

A wide range of contact forms and functions  
Over 180 different models available

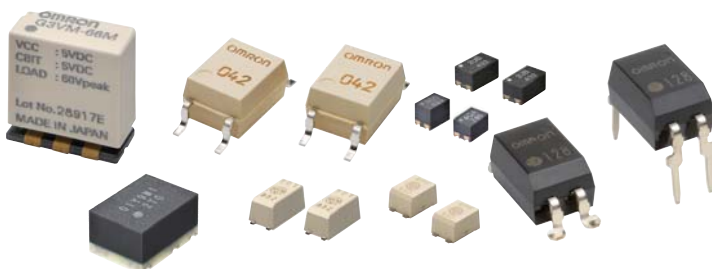
# G3VM MOSFET RELAYS

## *SELECTION GUIDE*

### What's NEW!

## MOS FET Relay Module is now available

Very small packages (VSON(R), S-VSON(L)) are now available



# G3VM

MOS FET Relays

MOS FET Relay Modules

# MOS FET Relay Module SPDT contact form type line up

## The new value of MOS FET Relays now available

MOS FET Relay Modules are new products which bring SPDT contact structure, while still keeping long endurance and high reliability. These modules are suitable for many applications that use SPDT mechanical relays in place of reed relays, as they eliminate endurance concerns.

### MOS FET Relay Module SPDT contact form type



**NEW**

#### G3VM-26M10 (Low $C_{OFF}$ )

Suitable for high-frequency switching ( $\leq 300\text{MHz}$ )

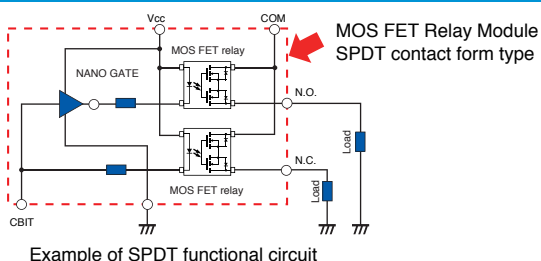
#### G3VM-26M11 (Low $R_{ON}$ )

Suitable for high-current switching ( $\leq 1\text{A}$ )

#### G3VM-66M (Diversified)

Can be used for various purposes due to 60V 0.4A rating

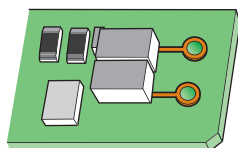
### Feature 1 Easily achieve SPDT contact structure on your board



### Complex wiring/components choices not needed

Whole complex circuit in module  
SPDT module contributes to efficiency of board design.

### Feature 2 Saves mounting area due to vertical structure



If making them on board ... 250 mm<sup>2</sup> \*



Mounting Space ... 56 mm<sup>2</sup>

Compared with making them on board

**78%\* area saving**

Contributes to space efficiency and better performance for your equipment.

\* By our own research

### Feature 3 Contributes to long life

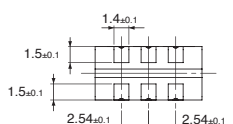
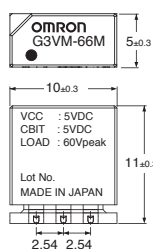
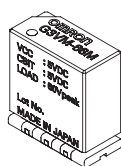
Wear failure will no happen due to switching, because no physical contacts exist inside.

## Product family of SPDT Modules

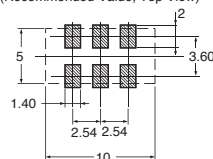
| SPDT Modules          |            |                     |              |                                   |                                              |                                                  |                                         |                        |                         |                         |                                        |
|-----------------------|------------|---------------------|--------------|-----------------------------------|----------------------------------------------|--------------------------------------------------|-----------------------------------------|------------------------|-------------------------|-------------------------|----------------------------------------|
| Load Voltage (V) Max. | Model      | Number of terminals | Contact form | Continuous load current (mA) Max. | Maximum resistance with output ON (Ohm) Typ. | Current leakage when the relay is open (nA) Max. | Capacitance between terminals (pF) Typ. | Turn-ON time (ms) Max. | Turn-OFF time (ms) Max. | Rated input voltage (V) | Dielectric strength between I/O (Vrms) |
| 20                    | G3VM-26M10 | 6                   | SPDT         | 200                               | 4.4                                          | 2                                                | 1                                       | 0.3                    | 0.3                     | 5                       | 500                                    |
| 20                    | G3VM-26M11 | 6                   | SPDT         | 1000                              | 0.21                                         | 2                                                | 40                                      | 2.5                    | 1.5                     | 5                       | 500                                    |
| 60                    | G3VM-66M   | 6                   | SPDT         | 400                               | 1                                            | 2                                                | 20                                      | 1                      | 1                       | 5                       | 500                                    |

## Dimensions

Surface-mounting Terminals  
weight : 1 g



Actual Mounting Pad Dimensions  
(Recommended Value, Top View)



# MOS FET Relay Module T switch function type line up

The world's first \* very low leakage current MOS FET Relay modules by "T-structure inside".

These modules achieve very low leakage current which contribute high accuracy measurement of testing equipment for semiconductors and so on. It's the world's first\* "T structure circuit installed" module with a combined 3 MOS FET relays.

\*As of 2019, April.

## MOS FET Relay Module T switch function type



**NEW**

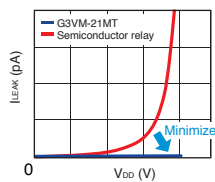
### G3VM-21MT (Low CxR)

Suitable for High frequency ( $\leq 1.5\text{GHz}$ ) and low signal

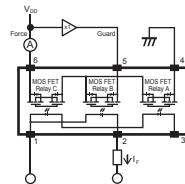
\* Developing other line up now

## Feature 1 Achieves extremely low leakage current

Current leakage  $I_{\text{LEAK}}$  vs Applied voltage  $V_{\text{DD}}$



Example of G3VM-21MT measuring circuit



**Leakage current  $\leq 1\text{pA}$**

Actual performance is lower than  $0.1\text{pA}$  for lowest suppressing effect for accuracy of measurement equipment.

This is suitable for as an alternative from Reed relays.

## Feature 2 Contributes to mounting area saving due to a very small package

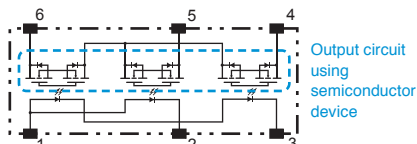


**Very small outline**

**5 mm  $\times$  3.75 mm  $\times$  2.7 mm**

Achieves very small size even though it's equipped with complex circuits. Contributes to high density mounting on the board.

## Feature 3 Significant reduction for maintenance cycles



No physical contact;  
prevents contact failure  
from wear



**Very long life**

Output circuit is structured by MOS FET relay, which is a semiconductor with no physical contact. Therefore, there is no wear failure due to no switching of arc.

## T Module Structure Product Line Up

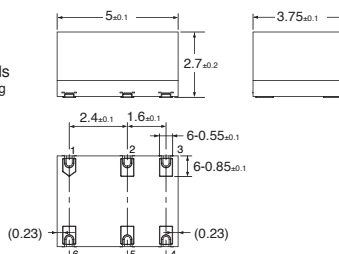
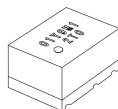
T structure Modules

| Load Voltage (V) Max. | Model                | Number of terminals | Contact form | Continuous load current (mA) Max. | Maximum resistance with output ON (Ohm) Typ. | Current leakage when the relay is open (pA) Max. | Capacitance between terminals (pF) Typ. | Turn-ON time (ms) Max. | Turn-OFF time (ms) Max. | Dielectric strength between I/O (Vrms) |
|-----------------------|----------------------|---------------------|--------------|-----------------------------------|----------------------------------------------|--------------------------------------------------|-----------------------------------------|------------------------|-------------------------|----------------------------------------|
| 20                    | G3VM-21MT <b>NEW</b> | 6                   | 1a*          | 200                               | 8                                            | 1                                                | 0.6                                     | 0.3                    | 0.3                     | 500                                    |

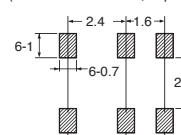
\* Please see Operation mode on datasheet for detail

## Dimensions

Surface-mounting Terminals  
weight : 0.11 g



Actual Mounting Pad Dimensions  
(Recommended Value, Top View)



## MOS FET Relay Modules model number legend

G3VM-□□□□□

### ① Load voltage

2: 20 V 5: 50 V 8: 80 V 35: 350 V  
3: 30 V 6: 60 V 10: 100 V 40: 400 V  
4: 40 V 7: 75 V 20: 200 V 60: 600 V

### ② Contact form

1: 1a(SPST-NO)\*  
6: SPDT \*

### ③ Structure

M: MOS FET Relay Modules

### ④ Additional functions

None: Normal  
T: T switch function

### ⑤ Other information

When specifications overlap, serial code is added in the recorded order.

\* For more detail please see datasheet

## About MOS FET relays

OMRON's MOS FET Relays lead the industry in optical semiconductor technology, utilizing an input LED, Photodiode Dome Array (PDA) used as photocoupler and MOS FET chip in the load switching current.

