



A diverse lineup of packages, contact forms,  
and functions to choose from!



# G3VM

MOS FET Relay  
MOS FET Relay Module

# MOS FET Relay Product Selection

**SPST**

**NC**

**NO**

**MOS FET Relay**

A relay function is achieved through combination of **LED, PDA and MOS-FET**

Allows signal transmission even when insulated!

Lamp lights up

① Current flows through the LED, causing it to light up. ② PDA (solar cell) generates power. ③ MOS FET turns ON.

**MOS FET Relay Module with Low Leakage Current Function**

Leakage Current  $I_{LEAK}$  vs Applied Voltage  $V_{DD}$

G3VM-21MT Example of Measurement Circuit

**SPDT**

**MOS FET Relay Module with 1c Changeover Function**

MOS FET Relay Module SPDT Contact Form Type

SPDT Form Circuit

# Comparison with Contact Relays

Module details: P3

	Reed relay	Mechanical relay	T-module G3VM-□1MT	SPDT module G3VM-□M	MOS FET relay G3VM-□□□
<b>Contact reliability (ON resistance)</b>	Average	Average	Excellent	Excellent	Excellent
<b>Durability</b>	Good	Average	Excellent	Excellent	Excellent
<b>Leakage current</b>	Excellent	Excellent	Excellent	Average	Average
<b>Isolation</b>	Excellent	Excellent	Excellent	Poor	Poor
<b>Contact form (SPDT)</b>	Excellent	Excellent	—	Excellent	—

# MOS FET Relay Model Number / Packaging / Package Legend

## MOS FET Relay Model Number Legend

G3VM-□□□□□□

① ② ③ ④ ⑤ ⑥

① Load voltage	② Contact form	③ Appearance	④ Additional functions	⑤ Serial code	⑥ Input forward voltage
2: 20 V 8: 80 V 3: 30 V 10: 100 V 4: 40 V 20: 200 V 5: 50 V 35: 350 V 6: 60 V 40: 400 V 7: 75 V 60: 600 V	1: 1a contact 2: 2a contact 3: 1b contact 4: 2b contact 5: 1a1b contact	A: DIP 4-pin PCB terminal B: DIP 6-pin PCB terminal C: DIP 8-pin PCB terminal D: DIP 4-pin surface-mount terminal E: DIP 6-pin surface-mount terminal F: DIP 8-pin surface-mount terminal G: SOP 4-pin H: SOP 6-pin J: SOP 8-pin L: SSOP 4-pin P: USOP 4-pin Q: S-VSON 4-pin U: VSON 4-pin V: SOP 4-pin (special) W: P-SON 4-pin	L: Current limit R: Low ON-resistance type Y: Dielectric strength between I/O above 2.5 kV type V: Voltage driving type	When specifications overlap, a serial code (number) is added.	H: High input forward voltage L: Low input forward voltage <small>*Some voltage driving types only</small>

Note 1: Some products may have a different model number structure.  
Note 2: In order to avoid confusion of l (English letter) and 1 (number), l (English letter) is not used here.

## MOS FET Relay Packaging Types

### General purpose packages

Package types	A DIP4 Through-hole	B DIP6 Through-hole	C DIP8 Through-hole	D DIP4 Surface-mount	E DIP6 Surface-mount	F DIP8 Surface-mount	G SOP4 Surface-mount	V SOP4 (special) Surface-mount	H SOP6 Surface-mount	J SOP8 Surface-mount
Reel packaging	/	/	/	TR: 1,500 pcs TR05: 500 pcs	TR: 1,500 pcs	TR: 1,500 pcs	TR: 2,500 pcs TR05: 500 pcs	TR: 3,000 pcs TR05: 500 pcs	TR: 2,500 pcs TR05: 500 pcs	TR: 2,500 pcs
Stick packaging	100 pcs per stick	50 pcs per stick	50 pcs per stick	100 pcs per stick	50 pcs per stick	50 pcs per stick	100 pcs per stick	125 pcs per stick	75 pcs per stick	50 pcs per stick

### Small packages (moisture-proof)

Package types	L SSOP Surface-mount	W P-SON Surface-mount	P USOP Surface-mount	U VSON Surface-mount	Q S-VSON Surface-mount
Reel packaging	TR05: 500 pcs	TR05: 500 pcs	TR05: 500 pcs	TR05: 500 pcs	TR05: 500 pcs
Stick packaging	/	/	/	/	/

Note 1: For packages without stick packaging, cut-tape items can be delivered in small quantities.

Note 2: Reel packaging is not available for through-hole type.

Note 3: Cut-tape items do not have moisture-proof packaging, so they cannot be mounted using reflow soldering (automatic mounting).

## Package Types

DIP	SOP	SSOP	USOP	P-SON	VSON(R)	VSON	S-VSON
Mounting area 100%	Mounting area 62%	Mounting area 24%	Mounting area 20%	Mounting area 19%	Mounting area 10%	Mounting area 9%	Mounting area 8% <small>*84% of VSON</small>

# MOS FET Relay Module Model Number Legend

G3VM-□□□□□

① ② ③ ④ ⑤

① Load voltages	② Contact forms	③ Type	④ Additional functions	⑤ Others
2: 20 V 6: 60 V 10: 100 V	1: 1a contact* 6: SPDT contact*	M: MOS FET Relay Module	None: Standard T : T switch function	When specifications overlap, a serial code (number) is added.

\*Refer to the datasheet for details.

# MOS FET Relay Module SPDT Contact Form Type

OMRON's unique technology\* has delivered a semiconductor relay module that enables easy construction of SPDT contact forms on boards where space is limited.



### G3VM-26M10 (Low C<sub>OFF</sub> model)

Ideal for high-frequency ( $\leq 300$  MHz) signal changeover

### G3VM-26M11 (Low R<sub>ON</sub> model)

Supports high current ( $\leq 1$  A) switching

### G3VM-66M (General purpose model)

The output rating of 60 V at 0.4 A enables a wide variety of applications

**Ideal replacement for contact relays\***

\*Reed relays, mechanical relays, etc.

