

## isc N-Channel MOSFET Transistor

## APT6025BVFR

## FEATURES

- Drain Current  $-I_D=25A@ T_C=25^{\circ}C$
- Drain Source Voltage-  
:  $V_{DS}=600V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)}=0.25 \Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## DESCRIPTION

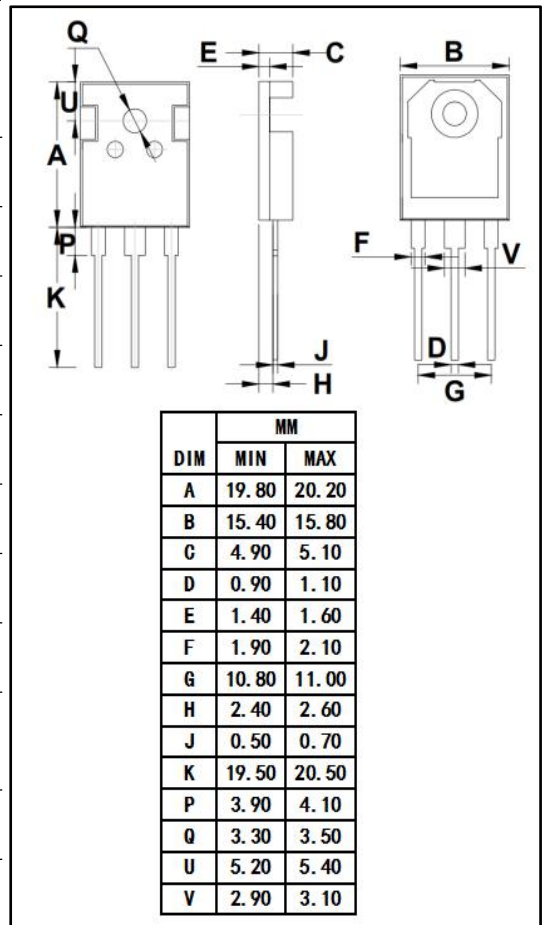
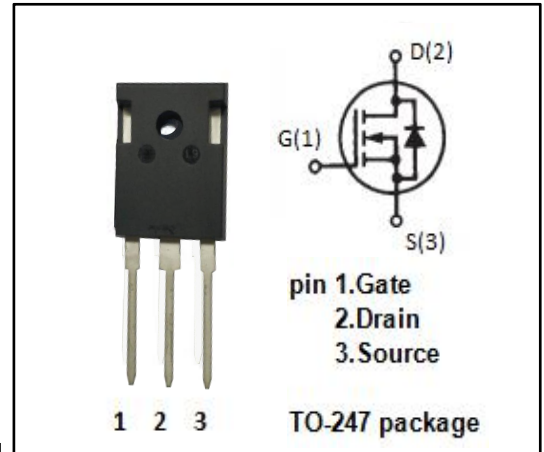
- Designed for use in switch mode power supplies and general purpose applications.

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

| SYMBOL    | PARAMETER                             | VALUE    | UNIT        |
|-----------|---------------------------------------|----------|-------------|
| $V_{DS}$  | Drain-Source Voltage                  | 600      | V           |
| $V_{GS}$  | Gate-Source Voltage-Continuous        | $\pm 30$ | V           |
| $I_D$     | Drain Current-Continuous              | 25       | A           |
| $I_{DM}$  | Drain Current-Single Pluse            | 100      | A           |
| $P_D$     | Total Dissipation @ $T_C=25^{\circ}C$ | 370      | 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 | 0.34 | $^{\circ}C/W$ |



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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  | $V_{GS}=0$ ; $I_D=0.25\text{mA}$   | 600 |             | V             |
| $V_{GS(th)}$  | Gate Threshold Voltage          | $V_{DS}=V_{GS}$ ; $I_D=1\text{mA}$   | 2   | 4           | V             |
| $R_{DS(on)}$  | Drain-Source On-Resistance      | $V_{GS}=10\text{V}$ ; $I_D=12.5\text{A}$   |     | 0.25        | $\Omega$      |
| $I_{GSS}$     | Gate-Body Leakage Current       | $V_{GS}=\pm 30\text{V}$ ; $V_{DS}=0$   |     | $\pm 100$   | nA            |
| $I_{DSS}$     | Zero Gate Voltage Drain Current | $V_{DS}=600\text{V}$ ; $V_{GS}=0$<br>$V_{DS}=480\text{V}$ ; $V_{GS}=0$ @ $T_J=125^{\circ}\text{C}$ |     | 250<br>1000 | $\mu\text{A}$ |
| $V_{SD}$      | Forward On-Voltage              | $I_S=25\text{A}$ ; $V_{GS}=0$  |     | 1.3         | V             |

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