

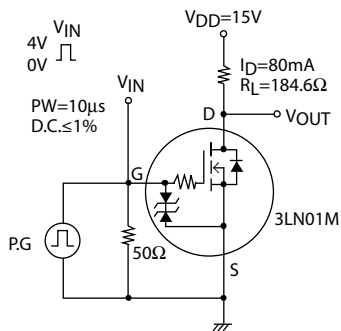
## 3LN01M

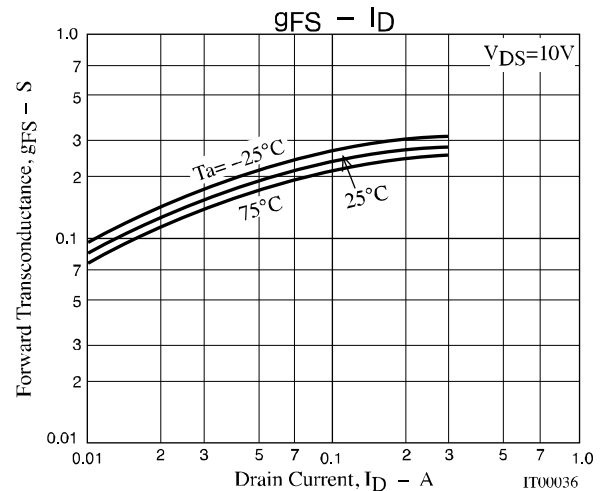
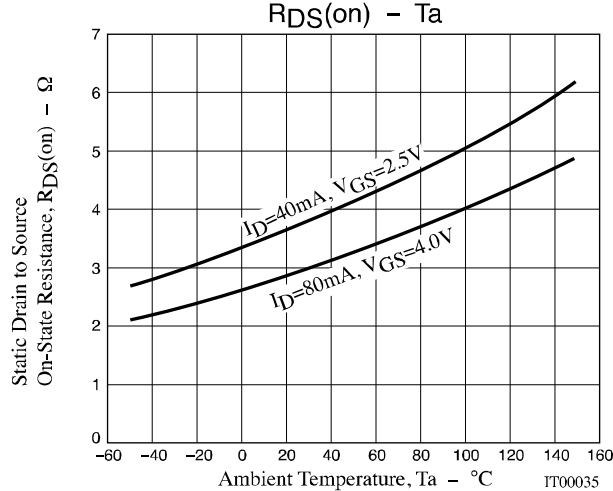
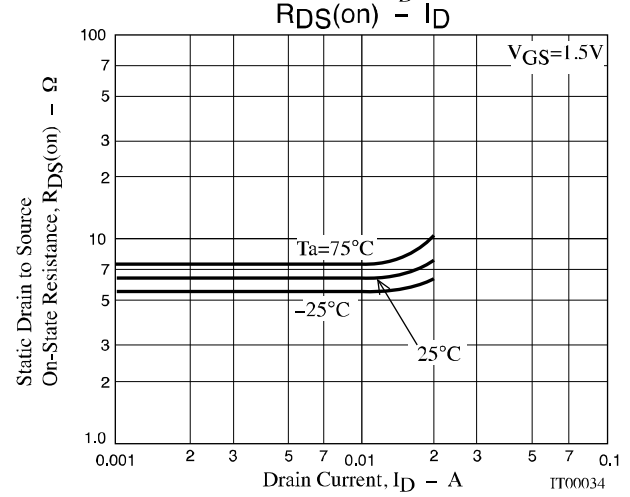
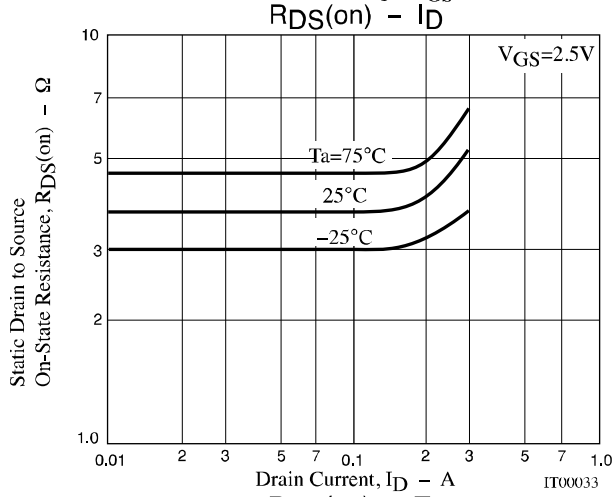
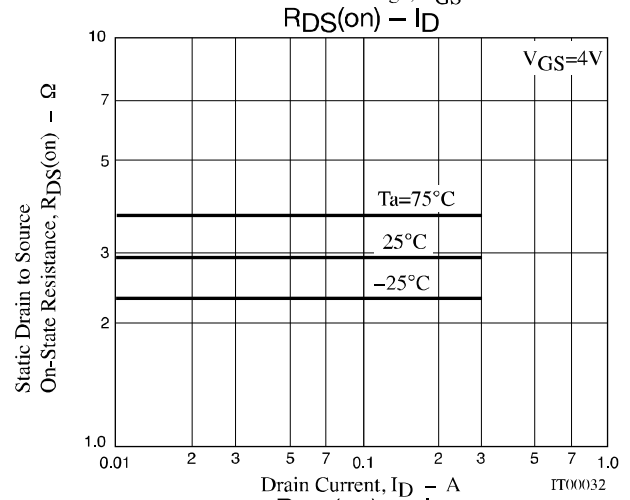
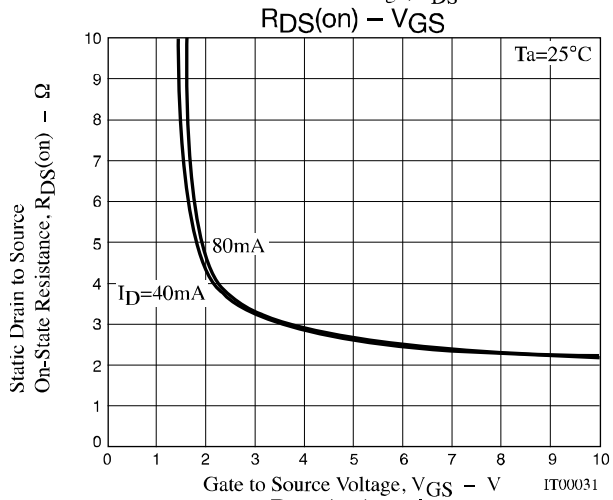
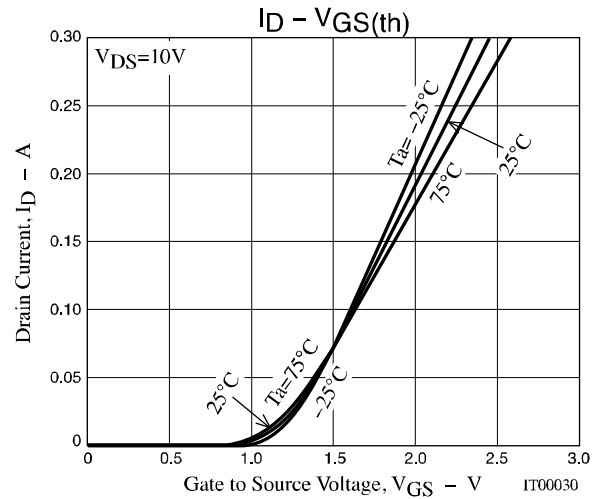
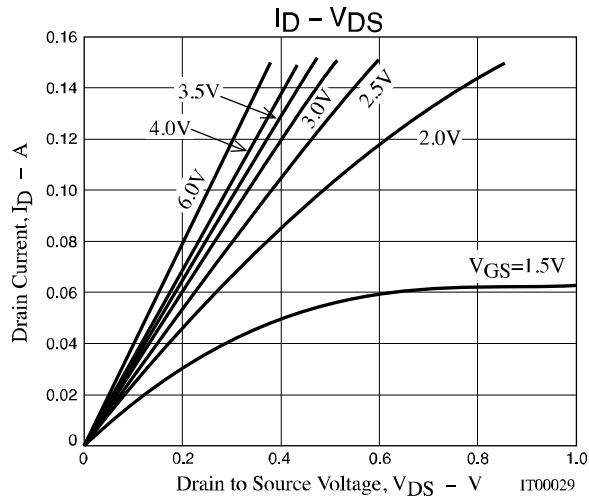
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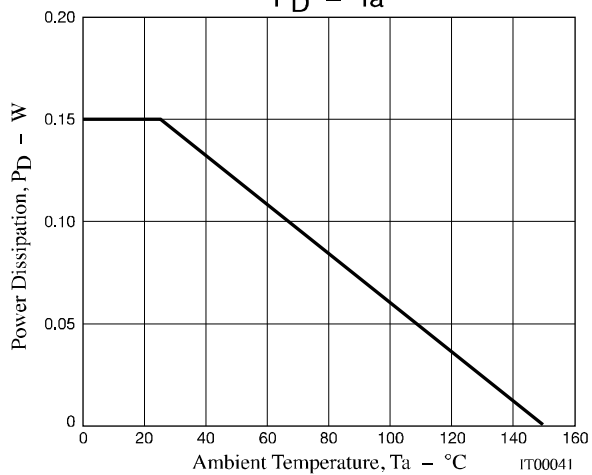
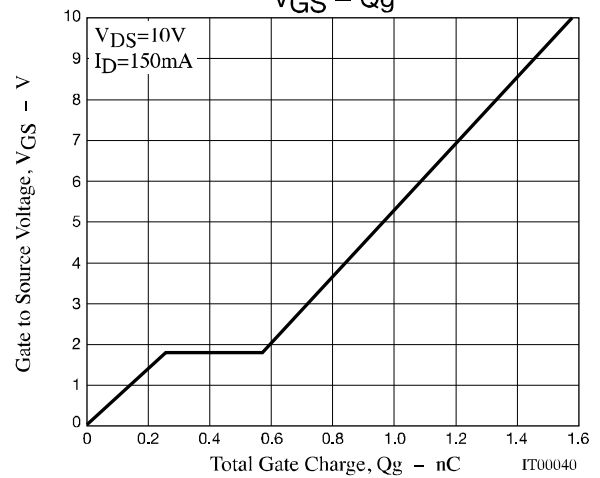
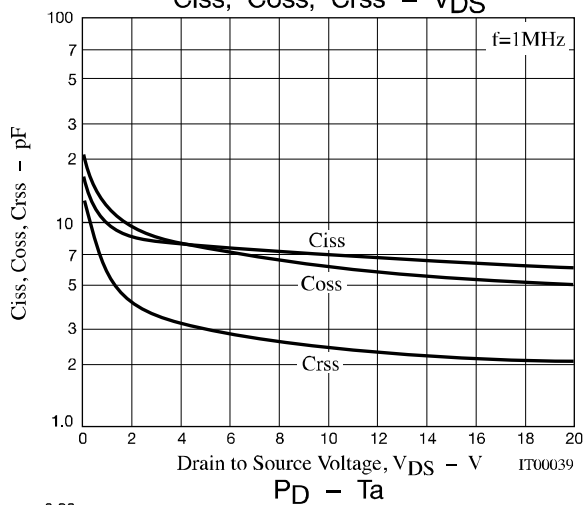
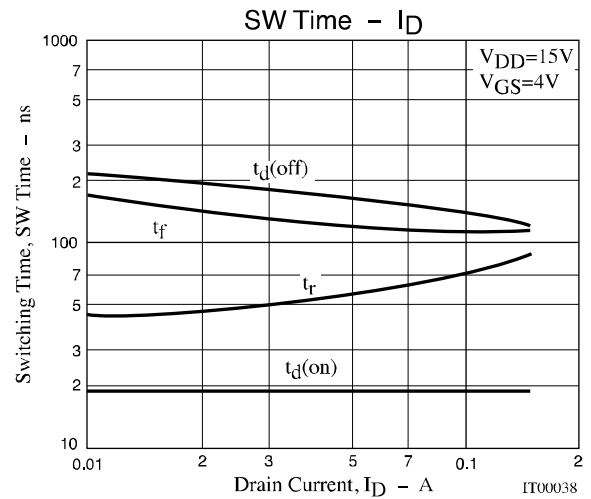
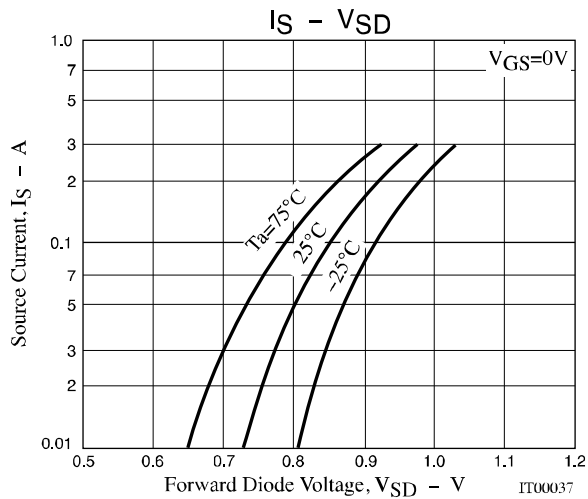
| Parameter                                  | Symbol        | Conditions   | Value |      |      | Unit     |
|--|---------------|--|-------|------|------|----------|
|  |               |  | min   | typ  | max  |          |