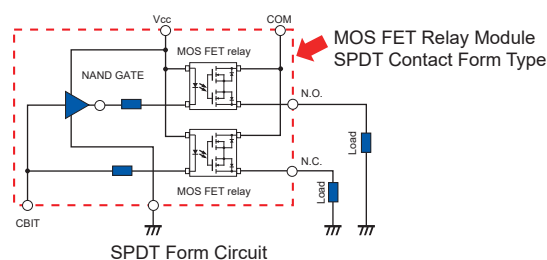
\*According to OMRON's research in 2021

## Feature 1 Reduced Workload

**Problem** Complex circuits and multiple components are required to configure SPDT contacts using semiconductor relays

**Solution** The workload for circuit design and component selection is reduced by using one single package

All of the complex circuits required to configure SPDT contacts are modularized, allowing efficient board design and high-density mounting.

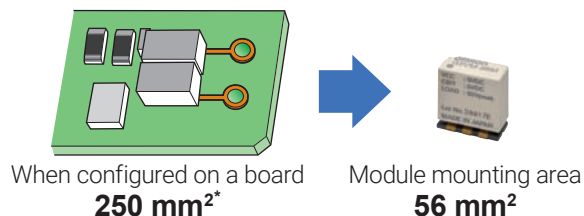


## Feature 2 1/5 of Mounting Space

**Problem** Large boards are required to configure SPDT contacts using semiconductor relays

**Solution** The space-saving structure based on OMRON's unique package technology\* reduces the mounting space

The mounting space is reduced by 78% compared to configuring SPDT circuits on boards.



\*According to OMRON's research in 2021

## Feature 3 Long Life

**Problem** Regular maintenance is required for the contacts of existing SPDT contact relays (reed relays, mechanical relays, etc.) due to their limited service life

**Solution** The frequency of regular maintenance is reduced by using semiconductor relays to extend the service life of the contacts

No arc discharge thanks to the semiconductor-based contactless configuration.  
No failures due to mechanical wear.



No physical contacts are used, eliminating failures due to mechanical wear

## SPDT Module Product Lineup

SPDT module											
Load voltage (max.) (V)	Model	Number of terminals	Contact form	Continuous load current (max.) (mA)	Maximum resistance with output ON (typical) ( $\Omega$ )	Current leakage when relay is open (max.) (nA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	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	1,000	0.21	2	40	2.5	1.5	5	500
60	G3VM-66M	6	SPDT	400	1	2	20	1	1	5	500

# MOS FET Relay Module T-Module Type

OMRON has adopted a "T-shaped circuit structure" consisting of three MOS FET relays in a single package to ensure minimum current leakage, which helps improve measurement accuracy of semiconductor testing devices, etc.



**G3VM-21MT** (high isolation type)  
**G3VM-61MT** (high current type)  
**G3VM-101MT** (high voltage type)

**Ideal replacement for contact relays\***

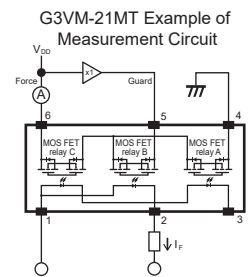
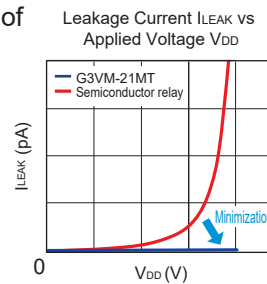
\*Reed relays, mechanical relays, etc.

## Feature 1 Improved Measurement Accuracy

**Problem** Current leakage in semiconductor relays causes deterioration of micro-current measurement accuracy

**Solution** The T-shaped circuit structure ensures leakage current of 1 pA or less, suitable for micro-current measurement

With an actual value of 0.1 pA or less, the impact on the accuracy of the measuring equipment is minimized.



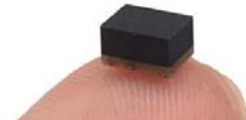
## Feature 2 Space Saving

**Problem** Mechanical relays are large in size and occupy large board space

**Solution** Space savings are achieved with the subminiature outline dimensions

Its ultra small size contributes to high-density mounting, despite complex circuits in the equipment.

**Subminiature Outline Dimensions**  
**5 mm × 3.75 mm × 2.7 mm**



## Feature 3 Long Life

**Problem** Regular maintenance is required for the existing relays with contact (reed relays, mechanical relays, etc.) due to limited service life of the contact

**Solution** The frequency of regular maintenance is reduced by using semiconductor relays to extend the service life of the contacts

No arc discharge thanks to the semiconductor-based contactless configuration. No failures due to mechanical wear.



No physical contacts are used, eliminating failures due to mechanical wear

# T-Module Product Lineup

T-module										
Load voltage (max.) (V)	Model	Number of terminals	Contact form	Continuous load current (max.) (mA)	Maximum resistance with output ON (typical) ( $\Omega$ )	Current leakage when relay is open (max.) (pA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	Dielectric strength between I/O (Vrms)
20	G3VM-21MT	6	1a*	200	8	1	0.6	0.3	0.3	500
60	G3VM-61MT	6	1a*	Io Main: 800 Io Sub : 400	0.4	1	38	2.5	0.5	500
100	G3VM-101MT	6	1a*	550	0.8	1	23	2.5	0.5	500

\*Refer to "●Operating mode" in the product datasheet for details

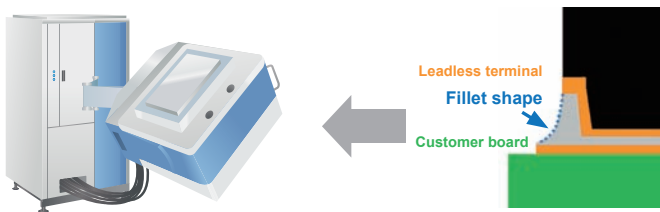
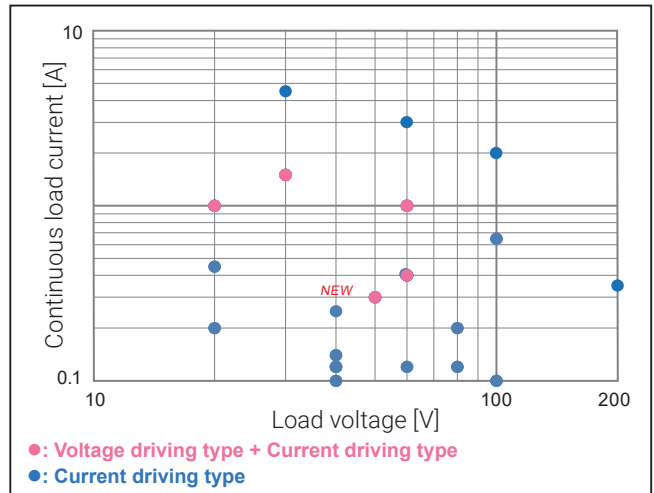
# MOS FET Relay Product Selection