In addition to being maintenance free, the MOS FET relay features high-speed operation and compact size, further promoting the replacement of mechanical relays.

Omron is expanding its wide range of products, from the industry's smallest class\* new package (S-VSON/VSON) to our high current, high dielectric strength, and high sensitivity models.

\*As of March, 2018.

## Advantages of MOS FET relays

### Ultra small size and weight

In addition to small size and weight the ultra-compact VSON and S-VSON packages, contributing to downsizing of equipment.

### Low drive currents

Realizing energy saving with standard driving current of 2-15mA. Ultrasensitive models are also available featuring Drive Currents as low as 0.2mA (max).

### Long operating life

MOS FET Relays use light signal instead of moveable contacts, avoiding reduction of life caused by contact wear, substantially increasing operational life.

### Small leakage current

Can withstand external surge current without addition of snubber circuit. Under normal conditions, the typical leakage current is about 1 nA or below.

### Excellent shock resistance

All the internal parts use casting method, and there are no movable parts in it, so it has excellent shock and vibration resistance.

### High insulation

MOS FET relays offer great I/O isolation due to their operational principles. They turn the voltage into light and transfer by light signal, therefore input and output are isolated. The standard models offer 2,500 Vrms between input and output. Superior 5,000 VAC products are also available. 3,750 VAC products have also been added to the SOP package series.

### Silent operation

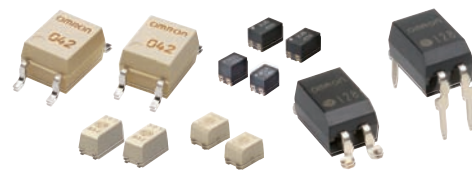
As MOS FET Relays do not have mechanical contacts, by using a MOS FET instead of an electromechanical relay, it is possible to eliminate switching noise in your applications.

### High-speed switching

Comparing with the switching time of 3 to 5 ms of a mechanical relay, its switching time is shortened to 0.2 ms(SSOP, USOP, VSON). It achieves quick response performance.

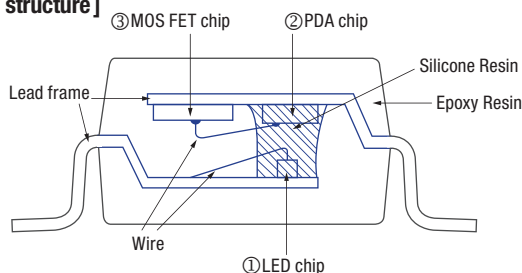
### Control the micro analog signal correctly

Comparing with the triac, MOS FET greatly reduces the dead zone. The input waveform of micro analog signal does not suffer distortion as it does with a triac and is basically converted into output waveform without distortion.



## Structure and operational principle of MOS FET relays

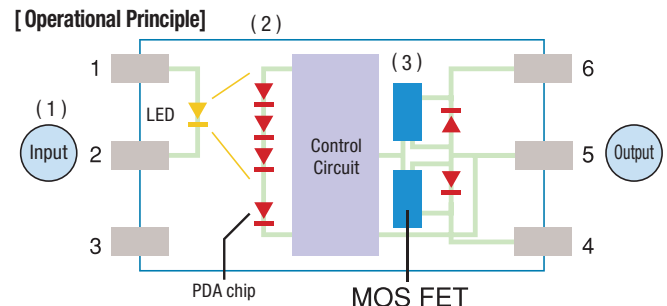
### [ Internal structure ]



MOS FET relay consists of the following three components:

- ① LED (light emitting diode)
- ② Photodiode dome array (PDA)
- ③ MOS FET

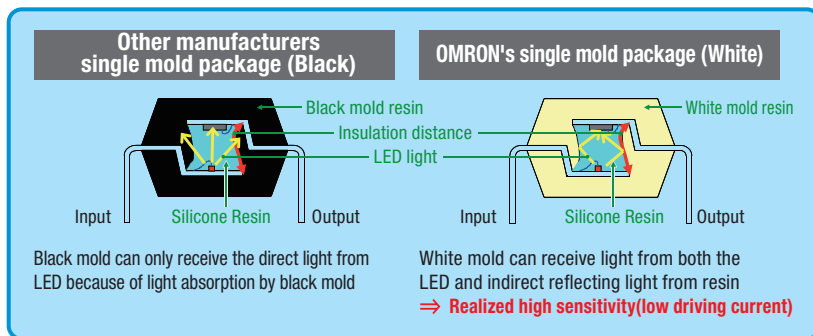
### [ Operational Principle ]



- ( 1 ) The LED lights up when the current is connected at the input side.
- ( 2 ) The light sent by the LED will be converted into voltage when it is received by the photodiode.
- ( 3 ) This voltage will be the gate voltage to drive the MOS FET via control circuit.

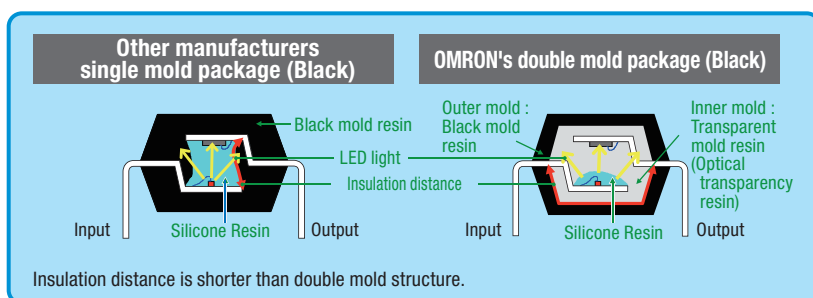
# Features of OMRON's MOS FET Relays

## Feature 1 Achieves high sensitivity (low driving current) with white mold resin package!



Many models of OMRON's MOS FET Relays are made with white mold resin in order to achieve high sensitivity.

## Feature 2 High dielectric strength is achieved with the black package!



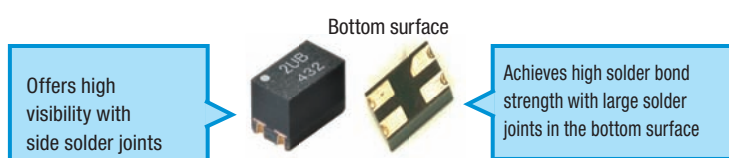
High Dielectric Strength types adopted a black package (black mold resin). And High Dielectric Strength was achieved by the double mold structure. Black package models have been added to the DIP and SOP series.  
DIP: 5,000 VAC, SOP: 3,750 VAC

## Feature 3 Good solderability with small package!

● SSOP/USOP Package    . . .    Lead type



● VSON/S-VSON Package    . . .    Non-lead type



# 3 Selection Tips

Tip  
1

### Take note of voltage and current values

Load voltage and continuous load current values are the maximum values. Take particular note in the case of AC load.

$$\text{Effective value} \times \sqrt{2} = \text{maximum value}$$

Ex. Commercial power 100 VAC (effective value) → select from maximum value of 141 V or above

Tip  
2

### Load with inrush current

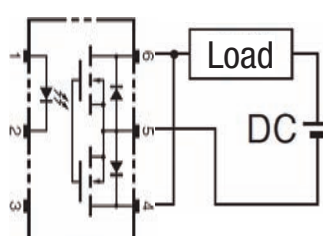
Guide for inrush current:  
up to 3x the continuous load current (100 ms)  
(Listed in the catalog as "Pulse ON current")

Tip  
3

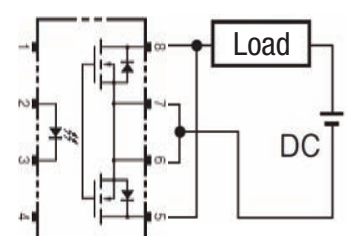
### Double the current volume with connection C (DC load only)

Types compatible with connection C (parallel connection of two MOS FET elements) offer switching with double the continuous load current.

