

# isc N-Channel MOSFET Transistor

# APT20M16B2FLL

### FEATURES

- Drain Current –I\_D= 100A@ T\_C=25 $^\circ\!\!\mathbb{C}$
- Drain Source Voltage-: V<sub>DSS</sub>=200V(Min)
- Static Drain-Source On-Resistance : R<sub>DS(on)</sub> =0.016 Ω (Max)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### DESCRIPTION

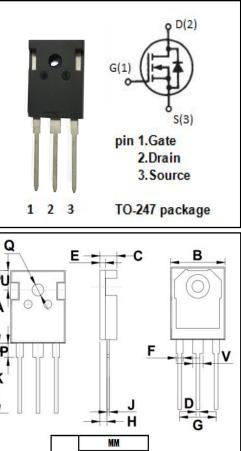
 Designed for use in switch mode power supplies and general purpose applications.

| ABSOLUTE MAXIMUM RATINGS(Ta=25 C) |                                     |         |    |  |  |  |
|-----------------------------------|-------------------------------------|---------|----|--|--|--|
| SYMBOL                            | PARAMETER                           | VALUE   |    |  |  |  |
| V <sub>DSS</sub>                  | Drain-Source Voltage                | 200     | V  |  |  |  |
| V <sub>GS</sub>                   | Gate-Source Voltage-Continuous ±30  |         | V  |  |  |  |
| ID                                | Drain Current-Continuous 100        |         |    |  |  |  |
| I <sub>DM</sub>                   | Drain Current-Single Pluse          | 400     | A  |  |  |  |
| PD                                | Total Dissipation @Tc=25℃           | 690     | 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 | 0.18 | °C/W |



|     | Concerne and Concerned |       |
|-----|------------------------|-------|
| DIM | MIN                    | MAX   |
| A   | 19.80                  | 20.20 |
| В   | 15.40                  | 15.80 |
| C   | 4.90                   | 5.10  |
| D   | 0.90                   | 1.10  |
| E   | 1.40                   | 1.60  |
| F   | 1.90                   | 2.10  |
| G   | 10.80                  | 11.00 |
| H   | 2.40                   | 2.60  |
| J   | 0.50                   | 0.70  |
| K   | 19.50                  | 20.50 |
| Р   | 3.90                   | 4.10  |
| Q   | 3.30                   | 3.50  |
| U   | 5.20                   | 5.40  |
| V   | 2.90                   | 3.10  |



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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   | 200 |             | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | $V_{DS}$ = $V_{GS}$ ; $I_D$ = 2.5mA  | 3   | 5           | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> =50A   |     | 0.016       | 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 | $V_{DS}$ = 200V; $V_{GS}$ = 0<br>$V_{DS}$ = 160V; $V_{GS}$ = 0@T <sub>C</sub> =125°C |     | 250<br>1000 | μA   |
| V <sub>SD</sub>      | Forward On-Voltage              | I <sub>S</sub> =-100A; V <sub>GS</sub> = 0   |     | 1.3         | V    |

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