

isc P-Channel MOSFET Transistor

IXTP52P10P

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 50m\Omega$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATION

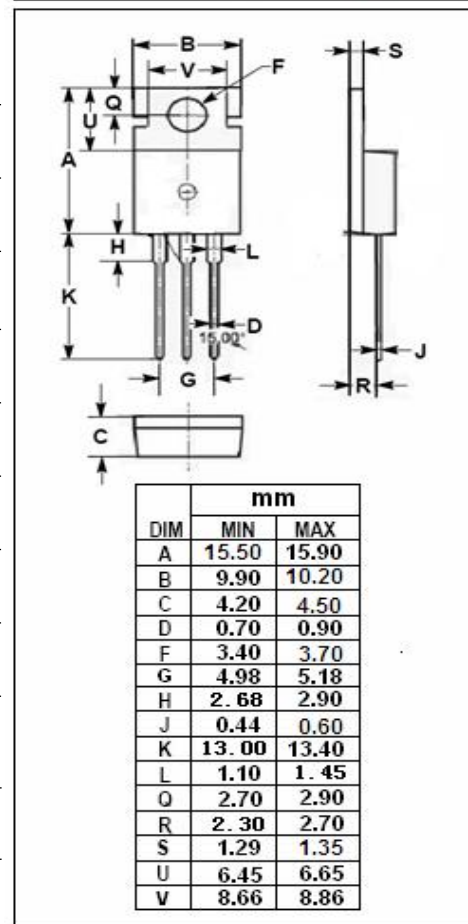
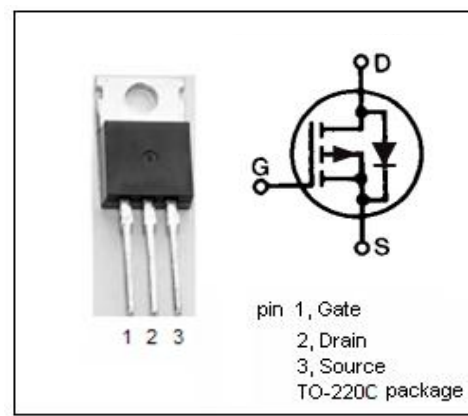
- High side switching
- Current regulators
- Automatic test equipment

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------------|
| V_{DS} | Drain-Source Voltage | -100 | V |
| V_{GS} | Gate-Source Voltage | ± 20 | V |
| I_D | Drain Current-Continuous | -52 | A |
| I_{DM} | Drain Current-Single Pulsed | -130 | A |
| P_D | Total Dissipation @ $T_c=25^\circ\text{C}$ | 300 | W |
| T_j | Operating Junction Temperature | -55~150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -55~150 | $^\circ\text{C}$ |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|------------------------------------|------|--------------------|
| $R_{th(j-c)}$ | Channel-to-case thermal resistance | 0.42 | $^\circ\text{C/W}$ |



isc P-Channel MOSFET Transistor**IXTP52P10P****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------|--------------------------------|--|------|-----|-----------|-----------|
| BV_{DSS} | Drain-Source Breakdown Voltage | $V_{GS}=0V$; $I_D = -250\ \mu A$ | -100 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}=V_{GS}$; $I_D = -250\ \mu A$ | -2.5 | | -4.5 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS} = -10V$; $I_D = -26A$ | | | 50 | $m\Omega$ |
| I_{GSS} | Gate-Source Leakage Current | $V_{GS} = \pm 20V$ | | | ± 100 | nA |
| I_{DSS} | Drain-Source Leakage Current | $V_{DS} = V_{DSS}$; $V_{GS} = 0V$ | | | -10 | μA |
| | | $V_{DS} = V_{DSS}$; $V_{GS} = 0V$; $T_J = 125^{\circ}\text{C}$ | | | -150 | |
| V_{SD} | Diode forward voltage | $I_F = -26A$; $V_{GS} = 0V$ | | | -3.5 | V |

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