DIP/SOP 6-pin package

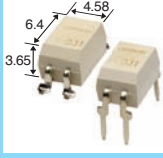
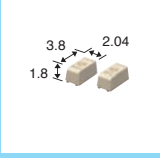
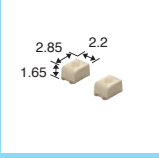
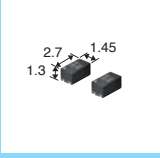
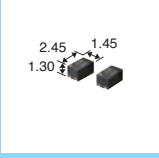
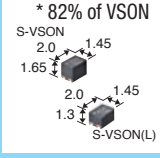


DIP 8-pin package (for □CR□/□FR□ types only)



# MOS FET Relay Lineup

## Package of MOS FET Relays

| DIP                                                                              | SOP                                                                               | SSOP                                                                              | USOP                                                                              | VSON(R)                                                                            | VSON                                                                                | S-VSON                                                                              |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Bottom surface<br>100%                                                           | Bottom surface<br>59%                                                             | Bottom surface<br>26%                                                             | Bottom surface<br>21%                                                             | Bottom surface<br>12%                                                              | Bottom surface<br>12%                                                               | Bottom surface<br>12%                                                               |
|  |  |  |  |  |  |  |

### General Purpose Type



Best-selling products suitable for various applications.  
Ideal for AC/DC load, Micro analog signal.

| Package | Model                               | Contact form | Load voltage (V) Max. | Continuous load current (mA) Max. | Dielectric strength between I/O (Vrms) |
|---------|-------------------------------------|--------------|-----------------------|-----------------------------------|----------------------------------------|
| DIP     | G3VM-61A1/D1                        | 1a           | 60                    | 500                               | 2500                                   |
|         | G3VM-61B1/E1                        | 1a           | 60                    | 500 (1000) <sup>*1</sup>          | 2500                                   |
|         | G3VM-62C1/F1                        | 2a           | 60                    | 500                               | 2500                                   |
|         | G3VM-351A/D                         | 1a           | 350                   | 120                               | 2500                                   |
|         | G3VM-352C/F                         | 2a           | 350                   | 120                               | 2500                                   |
| SOP     | G3VM-61VY2 <sup>*2</sup>            | 1a           | 60                    | 500                               | 3750                                   |
|         | G3VM-61VY3 <sup>*2</sup> <b>NEW</b> | 1a           | 60                    | 700                               | 3750                                   |
|         | G3VM-63G                            | 1b           | 60                    | 500                               | 1500                                   |
|         | G3VM-61H1                           | 1a           | 60                    | 400 (800) <sup>*1</sup>           | 1500                                   |
|         | G3VM-62J1                           | 2a           | 60                    | 400                               | 1500                                   |
|         | G3VM-81G1                           | 1a           | 80                    | 350                               | 1500                                   |
|         | G3VM-351VY <sup>*2</sup>            | 1a           | 350                   | 110                               | 3750                                   |
|         | G3VM-353G                           | 1b           | 350                   | 120                               | 1500                                   |
|         | G3VM-351H                           | 1a           | 350                   | 110 (220) <sup>*1</sup>           | 1500                                   |
|         | G3VM-352J                           | 2a           | 350                   | 110                               | 1500                                   |
|         | G3VM-401G                           | 1a           | 400                   | 120                               | 1500                                   |

\*1. Load current in case of connection C is shown in parentheses (DC load only)

\*2. VY2 and VY3 types: Special SOP4 pin package

### High Current & Low On-resistance Type



Offers High Current & Low On-resistance in the same level as the mechanical relay.

| Package | Model                              | Load voltage (V) Max. | Continuous load current (A) Max. | Maximum resistance with output ON(Ω) Typ. |
|---------|------------------------------------|-----------------------|----------------------------------|-------------------------------------------|
| DIP     | G3VM-31AR/DR <b>NEW</b>            | 30                    | 4                                | 0.025                                     |
|         | G3VM-31BR/ER <b>NEW</b>            | 30                    | 5 (10) <sup>*1</sup>             | 0.02 (0.005) <sup>*1</sup>                |
|         | G3VM-61AR1/DR1 <b>NEW</b>          | 60                    | 3                                | 0.045                                     |
|         | G3VM-61BR2/ER2 <b>NEW</b>          | 60                    | 4 (8) <sup>*1</sup>              | 0.035 (0.013) <sup>*1</sup>               |
|         | G3VM-101AR1/DR1 <b>NEW</b>         | 100                   | 2                                | 0.11                                      |
|         | G3VM-101BR1/ER1 <b>NEW</b>         | 100                   | 3.5 (7) <sup>*1</sup>            | 0.05 (0.012) <sup>*1</sup>                |
|         | G3VM-201AR/DR <b>NEW</b>           | 200                   | 0.7                              | 0.09                                      |
| SOP     | G3VM-31HR1 <b>NEW</b>              | 30                    | 4.5 (9) <sup>*1</sup>            | 0.022 (0.006) <sup>*1</sup>               |
|         | G3VM-61VR <sup>*2</sup> <b>NEW</b> | 60                    | 1.4                              | 0.13                                      |
|         | G3VM-61GR2                         | 60                    | 1.7                              | 0.08                                      |
|         | G3VM-61HR2 <b>NEW</b>              | 60                    | 4 (8) <sup>*1</sup>              | 0.028 (0.04) <sup>*1</sup>                |
|         | G3VM-101HR2 <b>NEW</b>             | 100                   | 3 (6) <sup>*1</sup>              | 0.05 (0.013) <sup>*1</sup>                |
| S-VSON  | G3VM-31QR <b>NEW</b>               | 30                    | 1.5                              | 0.1                                       |
|         | G3VM-61QR2 <b>NEW</b>              | 60                    | 1                                | 0.2                                       |
|         | G3VM-101QR1 <b>NEW</b>             | 100                   | 0.65                             | 0.4                                       |

\*1. Load current in case of connection C is shown in parentheses (DC load only)

\*2. 61VR type: Special SOP4 pin package

# MOS FET Relay Lineup

## Ultrasensitive Type



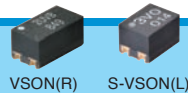
Ideal for energy saving, various battery-driven devices.  
Ultrasensitive Driving current\* 0.2 mA (Max.)  
with SOP4 available.

\*Driving current = LED forward current

■ SOP package

| Model      | Load voltage (V) Max. | Continuous load current (mA) Max. | Trigger LED forward current (mA) Max. | Recommended Trigger LED forward current (mA) Max. |
|------------|-----------------------|-----------------------------------|---------------------------------------|---------------------------------------------------|
| G3VM-61G2  | 60                    | 400                               | 1                                     | 2                                                 |
| G3VM-61G3  | 60                    | 400                               | 0.2                                   | 0.5                                               |
| G3VM-201G1 | 200                   | 200                               | 1                                     | 2                                                 |
| G3VM-201G2 | 200                   | 200                               | 0.2                                   | 0.5                                               |
| G3VM-351G1 | 350                   | 100                               | 1                                     | 2                                                 |
| G3VM-401G1 | 400                   | 100                               | 0.2                                   | 0.5                                               |
| G3VM-601G1 | 600                   | 70                                | 0.2                                   | 0.5                                               |
| G3VM-601G  | 600                   | 90                                | 1                                     | 2                                                 |

## Voltage Driven Type



Can be used by voltage control due to LED current limiting register inside.  
Contribute simply surrounding circuit and reducing part number on board.

■ VSON (R) package

| Model                  | Load voltage (V) Max. | Continuous load current (A) Max. | Capacitance between terminals (pF) Typ. | Recommended Operating voltage (V) Typ. |
|------------------------|-----------------------|----------------------------------|-----------------------------------------|----------------------------------------|
| G3VM-21UV11 <b>NEW</b> | 20                    | 1                                | 40                                      | 5                                      |
| G3VM-51UV <b>NEW</b>   | 50                    | 0.3                              | 12                                      | 5                                      |
| G3VM-61UV <b>NEW</b>   | 60                    | 0.4                              | 20                                      | 5                                      |

■ S-VSON (L) package

| Model                  | Load voltage (V) Max. | Continuous load current (A) Max. | Capacitance between terminals (pF) Typ. | Recommended Operating voltage (V) Typ. |
|------------------------|-----------------------|----------------------------------|-----------------------------------------|----------------------------------------|
| G3VM-31QVH <b>NEW</b>  | 30                    | 1.5                              | 120                                     | 5                                      |
| G3VM-31QVL <b>NEW</b>  | 30                    | 1.5                              | 120                                     | 2.5                                    |
| G3VM-61QV2H <b>NEW</b> | 60                    | 1                                | 80                                      | 5                                      |
| G3VM-61QV2L <b>NEW</b> | 60                    | 1                                | 80                                      | 2.5                                    |
| G3VM-61QVH <b>NEW</b>  | 60                    | 0.4                              | 20 Max.                                 | 5                                      |

## Low Output Capacitance and ON Resistance Type (Low CxR)

Ideal for semi-conductor test equipment.  
low C(capacitance between terminals)  
× R(output on-resistance) type.



