

isc N-Channel MOSFET Transistor

APT56F50L

FEATURES

- Drain Current $-I_D = 56A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DS} = 500V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.1 \Omega (Max)$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

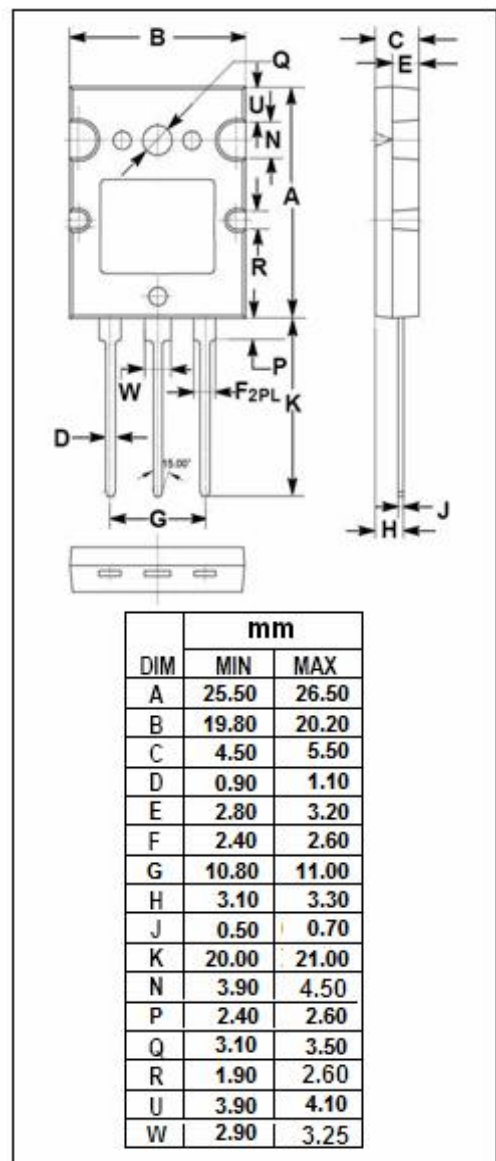
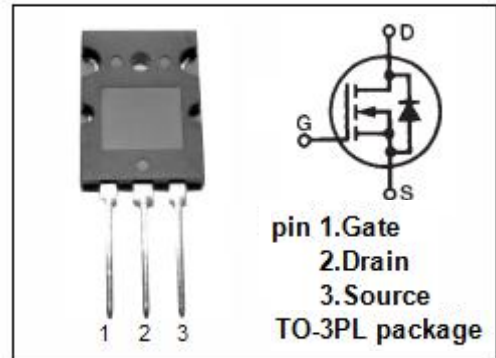
- Designed for use in switch mode power supplies and general purpose applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------|
| V_{DS} | Drain-Source Voltage | 500 | V |
| V_{GS} | Gate-Source Voltage-Continuous | ± 30 | V |
| I_D | Drain Current-Continuous | 56 | A |
| I_{DM} | Drain Current-Single Pluse | 175 | A |
| P_D | Total Dissipation @ $T_C = 25^\circ C$ | 780 | 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 | 0.16 | $^\circ C/W$ |



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ELECTRICAL CHARACTERISTICS

 $T_J=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|---------------|---------------------------------|--|-----|-------------|---------------|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage | $V_{GS}=0$; $I_D=0.25\text{mA}$ | 500 | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}=V_{GS}$; $I_D=2.5\text{mA}$ | 2.5 | 5 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}=10\text{V}$; $I_D=28\text{A}$ | | 0.1 | Ω |
| I_{GSS} | Gate-Body Leakage Current | $V_{GS}=\pm 30\text{V}$; $V_{DS}=0$ | | ± 100 | nA |
| I_{DSS} | Zero Gate Voltage Drain Current | $V_{DS}=500\text{V}$; $V_{GS}=0$ $V_{DS}=500\text{V}$; $V_{GS}=0$ @ $T_J=125^{\circ}\text{C}$ | | 250 1000 | μA |
| V_{SD} | Forward On-Voltage | $I_S=-28\text{A}$; $V_{GS}=0$ | | 1.0 | V |

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