

## P-Channel MOSFET Transistor

### FEATURES

- Drain Current  $-I_D = -140A @ T_C = 25^\circ C$
- Drain Source Voltage  $-V_{DSS} = -50V (Min)$
- Static Drain-Source On-Resistance  
 $-R_{DS(on)} = 9m\Omega (Max) @ V_{GS} = -10V$

### APPLICATIONS

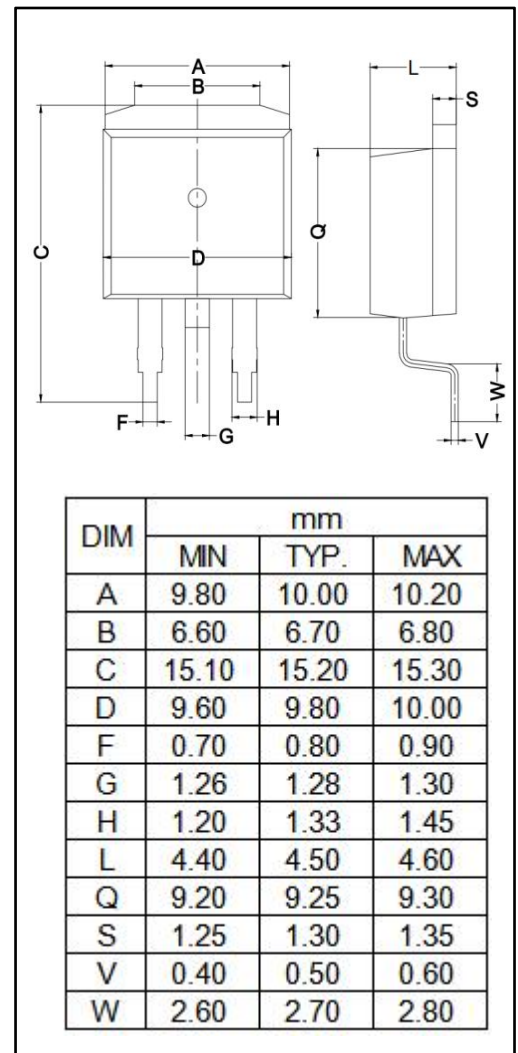
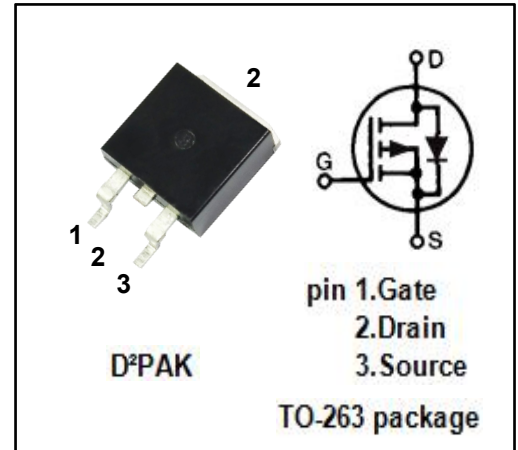
- DC-DC Converters
- Automatic Test Equipment
- High-Side Switching
- Battery Chargers

### Absolute Maximum Ratings( $T_C = 25^\circ C$ )

| SYMBOL    | PARAMETER                              | VALUE    | UNIT       |
|-----------|--|----------|------------|
| $V_{DSS}$ | Drain-Source Voltage                   | -50      | V          |
| $V_{GS}$  | Gate-Source Voltage-Continuous         | $\pm 20$ | V          |
| $I_D$     | Drain Current-Continuous               | -140     | A          |
| $I_{DM}$  | Drain Current-Single Pulse             | -420     | A          |
| $P_D$     | Total Dissipation @ $T_C = 25^\circ C$ | 298      | W          |
| $T_J$     | Max. Operating Junction Temperature    | 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 | 0.42 | $^\circ C/W$ |



### P-Channel MOSFET Transistor

#### ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$ )

| SYMBOL        | PARAMETER                       | CONDITIONS                                | MIN  | TYP | MAX       | UNIT             |
|---------------|---------------------------------|---|------|-----|-----------|------------------|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage  | $V_{GS}=0, I_D=-0.25\text{mA}$            | -50  | -   | -         | V                |
| $I_{DSS}$     | Zero Gate Voltage Drain Current | $V_{DS}=-50\text{V}, V_{GS}=0\text{V}$    | -    | -   | -10       | $\mu\text{A}$    |
| $I_{GSS}$     | Gate-Body Leakage Current       | $V_{GS}=\pm 15\text{V}, V_{DS}=0\text{V}$ | -    | -   | $\pm 100$ | nA               |
| $V_{GS(th)}$  | Gate Threshold Voltage          | $V_{DS}=V_{GS}, I_D=-0.25\text{mA}$       | -1.0 | -   | -2.0      | V                |
| $R_{DS(on)}$  | Drain-Source On-Resistance      | $V_{GS}=-10\text{V}, I_D=-70\text{A}$     | -    | -   | 9         | $\text{m}\Omega$ |
| $V_{SD}$      | Diode Forward Voltage           | $I_{SD}=-70\text{A}, V_{GS}=0\text{V}$    | -    | -   | -1.3      | V                |

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