■ USOP package

| Model       | Load voltage (V) Max. | Continuous load current (mA) Max. | Maximum resistance with output ON(Ω) Typ. | Capacitance between terminals (pF) Typ. |
|-------------|-----------------------|-----------------------------------|-------------------------------------------|-----------------------------------------|
| G3VM-21PR1  | 20                    | 450                               | 0.6                                       | 5                                       |
| G3VM-21PR10 | 20                    | 200                               | 3                                         | 0.8                                     |
| G3VM-21PR11 | 20                    | 900                               | 0.18                                      | 40                                      |
| G3VM-41PR12 | 40                    | 100                               | 15                                        | 0.3                                     |
| G3VM-41PR6  | 40                    | 120                               | 10                                        | 1                                       |
| G3VM-41PR10 | 40                    | 120                               | 12                                        | 0.45                                    |
| G3VM-41PR11 | 40                    | 140                               | 7                                         | 0.7                                     |
| G3VM-61PR1  | 60                    | 120                               | 10                                        | 0.7                                     |

■ VSON package

| Model       | Load voltage (V) Max. | Continuous load current (mA) Max. | Maximum resistance with output ON(Ω) Typ. | Capacitance between terminals (pF) Typ. |
|-------------|-----------------------|-----------------------------------|-------------------------------------------|-----------------------------------------|
| G3VM-21UR10 | 20                    | 200                               | 3                                         | 0.8                                     |
| G3VM-21UR1  | 20                    | 450                               | 0.8                                       | 5                                       |
| G3VM-21UR11 | 20                    | 1000                              | 0.18                                      | 40                                      |
| G3VM-41UR12 | 40                    | 100                               | 15                                        | 0.3                                     |
| G3VM-41UR10 | 40                    | 120                               | 12                                        | 0.45                                    |
| G3VM-41UR11 | 40                    | 140                               | 7                                         | 0.7                                     |
| G3VM-61UR1  | 60                    | 120                               | 10                                        | 0.7                                     |

■ S-VSON package

| Model                   | Load voltage (V) Max. | Continuous load current (mA) Max. | Maximum resistance with output ON(Ω) Typ. | Capacitance between terminals (pF) Typ. |
|-------------------------|-----------------------|-----------------------------------|-------------------------------------------|-----------------------------------------|
| G3VM-41QR10* <b>NEW</b> | 40                    | 120                               | 11                                        | 0.45                                    |
| G3VM-61QR <b>NEW</b>    | 60                    | 400                               | 1.1                                       | 12                                      |

\* 41QR10 type: S-VSON(L)package (Low profile type)

## G3VM Model Number Legend

G3VM-□□□□□□

| ① Load voltage                                                                                                                             | ② Contact form                                                                                    | ③ Package type                                                                                                                                                                                                                                                                                                                                            | ④ Additional functions                                                                                                          | ⑤ Other information                                                      | ⑥ Input control voltage                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 2: 20 V    8: 80 V<br>3: 30 V    10: 100 V<br>4: 40 V    20: 200 V<br>5: 50 V    35: 350 V<br>6: 60 V    40: 400 V<br>7: 75 V    60: 600 V | 1: 1a(SPST-NO)<br>2: 2a(DPST-NO)<br>3: 1b(SPST-NC)<br>4: 2b(DPST-NC)<br>5: 1a1b (SPST-NO/SPST-NC) | A: DIP 4pin PCB Terminals<br>B: DIP 6pin PCB Terminals<br>C: DIP 8pin PCB Terminals<br>D: DIP 4pin Surface-mounting Terminals<br>E: DIP 6pin Surface-mounting Terminals<br>F: DIP 8pin Surface-mounting Terminals<br>G: SOP 4pin<br>H: SOP 6pin<br>J: SOP 8pin<br>L: SSOP 4pin<br>P: USOP 4pin<br>Q: S-VSON 4pin<br>U: VSON 4pin<br>V: SOP 4pin (Special) | L: Current limit<br>R: Low ON-resistance type<br>Y: Dielectric strength between I/O above 2.5 kV type<br>V: Voltage driven type | When specifications overlap, serial code is added in the recorded order. | H: High input control voltage<br>L: Low input control voltage<br>*Only for voltage driven type |

Note 1 : Some products may have a different model number structure. - Note 2 : In order to avoid the confusion of I (English letter) and 1 (number), I (English letter) is not used here.  
Note 3 : For 4-pin SOP models, where the available marking space is insufficient to clearly differentiate model numbers with 6 or more suffix digits, the package type code ③ is omitted.

# Product lineup of MOS FET Relays

Please refer to our web site or datasheet for more information such as measurement conditions.

## DIP (Dual Inline Package)

| Load Voltage (V) Max. | Model           | Number of terminals | Contact form | Continuous load current (mA) Max. | Maximum resistance with output ON (Ω) Typ. | Current leakage when the relay is open (nA) Max. | Capacitance between terminals (pF) Typ. | Turn-ON time (ms) Max. | Turn-OFF time (ms) Max. | Dielectric strength between I/O (Vrms) |
|-----------------------|-----------------|---------------------|--------------|-----------------------------------|--------------------------------------------|--------------------------------------------------|-----------------------------------------|------------------------|-------------------------|----------------------------------------|
| 20                    | G3VM-21AR/DR    | 4                   | 1a           | 3000                              | 0.04                                       | 1000                                             | 300                                     | 5.0                    | 1.0                     | 2500                                   |
| 20                    | G3VM-21BR/ER    | 6                   | 1a           | 4000 (8000) <sup>*1</sup>         | 0.02                                       | 1000                                             | 1000                                    | 5.0                    | 1.0                     | 2500                                   |
| 30                    | G3VM-31AR/DR    | 4                   | 1a           | 4000                              | 0.025                                      | 1000                                             | 450                                     | 3.0                    | 1.0                     | 2500                                   |
| 30                    | G3VM-31BR/ER    | 6                   | 1a           | 5000 (8000) <sup>*1</sup>         | 0.02                                       | 1000                                             | 1100                                    | 5.0                    | 0.5                     | 2500                                   |
| 40                    | G3VM-41AY/DY    | 4                   | 1a           | 2000                              | 0.09                                       | 1000                                             | 300                                     | 5.0                    | 1.0                     | 5000                                   |
| 40                    | G3VM-41AY1/DY1  | 4                   | 1a           | 2000                              | 0.09                                       | 1000                                             | 300                                     | 5.0                    | 1.0                     | 5000                                   |
| 40                    | G3VM-41AR/DR    | 4                   | 1a           | 2500                              | 0.05                                       | 1000                                             | 300                                     | 5.0                    | 1.0                     | 2500                                   |
| 40                    | G3VM-41BR/ER    | 6                   | 1a           | 3500 (7000) <sup>*1</sup>         | 0.03                                       | 1000                                             | 1000                                    | 5.0                    | 1.0                     | 2500                                   |
| 60                    | G3VM-61A1/D1    | 4                   | 1a           | 500                               | 1                                          | 1000                                             | 130                                     | 2.0                    | 0.5                     | 2500                                   |
| 60                    | G3VM-61AY/DY    | 4                   | 1a           | 500                               | 0.6                                        | 1000                                             | 130                                     | 1.0                    | 1.0                     | 5000                                   |
| 60                    | G3VM-61AY1/DY1  | 4                   | 1a           | 500                               | 0.6                                        | 1000                                             | 130                                     | 3.0                    | 1.0                     | 5000                                   |
| 60                    | G3VM-61AR/DR    | 4                   | 1a           | 2000                              | 0.08                                       | 1000                                             | 250                                     | 5.0                    | 1.0                     | 2500                                   |
| 60                    | G3VM-61AR1/DR1  | 4                   | 1a           | 3000                              | 0.045                                      | 1000                                             | 250                                     | 2.0                    | 1.0                     | 2500                                   |
| 60                    | G3VM-61B1/E1    | 6                   | 1a           | 500 (1000) <sup>*1</sup>          | 1                                          | 1000                                             | 130                                     | 2.0                    | 0.5                     | 2500                                   |
| 60                    | G3VM-61BR/ER    | 6                   | 1a           | 2500                              | 0.065                                      | 10                                               | 400                                     | 1.5                    | 0.4                     | 2500                                   |
