

# isc N-Channel MOSFET Transistor

# APT5014BFLL

### FEATURES

- Drain Current –I\_D=35A@ T\_C=25 $^\circ\!\mathrm{C}$
- Drain Source Voltage-: V<sub>DSS</sub>=500V(Min)
- Static Drain-Source On-Resistance
- : R<sub>DS(on)</sub> =0.14 Ω (Max)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### DESCRIPTION

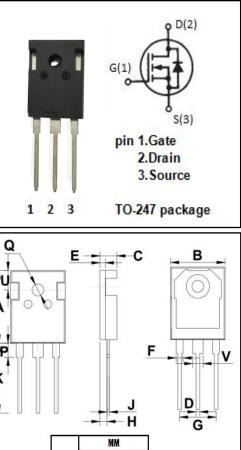
 Designed for use in switch mode power supplies and general purpose applications.

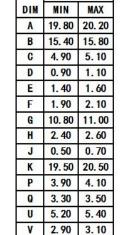
| ABSOLUTE MAXIMUM RATINGS(Ta=25 C) |                                     |         |      |  |  |  |
|-----------------------------------|-------------------------------------|---------|------|--|--|--|
| SYMBOL                            | PARAMETER VALUE                     |         | UNIT |  |  |  |
| V <sub>DSS</sub>                  | Drain-Source Voltage                | 500     | V    |  |  |  |
| V <sub>GS</sub>                   | Gate-Source Voltage-Continuous      | ±30     | V    |  |  |  |
| ID                                | Drain Current-Continuous            | 35      | A    |  |  |  |
| I <sub>DM</sub>                   | Drain Current-Single Pluse          | 140     | A    |  |  |  |
| PD                                | Total Dissipation @Tc=25°C 403      |         | W    |  |  |  |
| TJ                                | Max. Operating Junction Temperature | -55~150 | °C   |  |  |  |
| T <sub>stg</sub>                  | Storage Temperature -55~150         |         | °C   |  |  |  |

### ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

### THERMAL CHARACTERISTICS

| SYMBOL              | PARAMETER                            | МАХ  | UNIT        |
|---------------------|--------------------------------------|------|-------------|
| R <sub>th j-c</sub> | Thermal Resistance, Junction to Case | 0.31 | ℃ <b>/W</b> |







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#### **ELECTRICAL CHARACTERISTICS**

#### $T_c=25^{\circ}C$ unless otherwise specified

| SYMBOL               | PARAMETER                       | CONDITIONS                                                                           | MIN | МАХ        | UNIT |
|----------------------|---------------------------------|--------------------------------------------------------------------------------------|-----|------------|------|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage  | V <sub>GS</sub> = 0; I <sub>D</sub> = 0.25mA                                         | 500 |            | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 1mA                             | 3   | 5          | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> =17.5A                                         |     | 0.14       | Ω    |
| lgss                 | Gate-Body Leakage Current       | V <sub>GS</sub> = ±30V;V <sub>DS</sub> = 0                                           |     | ±100       | nA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current | $V_{DS}$ = 500V; $V_{GS}$ = 0<br>$V_{DS}$ = 400V; $V_{GS}$ = 0@T <sub>J</sub> =125°C |     | 100<br>500 | μA   |
| V <sub>SD</sub>      | Forward On-Voltage              | I <sub>S</sub> =35A; V <sub>GS</sub> = 0                                             |     | 1.3        | V    |

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