## Recommended for Semiconductor Inspection Devices

If the mounting area of DIP products is taken to be 100%

P-SON	VSON(R)	VSON	S-VSON
Mounting area 19%	Mounting area 10%	Mounting area 9%	Mounting area 8% *84% of VSON

We provide MOS FET relays that balance high-density mounting and performance  
 Easy-to-use 500 pcs/reel compact package size  
 Wettable flank structure



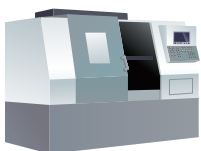
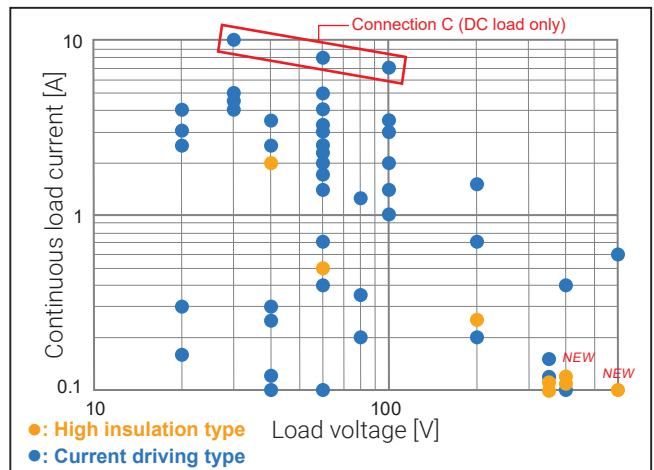
The fillet shape ensures higher mounting strength and better solder visibility after mounting

## General Purpose (FA, OA, Alarm, Communication)

DIP	SOP	SSOP	USOP
Mounting area 100%	Mounting area 62%	Mounting area 24%	Mounting area 20%

We provide MOS FET relays suitable for FA equipment and a wide variety of applications

\*A wide variety of UL certified products are available.



Industrial equipment



Detectors



OA equipment

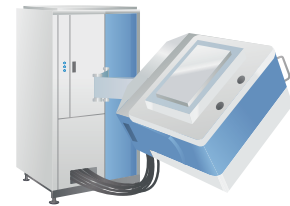
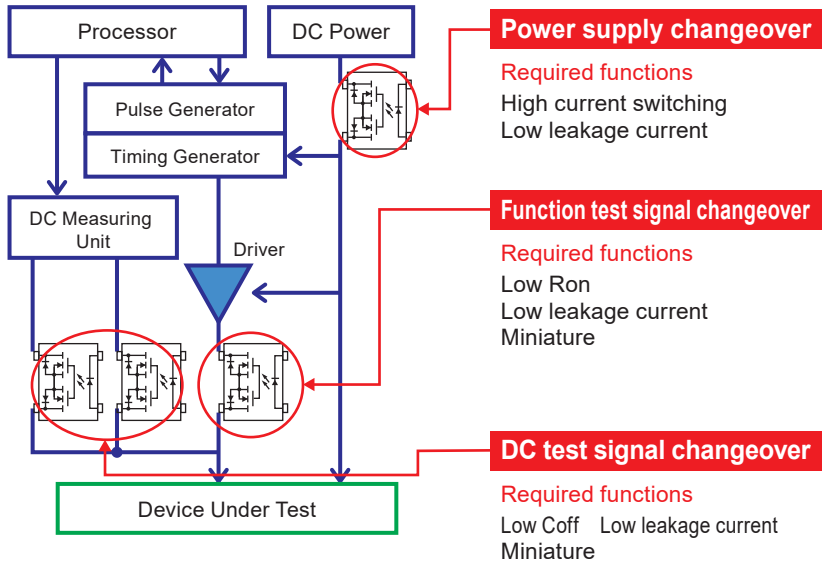


Control panels

The 1b contact type, which contributes to a reduced power consumption when the current flows, is also available.

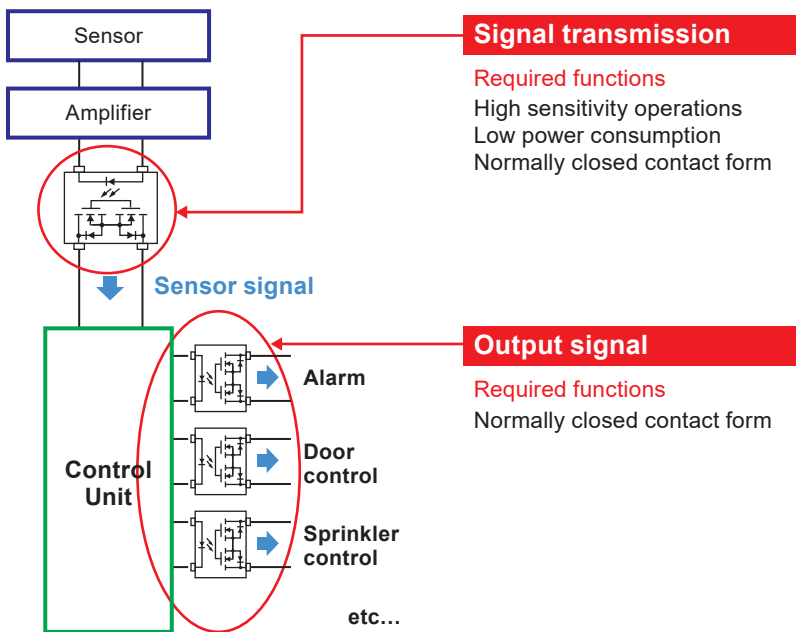
# Circuit Examples

## Semiconductor Inspection Device Circuit



- □ SON package series, etc.

