

# GSM1362TF

## Preliminary Specification

### 100V N-Channel MOSFET

#### Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)

| Symbol           | Parameter                              |                       | Value       | Unit |
|------------------|----------------------------------------|-----------------------|-------------|------|
| V <sub>DS</sub>  | Drain-Source Voltage                   |                       | 100         | V    |
| V <sub>GS</sub>  | Gate-Source Voltage                    |                       | ±20         | V    |
| I <sub>D</sub>   | Continuous Drain Current               | T <sub>C</sub> =25°C  | 105         | A    |
|                  |                                        | T <sub>C</sub> =100°C | 66          |      |
| I <sub>DM</sub>  | Pulsed Drain Current <sup>1</sup>      |                       | 320         | A    |
| P <sub>D</sub>   | Power Dissipation                      | T <sub>C</sub> =25°C  | 156         | W    |
|                  |                                        | T <sub>C</sub> =100°C | 62          |      |
| R <sub>θJC</sub> | Thermal Resistance-Junction to Case    |                       | 0.8         | °C/W |
| R <sub>θJA</sub> | Thermal Resistance-Junction to Ambient |                       | 62          | °C/W |
| T <sub>J</sub>   | Operating Junction Temperature Range   |                       | -55 to +150 | °C   |
| T <sub>STG</sub> | Storage Temperature Range              |                       | -55 to +150 | °C   |

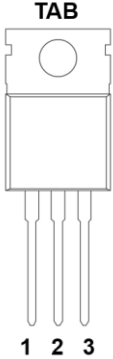
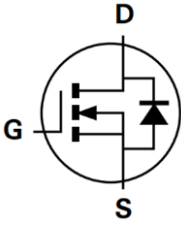
#### NOTE :

1. Pulse width limited by maximum junction temperature.

#### Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

| Symbol               | Parameter                      | Conditions                                               | Min | Typ | Max  | Unit |
|----------------------|--------------------------------|----------------------------------------------------------|-----|-----|------|------|
| Static               |                                |                                                          |     |     |      |      |
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage | V <sub>GS</sub> =0V, I <sub>D</sub> =250uA               | 100 |     |      | V    |
| I <sub>DSS</sub>     | Drain-Source Leakage Current   | V <sub>DS</sub> =100V, V <sub>GS</sub> =0V               |     |     | 1    | uA   |
| I <sub>GSS</sub>     | Gate-Source Leakage Current    | V <sub>DS</sub> =0V, V <sub>GS</sub> =±20V               |     |     | ±100 | nA   |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage         | V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250uA | 1.2 |     | 2.5  | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance     | V <sub>GS</sub> =10V, I <sub>D</sub> =15A                |     | 5.8 | 6.4  | mΩ   |
|                      |                                | V <sub>GS</sub> =4.5V, I <sub>D</sub> =10A               |     | 8.2 | 9    |      |
| V <sub>SD</sub>      | Diode Forward Voltage          | V <sub>GS</sub> =0V, I <sub>S</sub> =1A                  |     |     | 1.0  | V    |

# Packages & Pin Assignments

| TO-220-3L                                                                         |        |             | Equivalent Circuit                                                                  |        |             |
|-----------------------------------------------------------------------------------|--------|-------------|-------------------------------------------------------------------------------------|--------|-------------|
|  |        |             |  |        |             |
| Pin                                                                               | Symbol | Description | Pin                                                                                 | Symbol | Description |
| 1                                                                                 | G      | Gate        | 2                                                                                   | D      | Drain       |
| 3                                                                                 | S      | Source      | TAB                                                                                 | D      | Drain       |

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