| Static Drain to Source On-State Resistance | $R_{DS(on)1}$ | $I_D=80\text{mA}$ , $V_{GS}=4\text{V}$                         |       | 2.9  | 3.7  | $\Omega$ |
|  | $R_{DS(on)2}$ | $I_D=40\text{mA}$ , $V_{GS}=2.5\text{V}$                       |       | 3.7  | 5.2  | $\Omega$ |
|  | $R_{DS(on)3}$ | $I_D=10\text{mA}$ , $V_{GS}=1.5\text{V}$                       |       | 6.4  | 12.8 | $\Omega$ |
| Input Capacitance                          | $C_{iss}$     | $V_{DS}=10\text{V}$ , $f=1\text{MHz}$                          |       | 7.0  |      | pF       |
| Output Capacitance                         | $C_{oss}$     |  |       | 5.9  |      | pF       |
| Reverse Transfer Capacitance               | $C_{rss}$     |  |       | 2.3  |      | pF       |
| Turn-ON Delay Time                         | $t_d(on)$     | See specified Test Circuit                                     |       | 19   |      | ns       |
| Rise Time                                  | $t_r$         |  |       | 65   |      | ns       |
| Turn-OFF Delay Time                        | $t_d(off)$    |  |       | 155  |      | ns       |
| Fall Time                                  | $t_f$         |  |       | 120  |      | ns       |
| Total Gate Charge                          | $Q_g$         | $V_{DS}=10\text{V}$ , $V_{GS}=10\text{V}$ , $I_D=150\text{mA}$ |       | 1.58 |      | nC       |
| Gate to Source Charge                      | $Q_{gs}$      |  |       | 0.26 |      | nC       |
| Gate to Drain "Miller" Charge              | $Q_{gd}$      |  |       | 0.31 |      | nC       |
| Forward Diode Voltage                      | $V_{SD}$      | $I_S=150\text{mA}$ , $V_{GS}=0\text{V}$                        |       | 0.87 | 1.2  | V        |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

