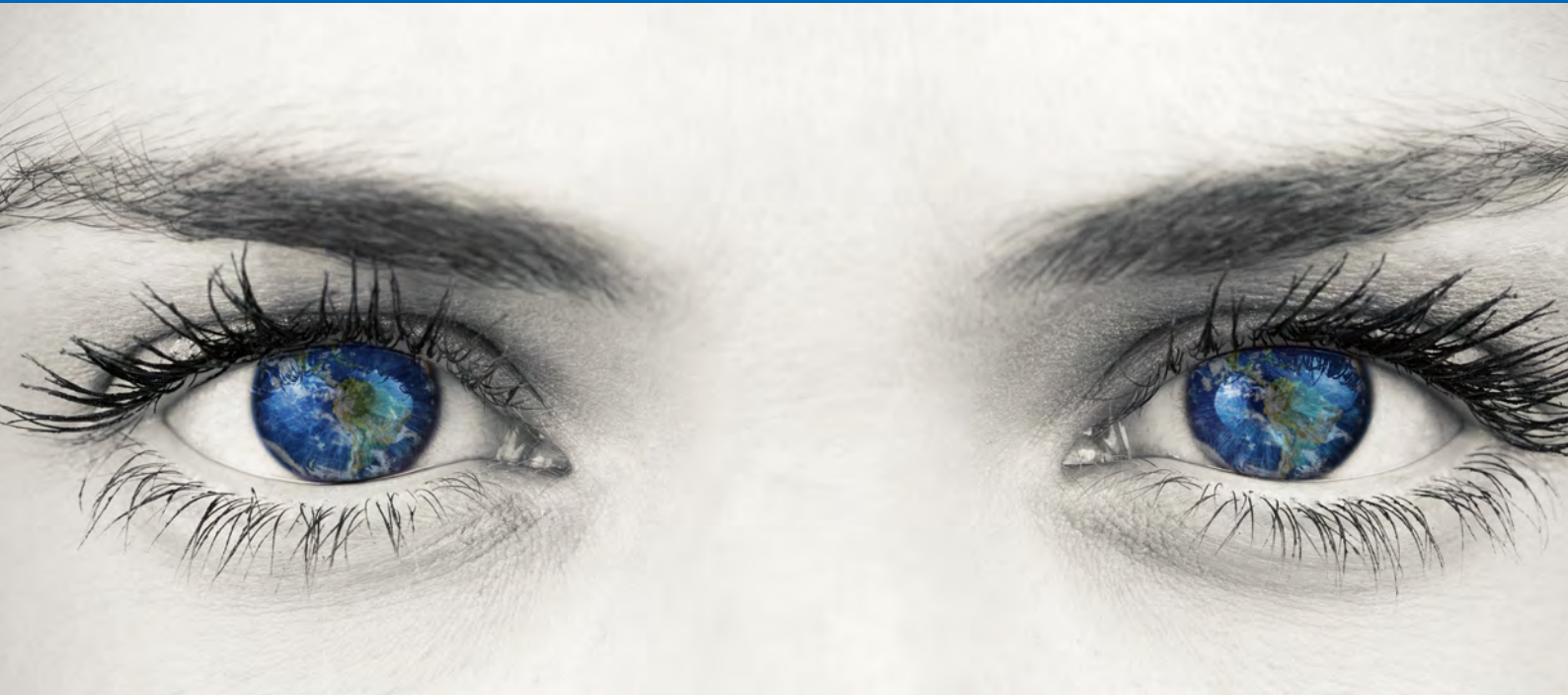


MOS FET Relay

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



MOS FET Relay Selection Guide



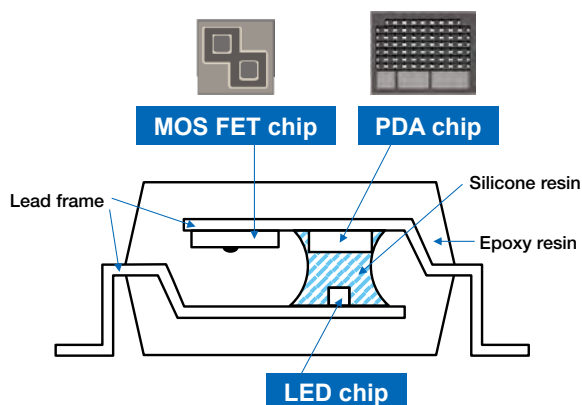
G3VM

MOS FET Relay

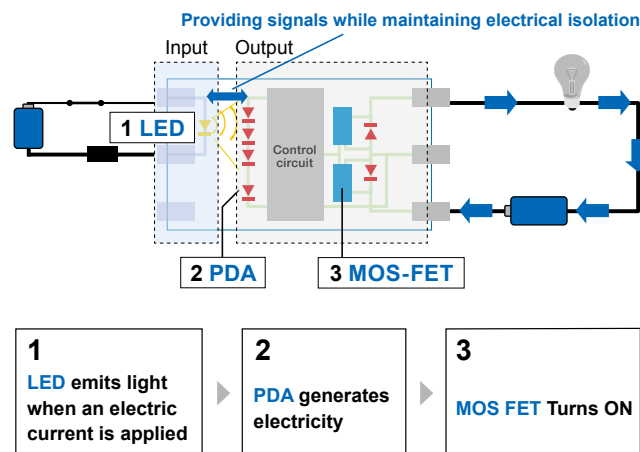
MOS FET relays are optoelectronic devices that use MOS FETs as output elements. They are increasingly being adopted as alternatives to mechanical relays and contribute to solving customer challenges with their superior performance.

MOS FET Relay Cross Section

The MOS FET relay consists of the following three chips:



Principle and Function of MOS FET Relay



Features (MOS FET Relay VS Mechanical Relay)

STRONG POINT 1

Unparalleled compact size contributes to smaller and denser equipment

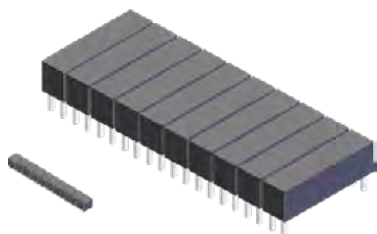