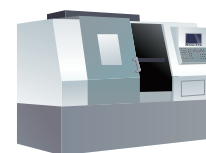
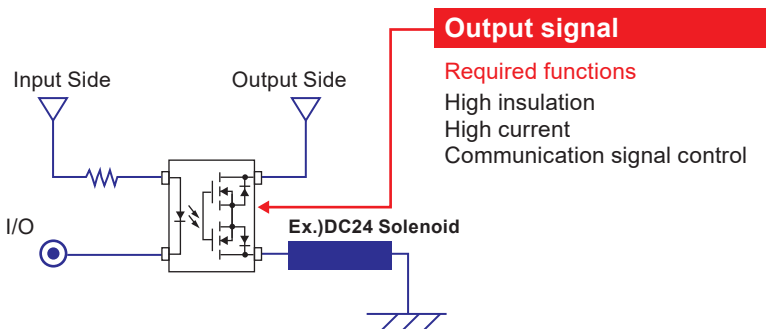
## Sensor Circuit



- High sensitivity type
- Normally closed type (1b)

- Normally closed type (1b)

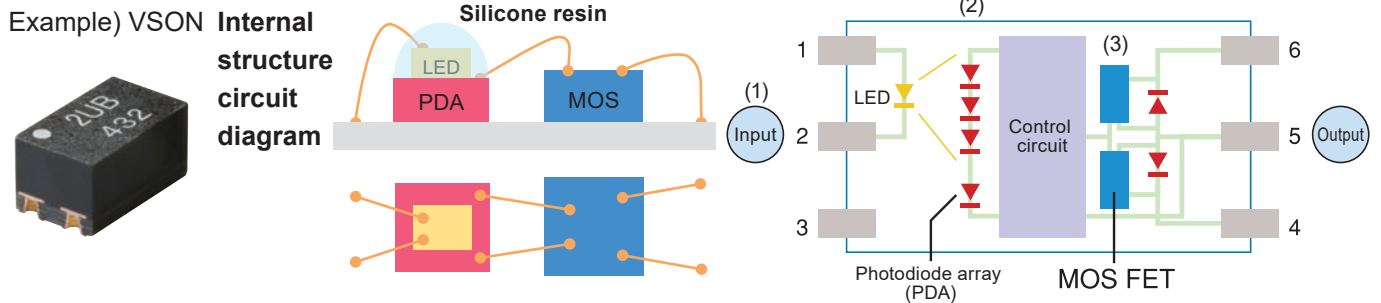
## FA Equipment Circuit



- High insulation type
- High capacity type
- General purpose type

# MOS FET Relay

MOS FET relays are optical semiconductor devices that use MOS FET for output elements, and are being increasingly used as a replacement for mechanical relays. OMRON semiconductor relays address the problems faced by customers.



1. The LED lights up when the current flows to the input side.
2. The light sent by the LED will be converted into voltage when it is received by the PDA on the output side.
3. This voltage will be the gate voltage to drive the MOS FET.

## Feature 1 Low Noise

**Problem** I want to get rid of the operating noises from existing mechanical relays

**Solution** The use of MOS FET relays without mechanical contacts helps ensure silent operation

In contrast with mechanical relays that generate contact noise during ON operations, MOS FET relays are free of mechanical contacts and built with semiconductors, thus eliminating contact noise.

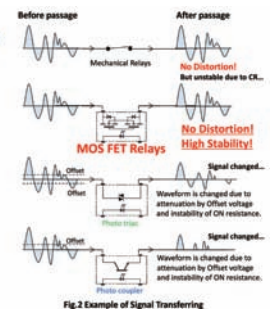
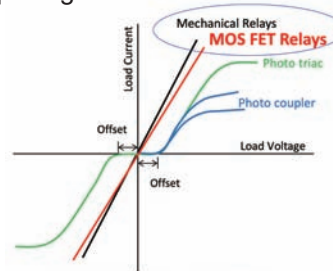


## Feature 2 Excellent Linearity Characteristics

**Problem** When I use phototransistors or phototriacs, the signals on the output side become distorted

**Solution** Use MOS FET relays to prevent distortion of output signals

As the elements on the output sides of phototransistors and phototriacs have low linearity, signals become distorted when passing between outputs. In contrast, MOS FET relays have excellent linearity characteristics, which help minimize such signal distortion.



## Feature 3 Long Life

**Problem** Regular maintenance is required for the existing relays with contact (reed relays, mechanical relays, etc.) due to limited service life of the contact

**Solution** The frequency of regular maintenance is reduced by using semiconductor relays to extend the service life of the contacts

No arc discharge thanks to the semiconductor-based contactless configuration. No failures due to mechanical wear.



No physical contacts are used, eliminating failures due to mechanical wear



# Introduction of the New "P-SON" Product

OMRON has released the P-SON series which are more compact than SOP4, but allow the flowing of even higher currents than SOP4.

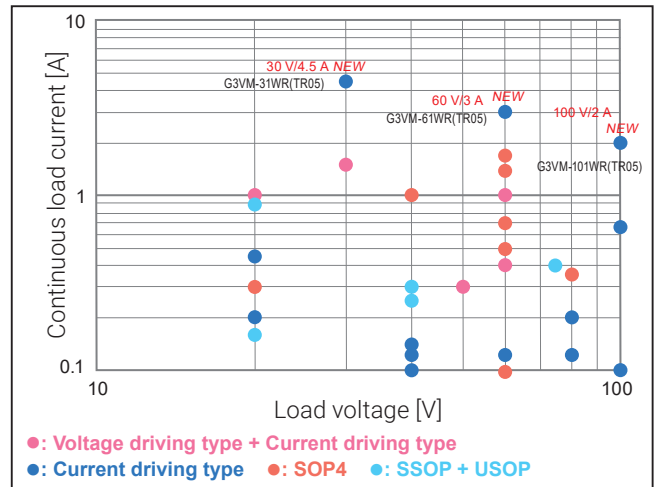
OMRON offers dual value to its customers in the form of "Compactness" and "High Current."

Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)
P-SON4	G3VM-31WR	1a	30	4.5
P-SON4	G3VM-61WR	1a	60	3
P-SON4	G3VM-101WR	1a	100	2
P-SON4	G3VM-201WR	1a	200	0.35