### Switching Time Test Circuit







# 3LN01M

## Package Dimensions

3LN01M-TL-E/ 3LN01M-TL-H

### SC-70/MCP3

CASE 419AJ

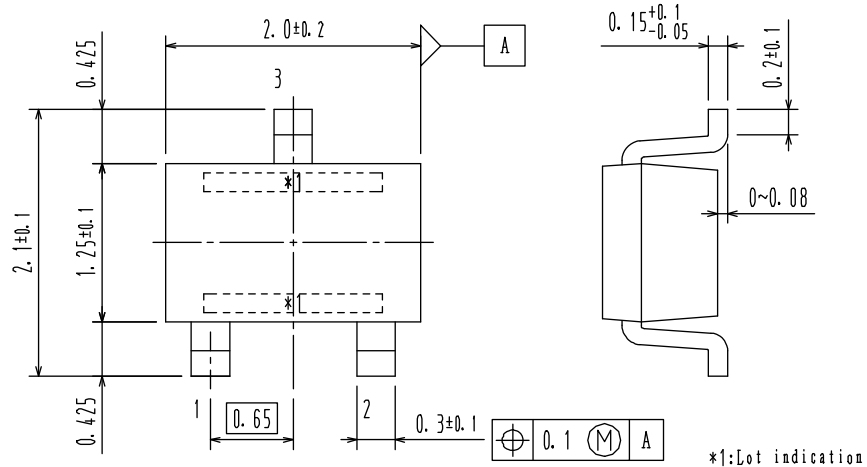
ISSUE O

Unit : mm

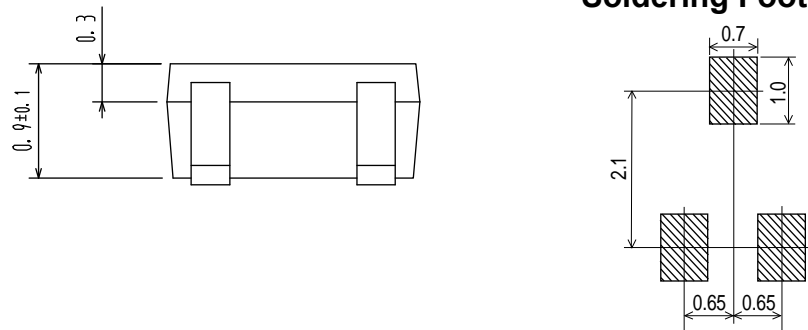
1 : Gate

2 : Source

3 : Drain



## Recommended Soldering Footprint



## ORDERING INFORMATION

| Device      | Package               | Shipping          | Note                        |
|-------------|-----------------------|-------------------|-----------------------------|
| 3LN01M-TL-E | MCP3<br>SC-70,SOT-323 | 3,000 pcs. / reel | Pb-Free                     |
| 3LN01M-TL-H |                       |                   | Pb-Free<br>and Halogen Free |

Note on usage : Since the 3LN01M is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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