Compared with mounting area for 10 pieces (mounted at 0.3mm spacing)

General reed relay

Size: 20 mm x 5 mm x 5 mm

Mounting area:

20 mm x (5 + 0.3) x 10 = **1060 mm²**



G3VM S-VSON package

Size: 2 mm x 1.45 mm x 1.65 mm

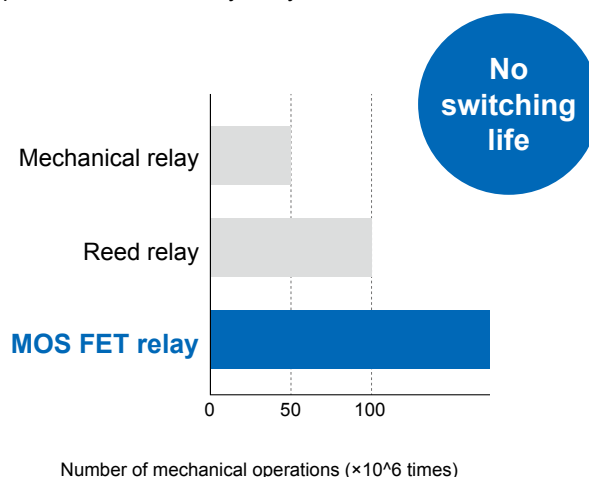
Mounting area: 2 mm x (1.45 + 0.3) x 10 = **35 mm²**

Mounting area can be reduced by about **65%***

STRONG POINT 2

Long life

Since there are no contacts (i.e., no mechanical life), it contributes to reducing maintenance frequency in equipment that uses many relays.



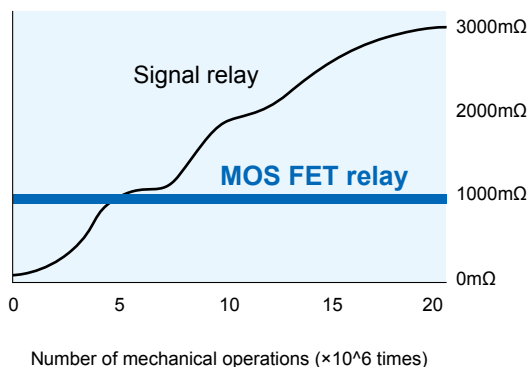
*According to OMRON's research in March 2025

Features (MOS FET Relay VS Mechanical Relay)

STRONG POINT 3

Stable ON resistance

Compared to mechanical relays, the ON resistance of MOS FET relays that have no contacts does not depend on the number of switching cycles.

