

**Micro Commercial Components** 



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# **Features**

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Power Dissipation: 0.2W(Tamb=25℃)
- Drain Current: 115mA
- Drain-source Voltage: 60V
- Operating Junction Temperature: -55 to +150°C
- Storage Temperature: -55 to +150°C
- Marking: K72

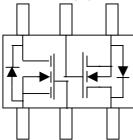
### Electrical Characteristics @ 25°C Unless Otherwise Specified

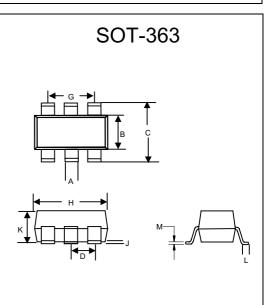
| Symbol               | Parameter  |  | Min | Тур        | Max         | Units |
|----------------------|--|--|-----|------------|-------------|-------|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage*<br>(V <sub>GS</sub> =0Vdc, I <sub>D</sub> =10µAdc)   |  |     | 70         |             | Vdc   |
| V <sub>th(GS)</sub>  | Gate-Threshold Voltage*<br>(V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250µAdc)  |  |     | 1.5        | 2.0         | Vdc   |
| I <sub>GSS</sub>     | Gate-body Leakage*<br>(V <sub>DS</sub> =0Vdc, V <sub>GS</sub> =±20Vdc)   |  |     |            | ±10         | nAdc  |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current*<br>(V <sub>DS</sub> =60Vdc, V <sub>GS</sub> =0Vdc)<br>(V <sub>DS</sub> =60Vdc, V <sub>GS</sub> =0Vdc, T <sub>j</sub> =125° <sub>C</sub> ) |  |     |            | 1<br>500    | µAdc  |
| I <sub>D(ON)</sub>   | On-state Drain Current*<br>(V <sub>DS</sub> =7.5Vdc, V <sub>GS</sub> =10Vdc)   |  |     | 1.0        |             | Adc   |
| r <sub>DS(on)</sub>  | Drain-Source On-Resistance*<br>(V <sub>GS</sub> =5Vdc, I <sub>D</sub> =50mAdc)<br>(V <sub>GS</sub> =10Vdc, I <sub>D</sub> =500mAdc)  |  |     | 3.2<br>4.4 | 7.5<br>13.5 | Ω     |
| <b>g</b> fs          | Forward Transconductance*<br>(V <sub>DS</sub> =10Vdc, I <sub>D</sub> =200mAdc)   |  | 80  |            |             | ms    |
| Ciss                 | Input Capacitance  |  |     | 22         | 50          |       |
| C <sub>oss</sub>     | Output Capacitance   | V <sub>DS</sub> =25Vdc,<br>V <sub>GS</sub> =0Vdc |     | 11         | 25          | pF    |
| C <sub>rSS</sub>     | Reverse Transfer<br>Capacitance  | f=1MHz   |     | 2          | 5           | Р     |

# Switching

| ſ | $t_{\text{d(on)}}$  | Turn-on Time  | V <sub>DD</sub> =30Vdc,<br>V <sub>GEN</sub> =10Vdc                 | <br>7  | 20 | ns  |
|---|---------------------|---------------|--|--------|----|-----|
| I | t <sub>d(off)</sub> | Turn-off Time | R <sub>L</sub> =150Ω,I <sub>D</sub> =200mA,<br>R <sub>G</sub> =25Ω | <br>11 | 20 | 115 |

\* Pulse test, pulse width  $\leq$  300  $\mu$  s, duty cycle  $\leq$  20%





2N7002DW

**N-Channel MOSFET** 

|     | DIMENSIONS |      |             |      |      |  |  |
|-----|------------|------|-------------|------|------|--|--|
|     | INCH       | ES   | м           |      |      |  |  |
| DIM | MIN        | MAX  | MIN         | MAX  | NOTE |  |  |
| Α   | .006       | .014 | 0.15        | 0.35 |      |  |  |
| В   | .045       | .053 | 1.15        | 1.35 |      |  |  |
| С   | .085       | .096 | 2.15        | 2.45 |      |  |  |
| D   | .026       |      | 0.65Nominal |      |      |  |  |
| G   | .047       | .055 | 1.20        | 1.40 |      |  |  |
| Н   | .071       | .087 | 1.80        | 2.20 |      |  |  |
| J   |            | .004 |             | 0.10 |      |  |  |
| K   | .035       | .043 | 0.90        | 1.10 |      |  |  |
| L   | .010       | .018 | 0.26        | 0.46 |      |  |  |
| М   | .003       | .006 | 0.08        | 0.15 |      |  |  |

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## **Ordering Information :**

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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