| 60                    | G3VM-61BR1/ER1  | 6                   | 1a           | 3000 (6000) <sup>*1</sup>         | 0.04                                       | 1000                                             | 1000                                    | 5.0                    | 1.0                     | 2500                                   |
| 60                    | G3VM-61BR2/ER2  | 6                   | 1a           | 4000 (8000) <sup>*1</sup>         | 0.035                                      | 1000                                             | 640                                     | 5.0                    | 0.5                     | 2500                                   |
| 60                    | G3VM-61CR1/FR1  | 8                   | 1a           | 5000(10000) <sup>*1</sup>         | 0.022                                      | 10000                                            | 850                                     | 5.0                    | 1.0                     | 2500                                   |
| 60                    | G3VM-62C1/F1    | 8                   | 2a           | 500                               | 1                                          | 1000                                             | 130                                     | 2.0                    | 0.5                     | 2500                                   |
| 100                   | G3VM-101AR/DR   | 4                   | 1a           | 1000                              | 0.25                                       | 1000                                             | 200                                     | 5.0                    | 1.0                     | 2500                                   |
| 100                   | G3VM-101AR1/DR1 | 4                   | 1a           | 2000                              | 0.11                                       | 1000                                             | 110                                     | 2.0                    | 0.5                     | 2500                                   |
| 100                   | G3VM-101BR/ER   | 6                   | 1a           | 2000 (4000) <sup>*1</sup>         | 0.1                                        | 1000                                             | 1000                                    | 5.0                    | 1.0                     | 2500                                   |
| 100                   | G3VM-101BR1/ER1 | 6                   | 1a           | 3500 (7000) <sup>*1</sup>         | 0.05                                       | 1000                                             | 450                                     | 5.0                    | 0.5                     | 2500                                   |
| 100                   | G3VM-101CR/FR   | 8                   | 1a           | 3000 (6000) <sup>*1</sup>         | 0.06                                       | 1000                                             | 720                                     | 5.0                    | 1.0                     | 2500                                   |
| 200                   | G3VM-201AY/DY   | 4                   | 1a           | 250                               | 5                                          | 1000                                             | 90                                      | 1.0                    | 1.0                     | 5000                                   |
| 200                   | G3VM-201AY1/DY1 | 4                   | 1a           | 250                               | 5                                          | 1000                                             | 90                                      | 3.0                    | 1.0                     | 5000                                   |
| 200                   | G3VM-201AR/DR   | 4                   | 1a           | 0.7                               | 0.9                                        | 1000                                             | 110                                     | 1.0                    | 0.5                     | 2500                                   |
| 200                   | G3VM-201CR/FR   | 8                   | 1a           | 1500 (3000) <sup>*1</sup>         | 0.25                                       | 1000                                             | 400                                     | 5.0                    | 1.0                     | 2500                                   |
| 350                   | G3VM-351AY/DY   | 4                   | 1a           | 100                               | 35                                         | 1000                                             | 30                                      | 1.0                    | 1.0                     | 5000                                   |
| 350                   | G3VM-351AY1/DY1 | 4                   | 1a           | 100                               | 35                                         | 1000                                             | 30                                      | 2.0                    | 1.0                     | 5000                                   |
| 350                   | G3VM-2L/2FL     | 4                   | 1a           | 120 <sup>*2</sup>                 | 22                                         | 1000                                             | 40                                      | 1.0                    | 1.0                     | 2500                                   |
| 350                   | G3VM-351A/D     | 4                   | 1a           | 120                               | 35                                         | 1000                                             | 30                                      | 1.0                    | 1.0                     | 2500                                   |
| 350                   | G3VM-353A/D     | 4                   | 1b           | 150                               | 15                                         | 1000                                             | 85                                      | 1.0                    | 3.0                     | 2500                                   |
| 350                   | G3VM-351B/E     | 6                   | 1a           | 120 (240) <sup>*1</sup>           | 35                                         | 1000                                             | 30                                      | 1.0                    | 1.0                     | 2500                                   |
| 350                   | G3VM-353B/E     | 6                   | 1b           | 150 (300) <sup>*1</sup>           | 15                                         | 1000                                             | 85                                      | 1.0                    | 3.0                     | 2500                                   |
| 350                   | G3VM-355CR/FR   | 8                   | 1a1b         | 120                               | 15                                         | 1000                                             | 65                                      | 1.0                    | 3.0                     | 2500                                   |
| 350                   | G3VM-352C/F     | 8                   | 2a           | 120                               | 35                                         | 1000                                             | 30                                      | 1.0                    | 1.0                     | 2500                                   |
| 350                   | G3VM-WL/WFL     | 8                   | 2a           | 120 <sup>*2</sup>                 | 22                                         | 1000                                             | 40                                      | 1.0                    | 1.0                     | 2500                                   |
| 350                   | G3VM-354C/F     | 8                   | 2b           | 150                               | 15                                         | 1000                                             | 85                                      | 1.0                    | 3.0                     | 2500                                   |
| 400                   | G3VM-401A/D     | 4                   | 1a           | 120                               | 18                                         | 1000                                             | 40                                      | 1.0                    | 1.0                     | 2500                                   |
| 400                   | G3VM-401AY/DY   | 4                   | 1a           | 120                               | 22                                         | 1000                                             | 80                                      | 1.0                    | 1.0                     | 5000                                   |
| 400                   | G3VM-401AY1/DY1 | 4                   | 1a           | 120                               | 22                                         | 1000                                             | 80                                      | 2.0                    | 1.0                     | 5000                                   |
| 400                   | G3VM-401B/E     | 6                   | 1a           | 120 (240) <sup>*1</sup>           | 17                                         | 1000                                             | 40                                      | 1.0                    | 1.0                     | 2500                                   |
| 400                   | G3VM-401BY/EY   | 6                   | 1a           | 120 (240) <sup>*1</sup>           | 17                                         | 1000                                             | 40                                      | 1.0                    | 1.0                     | 5000                                   |
| 400                   | G3VM-401CR/FR   | 8                   | 1a           | 400 (800) <sup>*1</sup>           | 3                                          | 1000                                             | 410                                     | 1.0                    | 1.0                     | 2500                                   |
| 400                   | G3VM-402C/F     | 8                   | 2a           | 120                               | 18                                         | 1000                                             | 40                                      | 1.0                    | 1.0                     | 2500                                   |
| 600                   | G3VM-601AY/DY   | 4                   | 1a           | 90                                | 45                                         | 1000                                             | 75                                      | 1.0                    | 1.0                     | 5000                                   |
| 600                   | G3VM-601AY1/DY1 | 4                   | 1a           | 90                                | 45                                         | 1000                                             | 75                                      | 2.0                    | 1.0                     | 5000                                   |
| 600                   | G3VM-601BY/EY   | 6                   | 1a           | 100 (200) <sup>*1</sup>           | 30                                         | 1000                                             | 120                                     | 1.5                    | 1.0                     | 5000                                   |
| 600                   | G3VM-601CR/FR   | 8                   | 1a           | 600 (1200) <sup>*1</sup>          | 1.3                                        | 10000                                            | 4300                                    | 3.0                    | 1.0                     | 2500                                   |