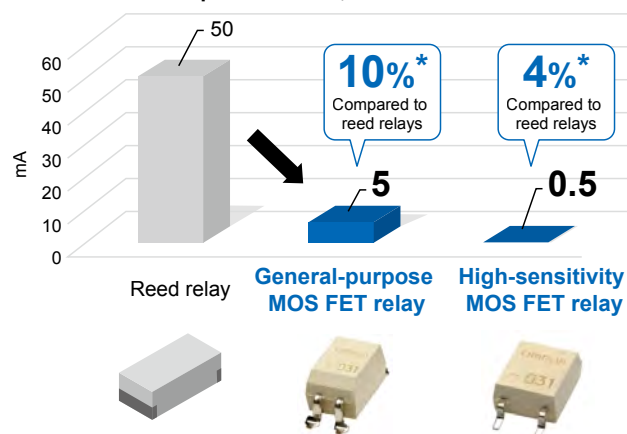


STRONG POINT 4

Low power consumption

Compared to reed relays, power consumption on the input is very low, contributing to the energy saving of equipment.

Drive Current Comparison * Example of 5 VDC drive



*According to OMRON's research in March 2025

STRONG POINT 5

Other features

Mechanical Relay (Reed Relay)	VS	MOS FET Relay
Yes 	Operating noise	Silent operation possible No mechanical contact = No contact sound
Yes 	Contact bouncing	None No mechanical contact = No contact bouncing
Required Surge absorber is required to protect peripheral circuits from surges (reverse voltage) generated by the coil	Coil surge absorber (input)	Not required No coil, thus no surge (reverse voltage)



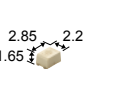
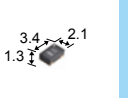




Mechanical Relay (Reed Relay)	VS	MOS FET Relay
 G6S-2F DC 220V	Load voltage (peak value)	Surpassing mechanical relays High-voltage types are also available. G3VM-601DY1 Max. 600 VDC
 G6S-2F 2000 VAC (1 min.)	Dielectric strength between input and output	High-dielectric strength type comparable to mechanical relays also available G3VM-601DY1 Max. 5000 VAC (1 min.)

Package / Packing Types

Package Types

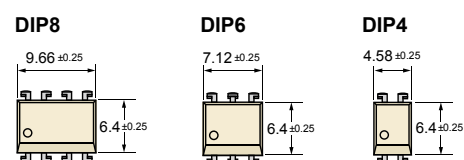
(Unit: mm)

A diverse lineup of packages

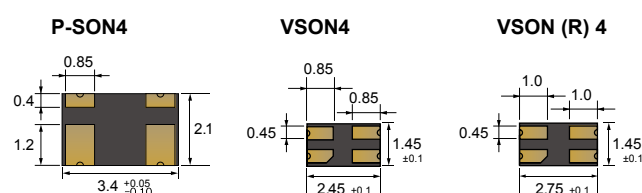
DIP	SOP	USOP	P-SON	VSON (R)	VSON	S-VSON (L)	WSON
Assuming 100% of volume	Volume 33.7%	Volume 13.0%	Volume 9.7%	Volume 8.7%	Volume 4.3%	Volume 3.5%	Volume 2.2%
							

Note. Calculated based on the size of the main unit, not including upper terminals from the board surface. Calculated from the size of the main unit, not including terminals above the board surface.

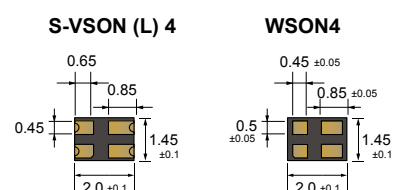
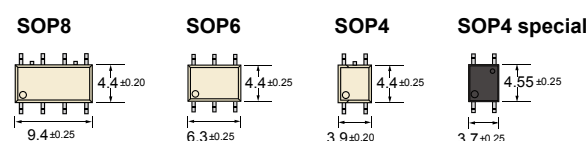
DIP (Dual Inline Package)



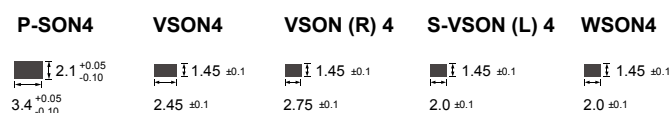
Enlarged dimensional drawing (back side)



SOP (Small Outline Package)



SON (Small Outline Non-leaded)

The unspecified dimension tolerance is ± 0.1 mm.

