

## isc N-Channel MOSFET Transistor

## FCB110N65F

## FEATURES

- Drain Current  $-I_D = 35A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DS} = 650V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 110m\Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## DESCRIPTION

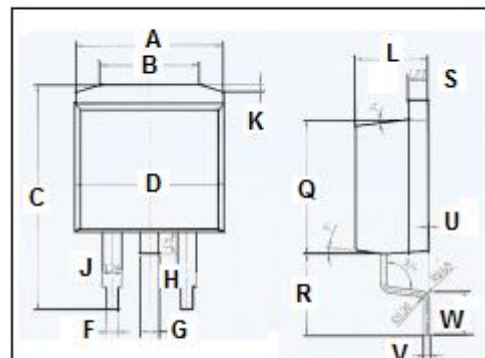
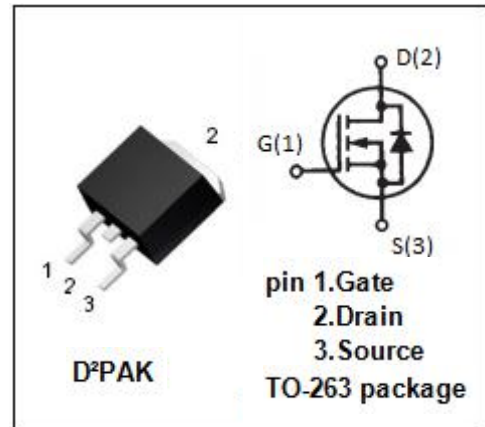
- Designed for use in switch mode power supplies and general purpose applications.

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

| SYMBOL    | PARAMETER                              | VALUE    | UNIT       |
|-----------|----------------------------------------|----------|------------|
| $V_{DS}$  | Drain-Source Voltage                   | 650      | V          |
| $V_{GS}$  | Gate-Source Voltage-Continuous         | $\pm 20$ | V          |
| $I_D$     | Drain Current-Continuous               | 35       | A          |
| $I_{DM}$  | Drain Current-Single Pluse             | 105      | A          |
| $P_D$     | Total Dissipation @ $T_C = 25^\circ C$ | 357      | W          |
| $T_J$     | Max. Operating Junction Temperature    | -55~150  | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                    | -55~150  | $^\circ C$ |

## THERMAL CHARACTERISTICS

| SYMBOL       | PARAMETER                            | MAX  | UNIT         |
|--------------|--------------------------------------|------|--------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 0.35 | $^\circ C/W$ |



| DIM | mm    |       |
|-----|-------|-------|
|     | MIN   | MAX   |
| A   | 10    |       |
| B   | 6.6   | 6.8   |
| C   | 15.23 | 15.25 |
| D   | 10.15 | 10.17 |
| F   | 0.76  | 0.78  |
| G   | 1.26  | 1.28  |
| H   | 1.4   | 1.6   |
| J   | 1.33  | 1.35  |
| K   | 0.4   | 0.6   |
| L   | 4.6   | 4.8   |
| Q   | 8.69  | 8.71  |
| R   | 5.28  | 5.30  |
| S   | 1.26  | 1.28  |
| U   | 0.0   | 0.2   |
| V   | 0.37  | 0.39  |
| W   | 2.80  | 2.82  |

**isc N-Channel MOSFET Transistor****FCB110N65F****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

| SYMBOL               | PARAMETER                       | CONDITIONS                                                 | MIN | MAX   | UNIT |
|----------------------|---------------------------------|------------------------------------------------------------|-----|-------|------|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage  | V <sub>GS</sub> = 0; I <sub>D</sub> = 10mA                 | 650 |       | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 3.5mA | 3.0 | 5.0   | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> = 17.5A              |     | 110   | mΩ   |
| I <sub>GSS</sub>     | Gate-Body Leakage Current       | V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0                |     | ± 100 | nA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current | V <sub>DS</sub> = 650V; V <sub>GS</sub> = 0                |     | 10    | μA   |
| V <sub>SD</sub>      | Forward On-Voltage              | I <sub>S</sub> = 17.5A; V <sub>GS</sub> = 0                |     | 1.4   | V    |

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