\*1. Load current in case of connection C is shown in parentheses (DC load only) \*2. Current-Limiting function (Limit current 150 mA Min. 300 mA Max.)

Note: Ambient operating temperature: ★ -40 to +110°C ◆ -40 to +105°C, ○ -20 to +85°C, others: -40 to +85°C

# Product lineup of MOS FET Relays

| SOP (Small Outline Package) |                          |                     |              |                                   |                                            |                                                  |                                         |                        |                         |                                        |
|-----------------------------|--------------------------|---------------------|--------------|-----------------------------------|--------------------------------------------|--------------------------------------------------|-----------------------------------------|------------------------|-------------------------|----------------------------------------|
| Load Voltage (V) Max.       | Model                    | Number of terminals | Contact form | Continuous load current (mA) Max. | Maximum resistance with output ON (Ω) Typ. | Current leakage when the relay is open (nA) Max. | Capacitance between terminals (pF) Typ. | Turn-ON time (ms) Max. | Turn-OFF time (ms) Max. | Dielectric strength between I/O (Vrms) |
| 20                          | G3VM-21GR                | 4                   | 1a           | 160                               | 5                                          | 1                                                | 1                                       | 0.5                    | 0.5                     | 1500                                   |
| 20                          | G3VM-21GR1               | 4                   | 1a           | 300                               | 1                                          | 1                                                | 5                                       | 0.5                    | 0.5                     | 1500                                   |
| 20                          | G3VM-21HR                | 6                   | 1a           | 2500 (5000) <sup>*1</sup>         | 0.02                                       | 10                                               | 1000                                    | 5.0                    | 1.0                     | 1500                                   |
| 30                          | G3VM-31HR                | 6                   | 1a           | 4000 (8000) <sup>*1</sup>         | 0.02                                       | 1000                                             | 1100                                    | 5.0                    | 1.0                     | 1500                                   |
| 30                          | G3VM-31HR1               | 6                   | 1a           | 4500 (9000) <sup>*1</sup>         | 0.022                                      | 1000                                             | 1200                                    | 2.0                    | 0.5                     | 1500                                   |
| 40                          | G3VM-41GR6               | 4                   | 1a           | 120                               | 10                                         | 1                                                | 1                                       | 0.5                    | 0.5                     | 1500                                   |
| 40                          | G3VM-41GR4               | 4                   | 1a           | 250                               | 2                                          | 1                                                | 5                                       | 0.5                    | 0.5                     | 1500                                   |
| 40                          | G3VM-41GR5               | 4                   | 1a           | 300                               | 1                                          | 1                                                | 10                                      | 0.5                    | 0.5                     | 1500                                   |
| 40                          | G3VM-41GR8               | 4                   | 1a           | 1000                              | 0.1                                        | 1                                                | 300                                     | 3.0                    | 0.5                     | 1500                                   |
| 40                          | G3VM-41HR                | 6                   | 1a           | 2500 (5000) <sup>*1</sup>         | 0.03                                       | 10                                               | 1000                                    | 5.0                    | 1.0                     | 1500                                   |
| 60                          | G3VM-61VY1 <sup>*3</sup> | 4                   | 1a           | 100                               | 25                                         | 1000                                             | 10                                      | 5.0                    | 5.0                     | 3750                                   |
| 60                          | G3VM-61G2                | 4                   | 1a           | 400                               | 1                                          | 1000                                             | 130                                     | 8.0                    | 3.0                     | 1500                                   |
| 60                          | G3VM-61G3                | 4                   | 1a           | 400                               | 1                                          | 1000                                             | 130                                     | 10.0                   | 5.0                     | 1500                                   |
| 60                          | G3VM-61VY2 <sup>*3</sup> | 4                   | 1a           | 500                               | 1                                          | 1000                                             | 20                                      | 2.0                    | 0.5                     | 3750                                   |
| 60                          | G3VM-61VY3               | 4                   | 1a           | 700                               | 0.15                                       | 1000                                             | 100                                     | 3.0                    | 0.5                     | 3750                                   |
| 60                          | G3VM-61GR2               | 4                   | 1a           | 1700                              | 0.08                                       | 10                                               | 250                                     | 3.0                    | 0.5                     | 1500                                   |
| 60                          | G3VM-61VR <sup>*3</sup>  | 4                   | 1a           | 1400                              | 0.13                                       | 1000                                             | 100                                     | 3.0                    | 1.0                     | 3750                                   |
| 60                          | G3VM-63G                 | 4                   | 1b           | 500                               | 1                                          | 1000                                             | 100                                     | 1.0                    | 3.0                     | 1500                                   |
| 60                          | G3VM-61H1                | 6                   | 1a           | 400 (800) <sup>*1</sup>           | 1                                          | 1000                                             | 130                                     | 2.0                    | 0.5                     | 1500                                   |
| 60                          | G3VM-61HR                | 6                   | 1a           | 2300 (4600) <sup>*1</sup>         | 0.04                                       | 10                                               | 1000                                    | 5.0                    | 1.0                     | 1500                                   |
| 60                          | G3VM-61HR1               | 6                   | 1a           | 3300 (6600) <sup>*1</sup>         | 0.03                                       | 20                                               | 700                                     | 5.0                    | 1.0                     | 1500                                   |
| 60                          | G3VM-61HR2               | 6                   | 1a           | 4000 (8000) <sup>*1</sup>         | 0.028                                      | 1000                                             | 750                                     | 2.0                    | 0.5                     | 1500                                   |
| 60                          | G3VM-62J1                | 8                   | 2a           | 400                               | 1                                          | 1000                                             | 130                                     | 2.0                    | 0.5                     | 1500                                   |
| 80                          | G3VM-81GR                | 4                   | 1a           | 40                                | 16                                         | 1                                                | 2.5                                     | 0.5                    | 0.5                     | 1500                                   |
| 80                          | G3VM-81GR1               | 4                   | 1a           | 200                               | 5                                          | 1                                                | 6.5                                     | 0.5                    | 0.5                     | 1500                                   |
| 80                          | G3VM-81G1                | 4                   | 1a           | 350                               | 1                                          | 1                                                | 30                                      | 0.5                    | 0.5                     | 1500                                   |
| 80                          | G3VM-81HR                | 6                   | 1a           | 1250 (2500) <sup>*1</sup>         | 0.11                                       | 1.5                                              | 460                                     | 3.0                    | 1.0                     | 1500                                   |
| 100                         | G3VM-101HR               | 6                   | 1a           | 1400 (2800) <sup>*1</sup>         | 0.1                                        | 10                                               | 1000                                    | 5.0                    | 1.0                     | 1500                                   |
| 100                         | G3VM-101HR1              | 6                   | 1a           | 2000 (4000) <sup>*1</sup>         | 0.045                                      | 1000                                             | 500                                     | 5.0                    | 1.0                     | 1500                                   |
| 100                         | G3VM-101HR2              | 6                   | 1a           | 3000 (6000) <sup>*1</sup>         | 0.05                                       | 1000                                             | 460                                     | 2.0                    | 0.5                     | 1500                                   |
| 200                         | G3VM-201G                | 4                   | 1a           | 50                                | 40                                         | 1                                                | 15                                      | 0.5                    | 0.2                     | 1500                                   |
| 200                         | G3VM-201G1               | 4                   | 1a           | 200                               | 5                                          | 1000                                             | 90                                      | 8.0                    | 3.0                     | 1500                                   |
| 200                         | G3VM-201G2               | 4                   | 1a           | 200                               | 5                                          | 1000                                             | 90                                      | 10.0                   | 5.0                     | 1500                                   |
| 200                         | G3VM-S5                  | 4                   | 1a           | 200                               | 5                                          | 1000                                             | 100                                     | 1.5                    | 1.0                     | 1500                                   |
| 200                         | G3VM-201H1               | 6                   | 1a           | 200 (400) <sup>*1</sup>           | 5                                          | 1000                                             | 100                                     | 1.5                    | 1.0                     | 1500                                   |
| 200                         | G3VM-202J1               | 8                   | 2a           | 200                               | 5                                          | 1000                                             | 100                                     | 1.5                    | 1.0                     | 1500                                   |
| 350                         | G3VM-351G1               | 4                   | 1a           | 100                               | 35                                         | 1000                                             | 35                                      | 5.0                    | 3.0                     | 1500                                   |
| 350                         | G3VM-351VY <sup>*3</sup> | 4                   | 1a           | 110                               | 35                                         | 1000                                             | 60                                      | 1.0                    | 0.5                     | 3750                                   |
| 350                         | G3VM-351GL               | 4                   | 1a           | 120 <sup>*2</sup>                 | 15                                         | 1000                                             | 70                                      | 1.0                    | 1.0                     | 1500                                   |
| 350                         | G3VM-353G                | 4                   | 1b           | 120                               | 15                                         | 1000                                             | 65                                      | 1.0                    | 3.0                     | 1500                                   |
| 350                         | G3VM-351H                | 6                   | 1a           | 110 (220) <sup>*1</sup>           | 35                                         | 1000                                             | 30                                      | 1.0                    | 1.0                     | 1500                                   |
| 350                         | G3VM-353H                | 6                   | 1b           | 120 (240) <sup>*1</sup>           | 15                                         | 1000                                             | 65                                      | 1.0                    | 3.0                     | 1500                                   |
| 350                         | G3VM-355JR               | 8                   | 1a1b         | 120                               | 15                                         | 1000                                             | 65                                      | 1.0                    | 3.0                     | 1500                                   |
| 350                         | G3VM-352J                | 8                   | 2a           | 110                               | 35                                         | 1000                                             | 30                                      | 1.0                    | 1.0                     | 1500                                   |
| 350                         | G3VM-354J                | 8                   | 2b           | 120                               | 15                                         | 1000                                             | 65                                      | 1.0                    | 3.0                     | 1500                                   |
| 400                         | G3VM-401G1               | 4                   | 1a           | 100                               | 18                                         | 1000                                             | 70                                      | 10.0                   | 5.0                     | 1500                                   |
| 400                         | G3VM-401G                | 4                   | 1a           | 120                               | 17                                         | 1000                                             | 70                                      | 1.0                    | 1.0                     | 1500                                   |
| 400                         | G3VM-401VY               | 4                   | 1a           | 110                               | 40                                         | 65                                               | 30                                      | 1.0                    | 0.5                     | 1500                                   |
| 400                         | G3VM-401H                | 6                   | 1a           | 120 (240) <sup>*1</sup>           | 17                                         | 1000                                             | 70                                      | 1.0                    | 1.0                     | 1500                                   |
| 400                         | G3VM-402J                | 8                   | 2a           | 120                               | 17                                         | 1000                                             | 70                                      | 1.0                    | 1.0                     | 1500                                   |
| 600                         | G3VM-601G1               | 4                   | 1a           | 70                                | 35                                         | 1000                                             | 75                                      | 10.0                   | 5.0                     | 1500                                   |
| 600                         | G3VM-601G                | 4                   | 1a           | 90                                | 45                                         | 1000                                             | 75                                      | 8.0                    | 3.0                     | 1500                                   |

\*1. Load current in case of connection C is shown in parentheses (DC load only) \*2. Current-Limiting function (Limit current 150 mA Min. 300 mA Max.) \*3. VY1,VY2,VY3 and VR types: Special SOP4 pin package  
 Note: Ambient operating temperature: ★ -40 to +110°C ◆ -40 to +105°C, ○ -20 to +85°C, others: -40 to +85°C

# Product lineup of MOS FET Relays

## SSOP (Shrink Small Outline Package)

| Load Voltage (V) Max. | Model       | Number of terminals | Contact form | Continuous load current (mA) Max. | Maximum resistance with output ON (Ohm) Typ. | Current leakage when the relay is open (nA) Max. | Capacitance between terminals (pF) Typ. | Turn-ON time (ms) Max. | Turn-OFF time (ms) Max. | Dielectric strength between I/O (Vrms) |
|-----------------------|-------------|---------------------|--------------|-----------------------------------|----------------------------------------------|--------------------------------------------------|-----------------------------------------|------------------------|-------------------------|----------------------------------------|
| 20                    | G3VM-21LR   | 4                   | 1a           | 160                               | 5                                            | 1                                                | 1                                       | 0.5                    | 0.5                     | 1500                                   |
| 20                    | G3VM-21LR10 | 4                   | 1a           | 200                               | 3                                            | 0.2                                              | 0.8                                     | 0.2                    | 0.2                     | 1500                                   |
| 20                    | G3VM-21LR1  | 4                   | 1a           | 450                               | 0.8                                          | 1                                                | 5                                       | 0.5                    | 0.5                     | 1500                                   |
| 20                    | G3VM-21LR11 | 4                   | 1a           | 900                               | 0.18                                         | 1                                                | 40                                      | 2.0                    | 1.0                     | 1500                                   |
| 40                    | G3VM-41LR6  | 4                   | 1a           | 120                               | 10                                           | 1                                                | 1                                       | 0.5                    | 0.5                     | 1500                                   |
| 40                    | G3VM-41LR10 | 4                   | 1a           | 120                               | 12                                           | 0.2                                              | 0.45                                    | 0.2                    | 0.3                     | 1500                                   |
| 40                    | G3VM-41LR11 | 4                   | 1a           | 140                               | 7                                            | 0.2                                              | 0.7                                     | 0.2                    | 0.2                     | 1500                                   |
| 40                    | G3VM-41LR4  | 4                   | 1a           | 250                               | 2                                            | 1                                                | 5                                       | 0.5                    | 0.5                     | 1500                                   |
| 40                    | G3VM-41LR5  | 4                   | 1a           | 300                               | 1                                            | 1                                                | 10                                      | 0.5                    | 0.5                     | 1500                                   |
| 60                    | G3VM-61LR   | 4                   | 1a           | 400                               | 1                                            | 1000                                             | 20                                      | 1.0                    | 1.0                     | 1500                                   |
| 80                    | G3VM-81LR   | 4                   | 1a           | 120                               | 7.5                                          | 0.2                                              | 5                                       | 0.25                   | 0.2                     | 1500                                   |
| 100                   | G3VM-101LR  | 4                   | 1a           | 80                                | 8                                            | 0.2                                              | 6                                       | 0.3                    | 0.3                     | 1500                                   |