MOS FET Relay Packaging Types

Large reels, small reels, and sticks are available.

Package		surface-mount terminal						
		DIP4	DIP6	DIP8	SOP4	SOP4 (special)	SOP6	SOP8
Tape packaging / pcs.	TR	1,500			2,500	3,000	2,500	2,500
	TR05	500			500			500
Stick packaging / pcs.		100	50		100	125	75	50

Package	Through-hole terminal	
	DIP4	DIP6/DIP8
Stick packaging / pcs.	100	50

- OMRON also offers reels of 500 pieces, as opposed to the usual reels of several thousand pieces.
Small-lot support enables efficient surface mounting with less waste.
(When ordering, select the format with (TR05) at the end of the format.)
- For packages without stick packaging, cut-tape items can be delivered in small quantities.



3,000 pcs/reel



500 pcs/reel

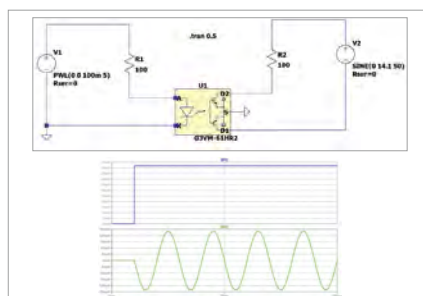
Omron Web site Application Guide

Selection, Design Support



Parametric search

By narrowing down your search criteria, you can easily find products with specifications that suit your needs.



Design Support Data

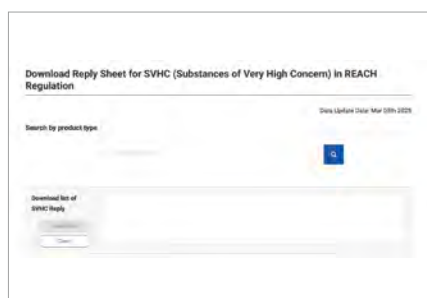
Supports circuit design efficiency. Download LTspice® simulation models of MOS FET relays by format.



Cross reference

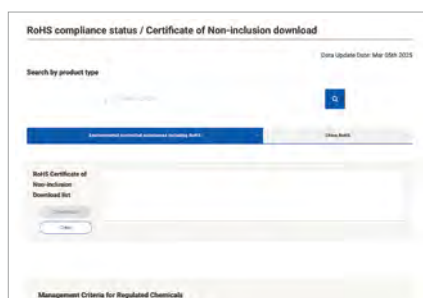
Enter the format of another company's product to search for an OMRON equivalent.

SVHC Reply / RoHS compliance status / Standards Certification



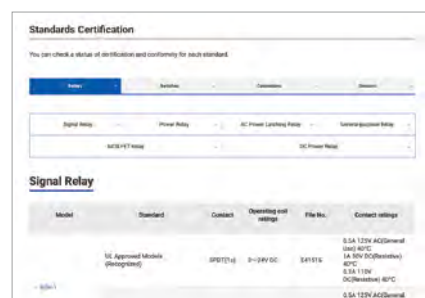
Reply Sheet for SVHC (Substances of Very High Concern) in REACH Regulation

Enter the product type to check whether the product contains SVHC or not and download the response form.



RoHS compliance status / Certificate of Non-inclusion download

Enter the product type to check RoHS compliance status and download certificates.



Standards Certification

You can check a status of certification and conformity for each standard.

Product Basic Information



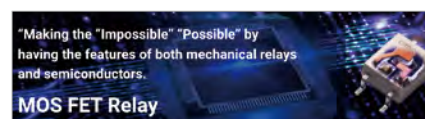
Fundamentals of MOS FET Relays

This section introduces in detail the basics of MOS FET relays, including technology, usage, standards, and a glossary of terms.



4-minute Real Verification! Mechanical relay vs MOS FET relay

The video clearly shows the four points where MOS FET relays are superior to mechanical relays.