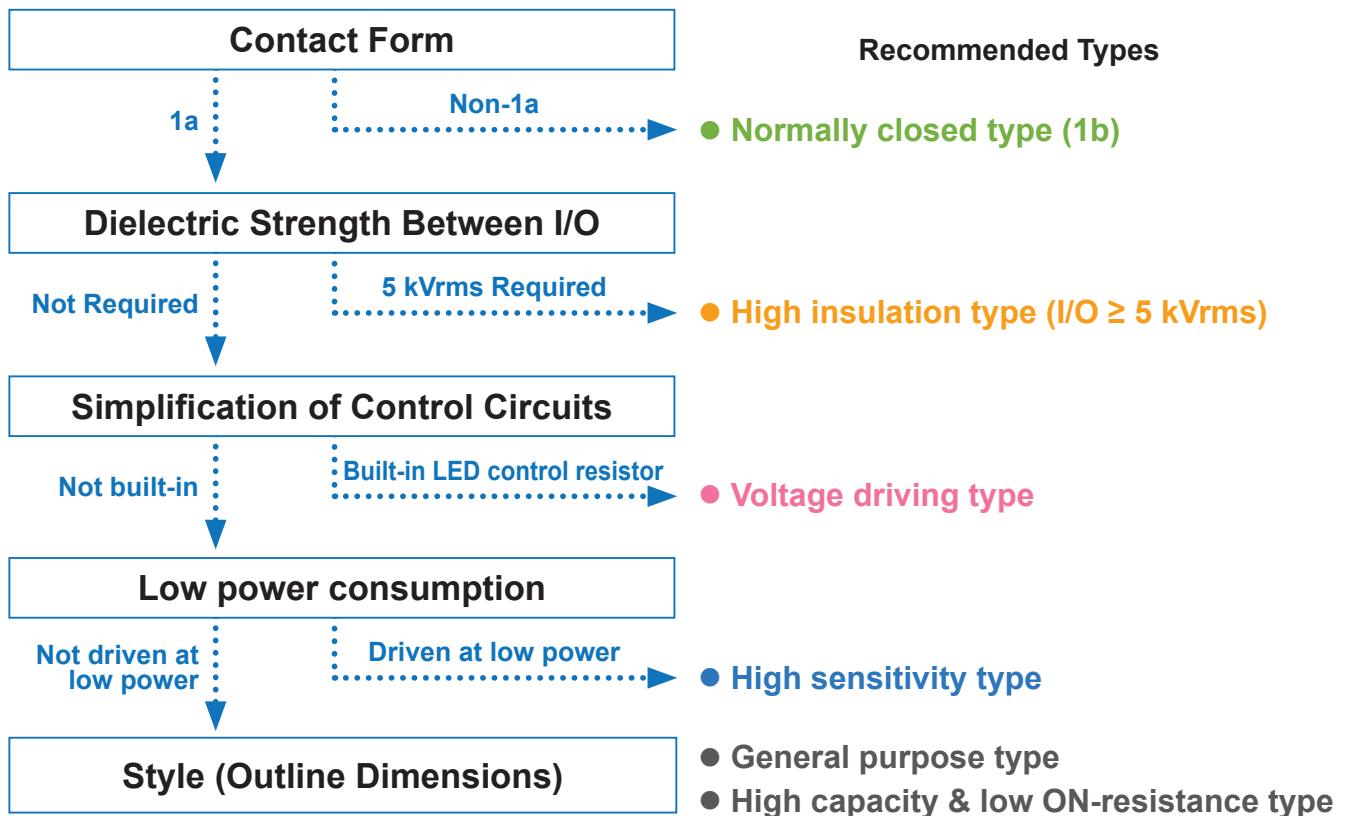
Mounting area reduced by roughly 75%!

27.3 mm<sup>2</sup>

7.1 mm<sup>2</sup>



## Product Selection Guide



List of characteristics by package (at the end)

DIP	SOP	SSOP	USOP	P-SON	VSON(R)	VSON	S-VSON
Mounting area 100%	Mounting area 62%	Mounting area 24%	Mounting area 20%	Mounting area 19%	Mounting area 10%	Mounting area 9%	Mounting area 8% *84% of VSON

# MOS FET Relay Recommended Lineup

## General Purpose Type

General purpose type and normally closed type (1b) relays are available for use in a variety of different applications.

### General Purpose Type

Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)
SOP4	G3VM-41GR8	1a	40	1
SOP4	G3VM-41GR5	1a	40	0.30
SOP4 (special)	G3VM-61VY2	1a	60	0.50
SOP4 (special)	G3VM-61VY3	1a	60	0.70
SOP4 (special)	G3VM-61VR	1a	60	1.40
SOP4	G3VM-201G1	1a	200	0.20
SOP4	G3VM-S5	1a	200	0.20
SOP4 (special)	G3VM-351VY	1a	350	0.11
SOP4	G3VM-401G1	1a	400	0.10
SOP4 (special)	G3VM-401VY	1a	400	0.11
SOP4	G3VM-401G	1a	400	0.12

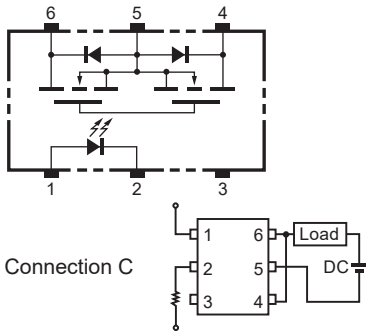
### Normally closed type

**NEW**  
**NEW**

Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)
SOP4	G3VM-63G	1b	60	0.50
DIP6	G3VM-63BR	1b	60	1.20
DIP6	G3VM-63ER	1b	60	1.20

## High Capacity & Low ON-resistance Type

Allows even higher current flow.  
Helps reduce heat generation and loss in equipment.



Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)*
DIP6	G3VM-31BR/ER	1a	30	5.0 (10)
DIP6	G3VM-61BR2/ER2	1a	60	4.0 (8)
DIP6	G3VM-101BR1/ER1	1a	100	3.5 (7)
SOP6	G3VM-31HR1	1a	30	4.5 (9)
SOP6	G3VM-61HR2	1a	60	4.0 (8)
SOP6	G3VM-101HR2	1a	100	3.0 (6)

\*The value shown in ( ) is for connection C (DC load only)

Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)
DIP4	G3VM-31AR/DR	1a	30	4
DIP4	G3VM-61AR1/DR1	1a	60	3
DIP4	G3VM-101AR1/DR1	1a	100	2

# MOS FET Relay Recommended Lineup

## High Insulation Type (I/O ≥ 5 kVrms)

High-insulation MOS FET relays are for customers who require insulation between input and output.

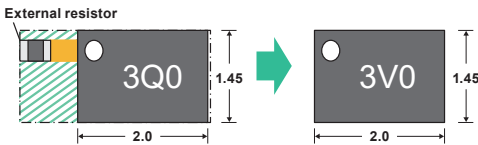
Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)	Ambient operating temperature (°C)	Dielectric strength between I/O (Vrms)	
DIP4	G3VM-41AY1/DY1	1a	40	2	-40 to 85	5,000	
DIP4	G3VM-61AY1/DY1	1a	60	0.5	-40 to 85	5,000	
DIP4	G3VM-201AY1/DY1	1a	200	0.25	-40 to 85	5,000	
DIP4	G3VM-351AY1/DY1	1a	350	0.1	-40 to 85	5,000	
DIP4	G3VM-401AY1/DY1	1a	400	0.12	-40 to 85	5,000	
<b>NEW</b>	DIP4	G3VM-401AY2/DY2	1a	400	0.12	-40 to 110	5,000
<b>NEW</b>	DIP4	G3VM-601AY1/DY1	1a	600	0.09	-40 to 85	5,000
	DIP4	G3VM-601AY2/DY2	1a	600	0.09	-40 to 110	5,000

## Voltage-Driving Type

Voltage-driven MOS FET relays that eliminate the need to select resistance on the input side are for customers who require compactness.

