$; $I_D=0.25\text{mA}$ | 1.4 | 2.4 | V |
| $R_{DS(on)1}$ | Drain-Source On-Resistance | $V_{GS}=10\text{V}$; $I_D=100\text{A}$ | - | 2.0 | $\text{m}\Omega$ |
| $R_{DS(on)2}$ | Drain-Source On-Resistance | $V_{GS}=4.5\text{V}$; $I_D=100\text{A}$ | - | 2.9 | $\text{m}\Omega$ |
| I_{GSS} | Gate-Body Leakage Current | $V_{GS}=\pm 20\text{V}$; $V_{DS}=0$ | - | ± 1.0 | μA |
| I_{DSS} | Zero Gate Voltage Drain Current | $V_{DS}=48\text{V}$; $V_{GS}=0$ | - | 1.0 | μA |
| V_{SD} | Forward On-Voltage | $I_S=100\text{A}$; $V_{GS}=0$ | - | 1.0 | V |

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