MOS FET Relay

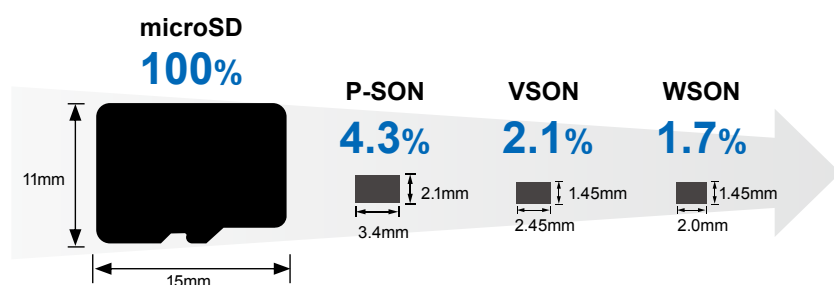
The structure, principle of operation, and selection method of MOS FET relays are explained in detail.

Application Examples

Recommended for Semiconductor Inspection Devices

We propose compact packages with high-density mounting and high mounting strength.

Assuming the microSD card's aspect ratio is 100%.



Wettable flanks construction for increased mounting strength

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



Background of demand for miniaturization for semiconductor inspection equipment

Advances in semiconductor miniaturization

More circuits and functions per wafer

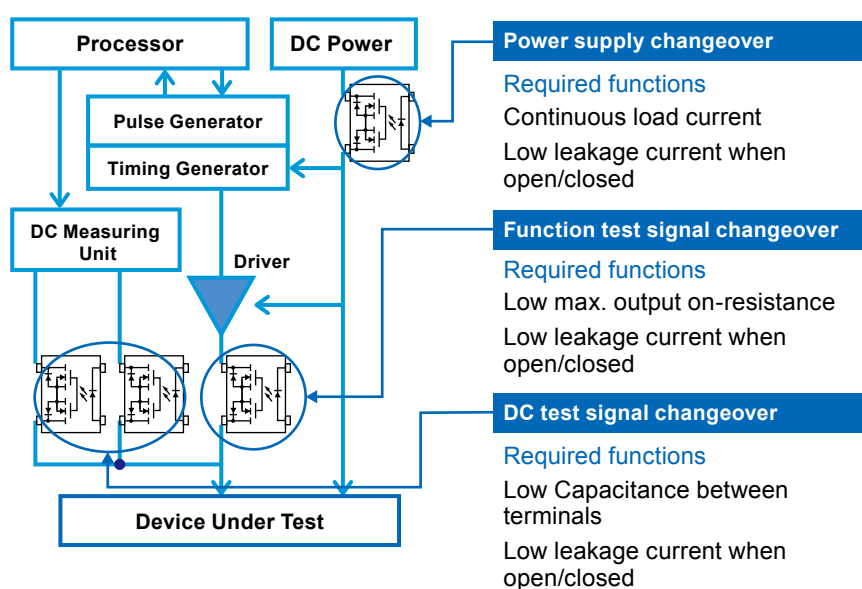
More inspection points and items to be inspected by semiconductor inspection equipment

More signal switching in the inspection circuit

More relays mounted for signal switching

Need to reduce the size and weight of relays to avoid increasing the size of the equipment

Semiconductor Inspection Device Circuit





● □ SON package series, etc.

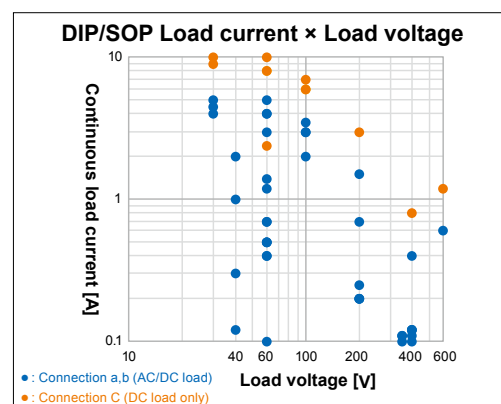
Application Examples

Recommended for general-purpose applications (FA equipment, security equipment, OA equipment, communication equipment, etc.)

We propose a DIP/SOP package that achieves high switching performance and energy-saving performance.