**S-VSON (existing)**  
Use with input current limiting resistor  
Mounting area 2.90 mm<sup>2</sup> + resistor area

**S-VSON(L) voltage driven**  
Built-in input current limiting resistor  
Mounting area 2.90 mm<sup>2</sup>



Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)	Operating input voltage (V)
VSON(R)4	G3VM-21UV11	1a	20	1.0	≤ 5.0
VSON(R)4	G3VM-51UV	1a	50	0.3	≤ 5.0
VSON(R)4	G3VM-61UV	1a	60	0.4	≤ 5.0
S-VSON(L)4	G3VM-31QVH	1a	30	1.5	≤ 5.0
S-VSON(L)4	G3VM-31QVL	1a	30	1.5	≤ 2.5
S-VSON(L)4	G3VM-61QVH	1a	60	0.4	≤ 5.0
S-VSON(L)4	G3VM-61QV2H	1a	60	1.0	≤ 5.0
S-VSON(L)4	G3VM-61QV2L	1a	60	1.0	≤ 2.5

## High Sensitivity Type

High sensitivity type MOS FET relays with reduced input current required for ON operations

Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)	Trigger LED forward current (typical) (mA)	Trigger LED forward current (max.) (mA)	
SOP4	G3VM-61G2	1a	60	0.40	0.40	1.00	
SOP4	G3VM-61G3	1a	60	0.40	0.02	0.10	
<b>NEW</b>	SOP4 (special)	G3VM-61VY4	1a	60	0.70	0.10	1.00
SOP4	G3VM-201G1	1a	200	0.20	0.40	1.00	
SOP4	G3VM-201G2	1a	200	0.20	0.02	0.10	
<b>NEW</b>	SOP4 (special)	G3VM-351VY1	1a	350	0.11	0.20	1.00
SOP4	G3VM-401G1	1a	400	0.10	0.02	0.10	
SOP4	G3VM-601G	1a	600	0.09	0.40	1.00	
SOP4	G3VM-601G1	1a	600	0.07	0.02	0.10	

# MOS FET Relay Product Lineup INDEX

Please refer to our web site or individual catalogs for more information such as measurement conditions

DIP (Dual Inline Package)											
Load voltage (max.) (V)	Model	Number of terminals	Contact form	Continuous load current (max.) (mA)	Maximum resistance with output ON (typical) ( $\Omega$ )	Current leakage when relay is open (max.) (nA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	Dielectric strength between I/O (Vrms)	
30	G3VM-31AR/DR	4	1a	4000	0.025	1000	450	3.0	1.0	2,500	★
30	G3VM-31BR/ER	6	1a	5000 (10000) *	0.02	1000	1100	5.0	0.5	2,500	★
40	G3VM-41AY1/DY1	4	1a	2000	0.09	1000	300	5.0	1.0	5,000	
60	G3VM-61AY1/DY1	4	1a	500	0.6	1000	130	3.0	1.0	5,000	
60	G3VM-61AR1/DR1	4	1a	3000	0.045	1000	250	2.0	1.0	2,500	★
60	G3VM-61BR2/ER2	6	1a	4000 (8000) *	0.035	1000	640	5.0	0.5	2,500	★
60	G3VM-61CR1/FR1	8	1a	5000 (10000) *	0.022	10000	850	5.0	1.0	2,500	
60	G3VM-63BR/ER	6	1b	1200 (2400) *	0.6	10	550	2.0	3.0	5,000	★
100	G3VM-101AR1/DR1	4	1a	2000	0.11	1000	110	2.0	0.5	2,500	★
100	G3VM-101BR1/ER1	6	1a	3500 (7000) *	0.05	1000	450	5.0	0.5	2,500	★
100	G3VM-101CR/FR	8	1a	3000 (6000) *	0.06	1000	720	5.0	1.0	2,500	
200	G3VM-201AY1/DY1	4	1a	250	5	1000	90	3.0	1.0	5,000	
200	G3VM-201AR/DR	4	1a	700	0.9	1000	110	1.0	0.5	2,500	★
200	G3VM-201CR/FR	8	1a	1500 (3000) *	0.25	1000	400	5.0	1.0	2,500	
350	G3VM-351AY1/DY1	4	1a	100	35	1000	30	2.0	1.0	5,000	
400	G3VM-401AY1/DY1	4	1a	120	22	1000	80	2.0	1.0	5,000	
400	G3VM-401AY2/DY2	4	1a	120	22	1000	80	1.0	0.5	5,000	★
400	G3VM-401CR/FR	8	1a	400 (800) *	3	1000	410	1.0	1.0	2,500	
600	G3VM-601AY1/DY1	4	1a	90	45	1000	75	2.0	1.0	5,000	
600	G3VM-601AY2/DY2	4	1a	90	45	1000	75	0.5	0.2	5,000	★
600	G3VM-601CR/FR	8	1a	600 (1200) *	1.3	10000	4300	3.0	1.0	2,500	

\*. The value shown in ( ) is for connection C (DC load only)

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

# MOS FET Relay Product Lineup INDEX

Please refer to our web site or individual catalogs for more information such as measurement conditions