Note: Ambient operating temperature: -20 to +85°C

## USOP (Ultra Small Outline Package)

| Load Voltage (V) Max. | Model       | Number of terminals | Contact form | Continuous load current (mA) Max. | Maximum resistance with output ON (Ohm) Typ. | Current leakage when the relay is open (nA) Max. | Capacitance between terminals (pF) Typ. | Turn-ON time (ms) Max. | Turn-OFF time (ms) Max. | Dielectric strength between I/O (Vrms) |
|-----------------------|-------------|---------------------|--------------|-----------------------------------|----------------------------------------------|--------------------------------------------------|-----------------------------------------|------------------------|-------------------------|----------------------------------------|
| 20                    | G3VM-21PR10 | 4                   | 1a           | 200                               | 3                                            | 1                                                | 0.8                                     | 0.2                    | 0.2                     | 500                                    |
| 20                    | G3VM-21PR1  | 4                   | 1a           | 450                               | 0.6                                          | 1                                                | 5                                       | 0.5                    | 0.5                     | 500                                    |
| 20                    | G3VM-21PR11 | 4                   | 1a           | 900                               | 0.18                                         | 1                                                | 40                                      | 2.0                    | 1.0                     | 500                                    |
| 40                    | G3VM-41PR12 | 4                   | 1a           | 100                               | 15                                           | 1                                                | 0.3                                     | 0.2                    | 0.2                     | 500                                    |
| 40                    | G3VM-41PR10 | 4                   | 1a           | 120                               | 12                                           | 1                                                | 0.45                                    | 0.2                    | 0.3                     | 500                                    |
| 40                    | G3VM-41PR6  | 4                   | 1a           | 120                               | 10                                           | 0.2                                              | 1                                       | 0.2                    | 0.3                     | 500                                    |
| 40                    | G3VM-41PR11 | 4                   | 1a           | 140                               | 7                                            | 1                                                | 0.7                                     | 0.2                    | 0.2                     | 500                                    |
| 40                    | G3VM-41PR5  | 4                   | 1a           | 300                               | 1                                            | 1                                                | 10                                      | 0.5                    | 0.3                     | 500                                    |
| 50                    | G3VM-51PR   | 4                   | 1a           | 300                               | 1                                            | 1                                                | 12                                      | 0.5                    | 0.4                     | 500                                    |
| 60                    | G3VM-61PR1  | 4                   | 1a           | 120                               | 10                                           | 1                                                | 0.7                                     | 0.2                    | 0.2                     | 500                                    |
| 60                    | G3VM-61PR   | 4                   | 1a           | 400                               | 1                                            | 1                                                | 20                                      | 0.5                    | 0.5                     | 500                                    |
| 75                    | G3VM-71PR   | 4                   | 1a           | 400                               | 1                                            | 1                                                | 30                                      | 2.0                    | 1.0                     | 500                                    |
| 80                    | G3VM-81PR   | 4                   | 1a           | 120                               | 7                                            | 0.02                                             | 5                                       | 0.5                    | 0.2                     | 500                                    |
| 100                   | G3VM-101PR  | 4                   | 1a           | 100                               | 8                                            | 0.2                                              | 6                                       | 0.3                    | 0.3                     | 500                                    |

Note: Ambient operating temperature: -40 to +85°C

## VSON(R) (Very Small Outline Package Non-leaded with Resistance) Voltage driven type

| Load Voltage (V) Max. | Model       | Number of terminals | Contact form | Continuous load current (mA) Max. | Maximum resistance with output ON (Ohm) Typ. | Current leakage when the relay is open (nA) Max. | Capacitance between terminals (pF) Typ. | Turn-ON time (ms) Max. | Turn-OFF time (ms) Max. | Recommended Operating voltage (V) Typ. | Dielectric strength between I/O (Vrms) |
|-----------------------|-------------|---------------------|--------------|-----------------------------------|----------------------------------------------|--------------------------------------------------|-----------------------------------------|------------------------|-------------------------|----------------------------------------|----------------------------------------|
| 20                    | G3VM-21UV11 | 4                   | 1a           | 1000                              | 0.18                                         | 1                                                | 40                                      | 2.0                    | 1.0                     | 5                                      | 500                                    |
| 50                    | G3VM-51UV   | 4                   | 1a           | 300                               | 1                                            | 1                                                | 12                                      | 0.5                    | 0.4                     | 5                                      | 500                                    |
| 60                    | G3VM-61UV   | 4                   | 1a           | 400                               | 1                                            | 1                                                | 20                                      | 0.5                    | 0.5                     | 5                                      | 500                                    |

Note: Ambient operating temperature: -40 to +110°C

## VSON (Very Small Outline Package Non-leaded)

| Load Voltage (V) Max. | Model       | Number of terminals | Contact form | Continuous load current (mA) Max. | Maximum resistance with output ON (Ohm) Typ. | Current leakage when the relay is open (nA) Max. | Capacitance between terminals (pF) Typ. | Turn-ON time (ms) Max. | Turn-OFF time (ms) Max. | Dielectric strength between I/O (Vrms) |
|-----------------------|-------------|---------------------|--------------|-----------------------------------|----------------------------------------------|--------------------------------------------------|-----------------------------------------|------------------------|-------------------------|----------------------------------------|
| 20                    | G3VM-21UR10 | 4                   | 1a           | 200                               | 3                                            | 1                                                | 0.8                                     | 0.2                    | 0.2                     | 500                                    |
| 20                    | G3VM-21UR1  | 4                   | 1a           | 450                               | 0.8                                          | 1                                                | 5                                       | 0.4                    | 0.4                     | 500                                    |
| 20                    | G3VM-21UR11 | 4                   | 1a           | 1000                              | 0.18                                         | 1                                                | 40                                      | 2.0                    | 1.0                     | 500                                    |
| 40                    | G3VM-41UR12 | 4                   | 1a           | 100                               | 15                                           | 1                                                | 0.3                                     | 0.2                    | 0.2                     | 500                                    |
| 40                    | G3VM-41UR10 | 4                   | 1a           | 120                               | 12                                           | 1                                                | 0.45                                    | 0.2                    | 0.3                     | 500                                    |
| 40                    | G3VM-41UR11 | 4                   | 1a           | 140                               | 7                                            | 1                                                | 0.7                                     | 0.2                    | 0.2                     | 500                                    |
| 50                    | G3VM-51UR   | 4                   | 1a           | 300                               | 1                                            | 1                                                | 12                                      | 0.5                    | 0.4                     | 500                                    |
| 60                    | G3VM-61UR1  | 4                   | 1a           | 120                               | 10                                           | 1                                                | 0.7                                     | 0.2                    | 0.2                     | 500                                    |
| 60                    | G3VM-61UR   | 4                   | 1a           | 400                               | 1                                            | 1                                                | 20                                      | 0.5                    | 0.5                     | 500                                    |
| 80                    | G3VM-81UR   | 4                   | 1a           | 120                               | 7                                            | 0.02                                             | 5                                       | 0.5                    | 0.2                     | 500                                    |
| 80                    | G3VM-81UR1  | 4                   | 1a           | 200                               | 6                                            | 1                                                | 6.5                                     | 0.4                    | 0.4                     | 500                                    |
| 100                   | G3VM-101UR  | 4                   | 1a           | 100                               | 8                                            | 0.2                                              | 6                                       | 0.3                    | 0.3                     | 500                                    |

