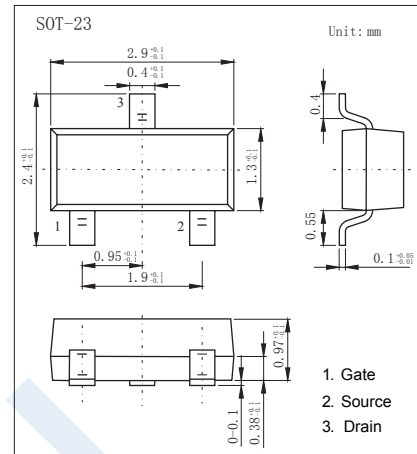
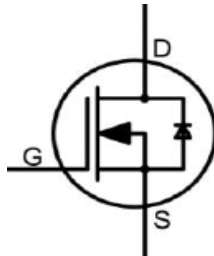


## N-Channel MOSFET

### DMZ6005E (KMZ6005E)

#### ■ Features

- $V_{DS} (V) = 600V$
- $I_D = 20mA$
- $R_{DS(ON)} < 700m\Omega$  ( $V_{GS} = 0V$ )
- Fast Switching Speed
- RoHS Compliant
- Halogen-free available



#### ■ Absolute Maximum Ratings $T_a = 25^\circ C$

| Parameter                               | Symbol     | Rating     | Unit         |
|---|------------|------------|--------------|
| Drain-Source Voltage                    | $V_{DS}$   | 600        | V            |
| Drain-Gate Voltage[                     | $V_{DG}$   | 600        |              |
| Gate-Source Voltage                     | $V_{GS}$   | $\pm 20$   |              |
| Continuous Drain Current                | $I_D$      | 20         | mA           |
| Pulsed Drain Current                    | $I_{DM}$   | 80         |              |
| Power Dissipation                       | $P_D$      | 500        | mW           |
| Thermal Resistance.Junction- to-Ambient | $R_{thJA}$ | 250        | $^\circ C/W$ |
| Soldering Temperature                   | $T_L$      | 300        | $^\circ C$   |
| Junction Temperature                    | $T_J$      | 150        |              |
| Storage Temperature Range               | $T_{stg}$  | -55 to 150 |              |

## N-Channel MOSFET

### DMZ6005E (KMZ6005E)

■ Electrical Characteristics Ta = 25°C

| Parameter                         | Symbol               | Test Conditions  | Min | Typ  | Max  | Unit |
|-----------------------------------|----------------------|--|-----|------|------|------|
| Drain-Source Breakdown Voltage    | V <sub>DSS</sub>     | I <sub>D</sub> =250 μA, V <sub>GS</sub> =-5V   | 600 |      |      | V    |
| Saturated Drain-to-Source Current | I <sub>DSS</sub>     | V <sub>GS</sub> =0V, V <sub>DS</sub> =25V  | 5   |      | 25   | mA   |
| Drain-to-Source Leakage Current   | I <sub>D(OFF)</sub>  | V <sub>DS</sub> =600V, V <sub>GS</sub> =-5V  |     |      | 0.1  | μA   |
|                                   |                      | V <sub>DS</sub> =600V, V <sub>GS</sub> =-5V, T <sub>J</sub> = 125°C                          |     |      | 10   |      |
| Gate-Body Leakage Current         | I <sub>GSS</sub>     | V <sub>DS</sub> =0V, V <sub>GS</sub> =±20V   |     |      | ±20  |      |
| Gate-to-Source Cut-off Voltage    | V <sub>GS(OFF)</sub> | V <sub>DS</sub> =3V, I <sub>D</sub> =8 μA  | -3  |      | -1.8 | V    |
| Static Drain-Source On-Resistance | R <sub>DS(on)</sub>  | V <sub>GS</sub> =0V, I <sub>D</sub> =3mA   |     |      | 700  | Ω    |
| Forward Transconductance          | g <sub>FS</sub>      | V <sub>DS</sub> =10V, I <sub>D</sub> =5mA  |     | 15.4 |      | mS   |
| Input Capacitance                 | C <sub>iss</sub>     | V <sub>GS</sub> =-5V, V <sub>DS</sub> =25V, f=1MHz   |     | 12.3 |      | pF   |
| Output Capacitance                | C <sub>oss</sub>     |  |     | 2.6  |      |      |
| Reverse Transfer Capacitance      | C <sub>rss</sub>     |  |     | 1.8  |      |      |
| Total Gate Charge                 | Q <sub>g</sub>       | V <sub>GS</sub> =-5~5V, V <sub>DS</sub> =300V, I <sub>D</sub> =7mA                           |     | 1.55 |      | nC   |
| Gate Source Charge                | Q <sub>gs</sub>      |  |     | 0.12 |      |      |
| Gate Drain Charge                 | Q <sub>gd</sub>      |  |     | 0.56 |      |      |
| Turn-On DelayTime                 | t <sub>d(on)</sub>   | V <sub>GS</sub> = -5V~5V<br>V <sub>DD</sub> = 300V, I <sub>D</sub> =7mA R <sub>G</sub> = 20Ω |     | 4    |      | ns   |
| Turn-On Rise Time                 | t <sub>r</sub>       |  |     | 9    |      |      |
| Turn-Off DelayTime                | t <sub>d(off)</sub>  |  |     | 14   |      |      |
| Turn-Off Fall Time                | t <sub>f</sub>       |  |     | 84   |      |      |
| Diode Forward Voltage             | V <sub>SD</sub>      | I <sub>S</sub> =3mA, V <sub>GS</sub> =-10V   |     |      | 1.2  | V    |

Note.: Pulse width≤380μs; duty cycles≤2%.

■ Marking

|         |      |
|---------|------|
| Marking | 605E |
|---------|------|

## N-Channel MOSFET DMZ6005E (KMZ6005E)

■ Typical Characteristics