SOP (Small Outline Package)											
Load voltage (max.) (V)	Model	Number of terminals	Contact form	Continuous load current (max.) (mA)	Maximum resistance with output ON (typical) (Ω)	Current leakage when relay is open (max.) (nA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	Dielectric strength between I/O (Vrms)	
30	G3VM-31HR1	6	1a	4500 (9000) *1	0.022	1000	1200	2.0	0.5	1,500	★
40	G3VM-41GR6	4	1a	120	10	1	1	0.5	0.5	1,500	○
40	G3VM-41GR5	4	1a	300	1	1	10	0.5	0.5	1,500	
40	G3VM-41GR8	4	1a	1000	0.1	1	300	3.0	0.5	1,500	
60	G3VM-61VY1 *2	4	1a	100	25	1000	10	5.0	5.0	3,750	
60	G3VM-61G2	4	1a	400	1	1000	130	8.0	3.0	1,500	
60	G3VM-61G3	4	1a	400	1	1000	130	10.0	5.0	1,500	
60	G3VM-61VY2 *2	4	1a	500	1	1000	20	2.0	0.5	3,750	★
60	G3VM-61VY3 *2	4	1a	700	0.15	1000	100	3.0	0.5	3,750	★
60	G3VM-61VY4 *2	4	1a	700	0.15	1000	100	6.0	1.0	3,750	
60	G3VM-61VR *2	4	1a	1400	0.13	1000	100	3.0	1.0	3,750	★
60	G3VM-63G	4	1b	500	1	1000	100	1.0	3.0	1,500	◆
60	G3VM-61HR2	6	1a	4000 (8000) *1	0.028	1000	750	2.0	0.5	1,500	★
100	G3VM-101HR2	6	1a	3000 (6000) *1	0.05	1000	460	2.0	0.5	1,500	★
200	G3VM-201G1	4	1a	200	5	1000	90	8.0	3.0	1,500	
200	G3VM-201G2	4	1a	200	5	1000	90	10.0	5.0	1,500	
200	G3VM-S5	4	1a	200	5	1000	100	1.5	1.0	1,500	
350	G3VM-351VY *2	4	1a	110	35	1000	30	1.0	0.5	3,750	★
350	G3VM-351VY1 *2	4	1a	110	28	1000	30	2.0	1.0	3,750	
400	G3VM-401G1	4	1a	100	18	1000	70	10.0	5.0	1,500	
400	G3VM-401G	4	1a	120	17	1000	70	1.0	1.0	1,500	
400	G3VM-401VY *2	4	1a	110	40	1000	30	1.0	0.5	3,750	★
600	G3VM-601G1	4	1a	70	35	1000	75	10.0	5.0	1,500	
600	G3VM-601G	4	1a	90	45	1000	75	8.0	3.0	1,500	

\*1. The value shown in ( ) is for connection C (DC load only)

\*2. VY1, VY2, VY3 and VR types: SOP 4-pin (special) package

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

# MOS FET Relay Product Lineup INDEX

Please refer to our web site or individual catalogs for more information such as measurement conditions

## P-SON (Power Small Outline Non-leaded)

Load voltage (max.) (V)	Model	Number of terminals	Contact form	Continuous load current (max.) (mA)	Maximum resistance with output ON (typical) (Ω)	Current leakage when relay is open (max.) (nA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	Dielectric strength between I/O (Vrms)
30	G3VM-31WR	4	1a	4,500	0.025	10	450	5	1	500
60	G3VM-61WR	4	1a	3,000	0.045	10	250	5	1	500
100	G3VM-101WR	4	1a	2,000	0.13	10	170	3	1	500
200	G3VM-201WR	4	1a	350	4.5	10	75	1	1	500

\*Refer to the catalog for measurement conditions

## USOP (Ultra Small Outline Package)

Load voltage (max.) (V)	Model	Number of terminals	Contact form	Continuous load current (max.) (mA)	Maximum resistance with output ON (typical) (Ω)	Current leakage when relay is open (max.) (nA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	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 Driving Type

Load voltage (max.) (V)	Model	Number of terminals	Contact form	Continuous load current (max.) (mA)	Maximum resistance with output ON (typical) (Ω)	Current leakage when relay is open (max.) (nA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	Recommended operating input Forward voltage (standard) (V)	Dielectric strength between I/O (Vrms)
20	G3VM-21UV11	4	1a	1,000	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 (max.) (V)	Model	Number of terminals	Contact form	Continuous load current (max.) (mA)	Maximum resistance with output ON (typical) (Ω)	Current leakage when relay is open (max.) (nA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	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	1,000	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	5	1	0.7	0.2	0.2	500
40	G3VM-41UR4	4	1a	250	2	1	5.0	0.3	0.3	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 (max.) (V)	Model	Number of terminals	Contact form	Continuous load current (max.) (mA)	Maximum resistance with output ON (typical) (Ω)	Current leakage when relay is open (max.) (nA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	Dielectric strength between I/O (Vrms)
30	G3VM-31QR	4	1a	1,500	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	1,000	0.2	1	80	2.0	0.3	500
100	G3VM-101QR1	4	1a	650	0.4	1	50	2.0	0.3	500

\*The 41QR10 type features a S-VSON(L) low-profile package

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

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

Load voltage (max.) (V)	Model	Number of terminals	Contact form	Continuous load current (max.) (mA)	Maximum resistance with output ON (typical) (Ω)	Current leakage when relay is open (max.) (nA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	Recommended operating input Forward voltage (standard) (V)	Dielectric strength between I/O (Vrms)
30	G3VM-31QVH	4	1a	1,500	0.1	1	120	2	0.2	5	500
30	G3VM-31QVL	4	1a	1,500	0.1	1	120	2	0.2	2.5	500
60	G3VM-61QV2H	4	1a	1,000	0.2	1	80	2	0.2	5	500
60	G3VM-61QV2L	4	1a	1,000	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) low-profile package

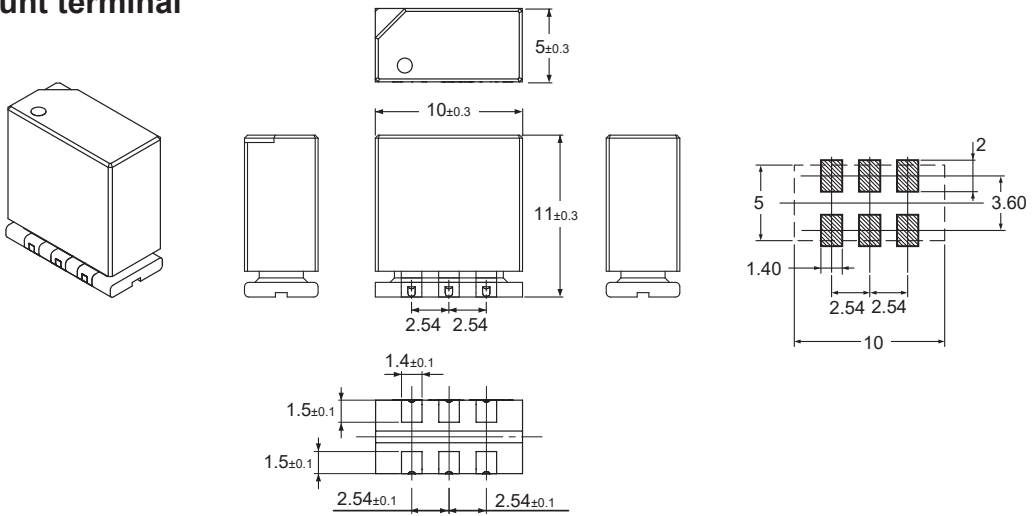
Note: Ambient operating temperature: -40 to +110°C