Note: Ambient operating temperature: -40 to +110°C

## S-VSON (Super - Very Small Outline Package Non-leaded)

| Load Voltage (V) Max. | Model         | Number of terminals | Contact form | Continuous load current (mA) Max. | Maximum resistance with output ON (Ohm) Typ. | Current leakage when the relay is open (nA) Max. | Capacitance between terminals (pF) Typ. | Turn-ON time (ms) Max. | Turn-OFF time (ms) Max. | Dielectric strength between I/O (Vrms) |
|-----------------------|---------------|---------------------|--------------|-----------------------------------|----------------------------------------------|--------------------------------------------------|-----------------------------------------|------------------------|-------------------------|----------------------------------------|
| 30                    | G3VM-31QR     | 4                   | 1a           | 1500                              | 0.1                                          | 1                                                | 120                                     | 2.0                    | 1.0                     | 500                                    |
| 40                    | G3VM-41QR10 * | 4                   | 1a           | 120                               | 11                                           | 1                                                | 0.45                                    | 0.2                    | 0.3                     | 500                                    |
| 60                    | G3VM-61QR     | 4                   | 1a           | 400                               | 1.1                                          | 1                                                | 12                                      | 0.5                    | 0.3                     | 500                                    |
| 60                    | G3VM-61QR2    | 4                   | 1a           | 1000                              | 0.2                                          | 1                                                | 80                                      | 2.0                    | 0.3                     | 500                                    |
| 100                   | G3VM-101QR1   | 4                   | 1a           | 650                               | 0.4                                          | 1                                                | 50                                      | 2.0                    | 0.3                     | 500                                    |

\* 41QR10 type: S-VSON(L) package (Low profile type) Note: Ambient operating temperature: -40 to +110°C

## S-VSON (Super - Very Small Outline Package Non-leaded) Voltage driven type

| Load Voltage (V) Max. | Model       | Number of terminals | Contact form | Continuous load current (mA) Max. | Maximum resistance with output ON (Ohm) Typ. | Current leakage when the relay is open (nA) Max. | Capacitance between terminals (pF) Typ. | Turn-ON time (ms) Max. | Turn-OFF time (ms) Max. | Recommended Operating voltage (V) Typ. | Dielectric strength between I/O (Vrms) |
|-----------------------|-------------|---------------------|--------------|-----------------------------------|----------------------------------------------|--------------------------------------------------|-----------------------------------------|------------------------|-------------------------|----------------------------------------|----------------------------------------|
| 30                    | G3VM-31QVH  | 4                   | 1a           | 1500                              | 0.1                                          | 1                                                | 120                                     | 2                      | 0.2                     | 5                                      | 500                                    |
| 30                    | G3VM-31QVL  | 4                   | 1a           | 1500                              | 0.1                                          | 1                                                | 120                                     | 2                      | 0.2                     | 2.5                                    | 500                                    |
| 60                    | G3VM-61QV2H | 4                   | 1a           | 1000                              | 0.2                                          | 1                                                | 80                                      | 2                      | 0.2                     | 5                                      | 500                                    |
| 60                    | G3VM-61QV2L | 4                   | 1a           | 1000                              | 0.2                                          | 1                                                | 80                                      | 1                      | 0.2                     | 2.5                                    | 500                                    |
| 60                    | G3VM-61QVH  | 4                   | 1a           | 400                               | 1                                            | 1                                                | 20 (Max.)                               | 0.5                    | 0.2                     | 5                                      | 500                                    |

\* S-VSON(L) package (Low profile type) Note: Ambient operating temperature: -40 to +110°C

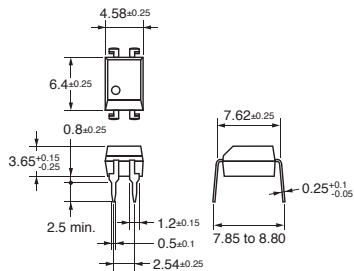
# Package dimensions/Appearance

(Unit: mm)

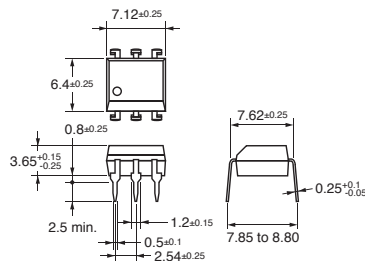
## DIP (Dual Inline Package)

### PCB Terminals

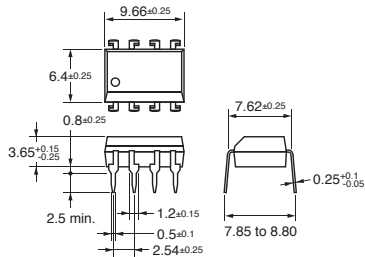
#### ■ DIP4 weight : 0.25 g



#### ■ DIP6 weight : 0.4 g

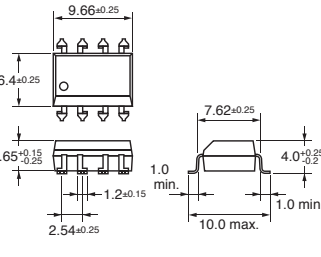
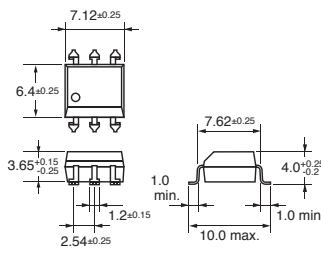
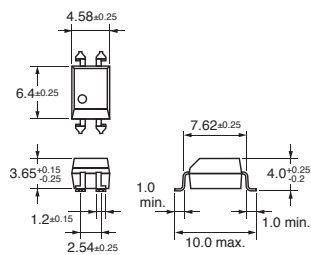


#### ■ DIP8 weight : 0.54 g



### Surface-mounting Terminals

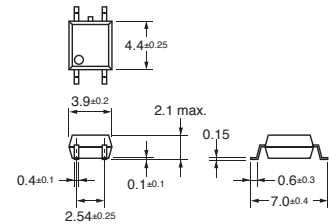
(Exclude G3VM-61BR/ER)



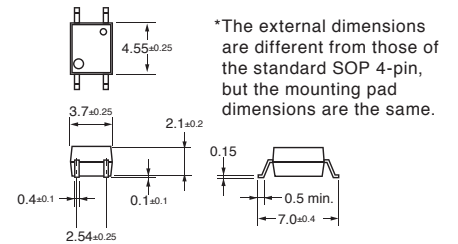
## SOP (Small Outline Package)

### Surface-mounting Terminals

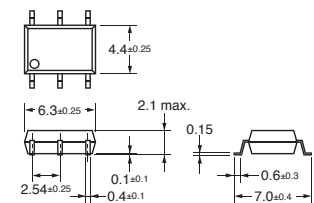
#### ■ SOP4 weight : 0.1 g



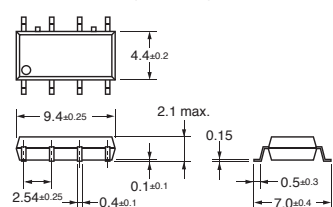
#### ■ Special SOP4 pin weight : 0.1 g



#### ■ SOP6 weight : 0.13 g



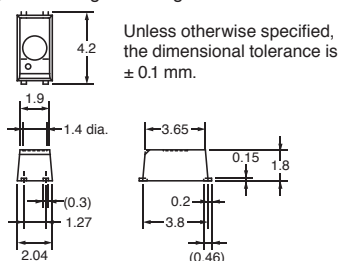
#### ■ SOP8 weight : 0.2 g



## SSOP (Shrink Small Outline Package)

### Surface-mounting Terminals

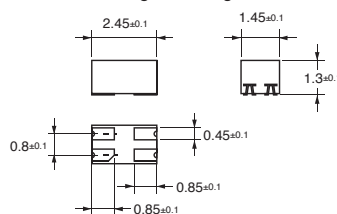
#### ■ SSOP4 weight : 0.03 g



## VSON (Very Small Outline Non-leaded)

### Surface-mounting Terminals

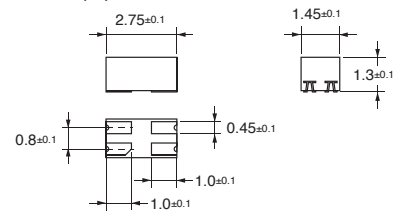
#### ■ VSON4 weight : 0.01 g



## VSON(R) (Very Small Outline Non-Leaded with Resistor)

### Surface-mounting Terminals

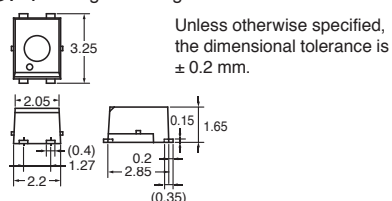
#### ■ VSON(R)4 weight : 0.01 g



## USOP (Ultra Small Outline Package)

### Surface-mounting Terminals

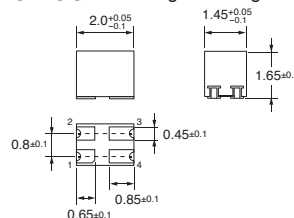
#### ■ USOP4 weight : 0.03 g



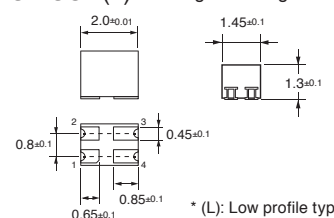
## S-VSON (Super Very Small Outline Non-leaded)

### Surface-mounting Terminals

#### ■ S-VSON4 weight : 0.01 g



#### ■ S-VSON(L)\*4 weight : 0.01 g



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Electronic and Mechanical Components Company

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