Package	DIP	SOP
Appearance		
Load voltage	DC/AC 30V ~ 600V	DC/AC 30V ~ 600V
Continuous load current	90mA ~ 10A	70mA ~ 9A
Contact form	1a, 1b	1a, 1b
Dielectric strength between I/O	2500V, 5000V	1500V, 3750V

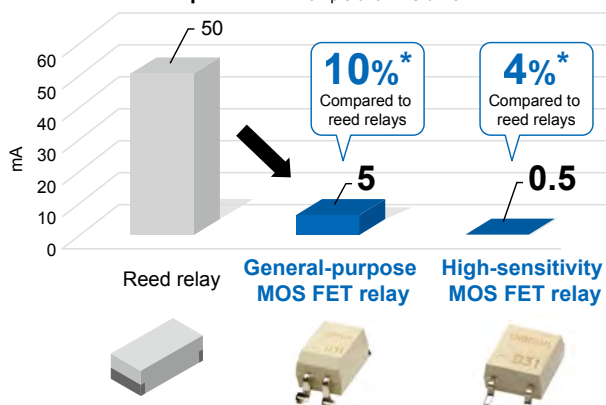
*The value shown in () is for connection C (DC load only)



NOTE : Continuous load current (max.), Load voltage (max.) : Indicates peak AC and DC

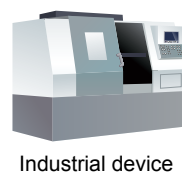
Very low current consumption on the input side contributes to energy saving of equipment.

Drive Current Comparison * Example of 5 VDC drive

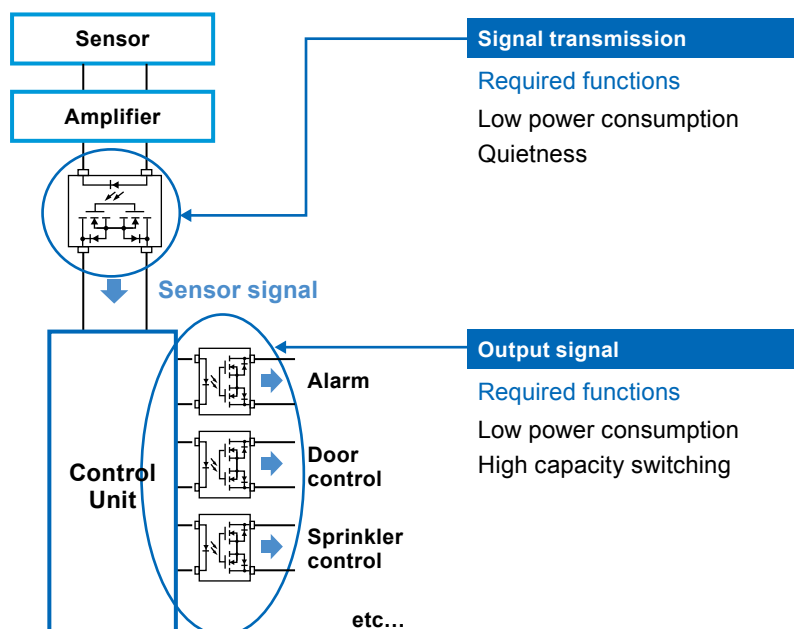


Normally closed type (1b contact) is also available, which contributes to reduced power consumption during continuous energization.

We offer MOS FET relays for a wide variety of applications including industrial equipment, and we have a large selection of UL certified products.



Example of circuit for security equipment



- Normally closed type (1b)



- Normally closed type (1b)

Lineup according to application

From signal relays Longer life,
smaller size, and power saving

General Purpose Type

Using MOS FET relays
Want to save even more power

High-sensitivity type

From mechanical power relays
Want to extend the service life

High capacity & low ON-resistance type

High insulation performance for
FA and other applications,
Longer service life

High Insulation Type

Want to replace mechanical relays
with fewer additional parts.

Voltage Driven Type

For use in high temperature
environments

High Temperature Type

General Purpose Type

General purpose type and normally closed type (1b) relays are available for use in a variety of different applications. These are mainly useful for signal switching (1A or less load) in applications where high frequency and long life are required.

The normally closed (1b contact specification) also supports applications to suppress power consumption during equipment operation.

By replacing signal relays with MOS FET relays, they can be used in a wide range of applications such as security equipment.