# MOS FET Relay Module Package Outline Dimensions / Appearance Example (Unit: mm)

## SPDT Module

### Surface-mount terminal

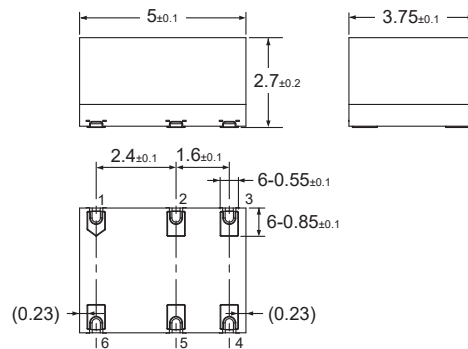
Weight: 1 g



## T-Module

### Surface-mount terminal

Weight: 0.11 g

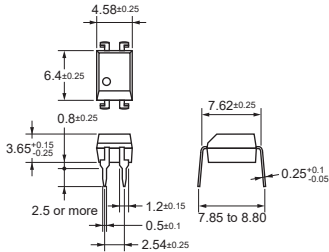


# MOS FET Relay Package Outline Dimensions / Appearance Example (Unit: mm)

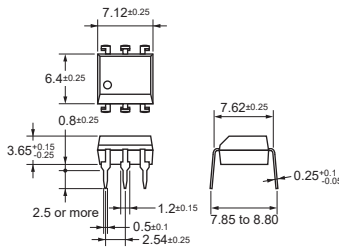
## DIP (Dual In-line Package)

### PCB terminal

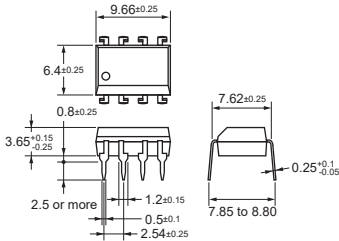
■DIP4-pin Weight: 0.25 g



■DIP6-pin Weight: 0.4 g

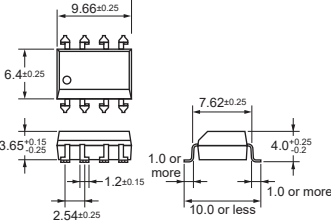
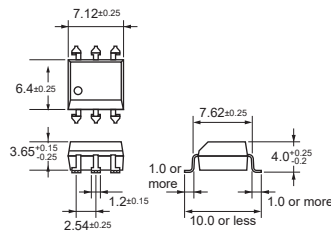
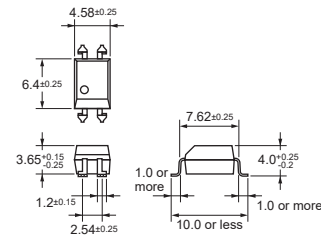


■DIP8-pin Weight: 0.54 g



### Surface-mount terminal

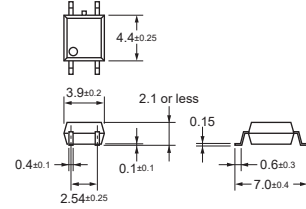
(Except G3VM-61BR/ER)



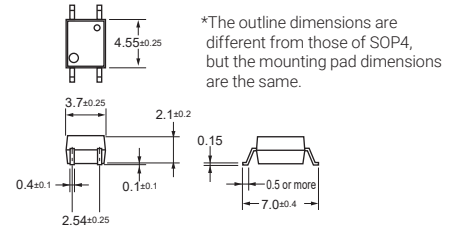
## SOP (Small Outline Package)

### Surface-mount terminal

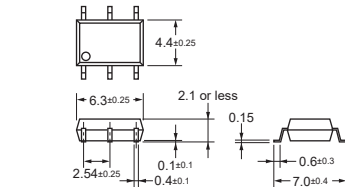
■SOP4-pin Weight: 0.1 g



■SOP4-pin (special) Weight: 0.1 g



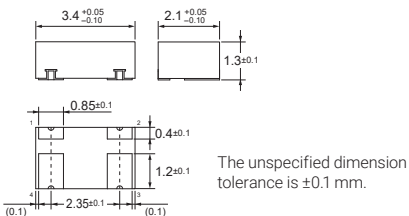
■SOP6-pin Weight: 0.13 g



## P-SOP (Power Small Outline Non-leaded)

### Surface-mount terminal

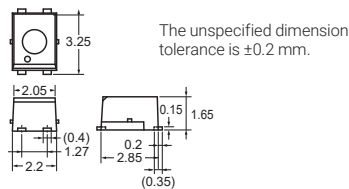
■P-SOP4-pin Weight: 0.02 g



## USOP (Ultra Small Outline Package)

### Surface-mount terminal

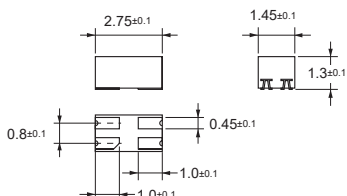
■USOP4-pin Weight: 0.03 g



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

### Surface-mount terminal

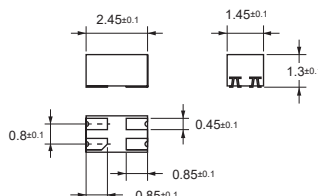
■VSON(R)4-pin Weight: 0.01 g



## VSON (Very Small Outline Non-leaded)

### Surface-mount terminal

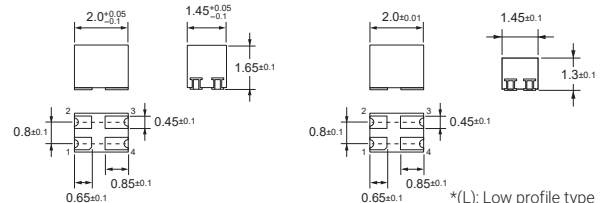
■VSON4-pin Weight: 0.01 g



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

### Surface-mount terminal

■S-VSON4-pin Weight: 0.01 g ■S-VSON(L)\* 4-pin Weight: 0.01 g





## MEMO

A series of horizontal dotted lines for writing a memo.





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