General Purpose Type

Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)
SOP4	G3VM-41GR5	1a	40	0.3
SOP4 special	G3VM-61VY2	1a	60	0.5
SOP4 special	G3VM-61VY3	1a	60	0.7
SOP4 special	G3VM-61VR	1a	60	1.4
SOP4	G3VM-201G1	1a	200	0.2
SOP4	G3VM-S5	1a	200	0.2
SOP4 special	G3VM-351VY	1a	350	0.11
SOP4	G3VM-401G1	1a	400	0.1
SOP4 special	G3VM-401VY	1a	400	0.11
SOP4	G3VM-401G	1a	400	0.12

The normally closed (1b contact specification)

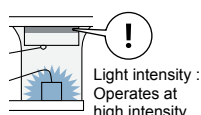
Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)
SOP4	G3VM-63G	1b	60	0.5
DIP6	G3VM-63BR/ER	1b	60	1.2
SOP4	G3VM-353G	1b	350	0.12

High sensitivity type (Driven at low power)

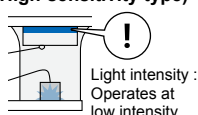
High sensitivity type MOS FET relays reduce the input current required for ON operation.

This reduces the power consumption of the device and also allows it to be used in equipment that requires a fast response time.

conventional



MOS FET relays (High-sensitivity type)



Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)	Trigger LED current Typ (mA)	Trigger LED current MAX (mA)
SOP4	G3VM-61G2	1a	60	0.4	0.4	1
SOP4	G3VM-61G3	1a	60	0.4	-	0.2
SOP4 special	G3VM-61VY4	1a	60	0.7	0.1	1
SOP4	G3VM-201G1	1a	200	0.2	0.4	1
SOP4	G3VM-201G2	1a	200	0.2	-	0.2
SOP4 special	G3VM-351VY1	1a	350	0.11	0.2	1
SOP4	G3VM-401G1	1a	400	0.1	-	0.2
SOP4	G3VM-601G	1a	600	0.09	0.4	1
SOP4	G3VM-601G1	1a	600	0.07	-	0.2

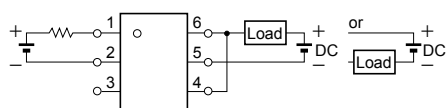
Recommended Lineup

High capacity & low ON-resistance type

High capacitance & low on-resistance type MOS FET relays can carry higher current.

They reduce heat generation and losses in equipment and also contribute to longer service life in direct switching applications for loads (2 to 5 A) where mechanical power relays were conventionally used.

DC Parallel Connection (C connection)



Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)*	Maximum resistance with output ON(Ω)
DIP4	G3VM-31AR/DR	1a	30	4	0.025
SOP6	G3VM-31HR1	1a	30	4.5 (9)	0.022
DIP6	G3VM-31BR/ER	1a	30	5.0 (10)	0.02
SOP4	G3VM-61VR	1a	60	1.4	0.13
DIP4	G3VM-61AR1/DR1	1a	60	3	0.045
DIP6	G3VM-61BR2/ER2	1a	60	4.0 (8)	0.035
SOP6	G3VM-61HR2	1a	60	4.0 (8)	0.028
DIP8	G3VM-61CR1/FR1	1a	60	5.0 (10)	0.022
DIP4	G3VM-101AR1/DR1	1a	100	2	0.11
SOP6	G3VM-101HR2	1a	100	3.0 (6)	0.05
DIP6	G3VM-101BR1/ER1	1a	100	3.5 (7)	0.05
DIP8	G3VM-201CR/FR	1a	200	1.5 (3)	0.25

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

High Insulation Type (I/O ≥ 5 kVrms)

High isolation type MOS FET relays are less susceptible to noise and overvoltage due to their high isolation performance, which ensures that the input and output sides are well insulated.

This contributes to improved equipment safety, making them ideal for applications that require insulation between input and output, such as factory automation equipment.

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~ +85	5,000
DIP4	G3VM-61AY1/DY1	1a	60	0.5	-40~ +85	5,000
DIP6	G3VM-63BR/ER	1b	60	1.2(2.4)	-40~ +110	5,000
DIP4	G3VM-201AY1/DY1	1a	200	0.25	-40~ +85	5,000
DIP4	G3VM-351AY1/DY1	1a	350	0.1	-40~ +85	5,000
DIP4	G3VM-401AY1/DY1	1a	400	0.12	-40~ +85	5,000
DIP4	G3VM-401AY2/DY2	1a	400	0.12	-40~ +110	5,000
DIP4	G3VM-601AY1/DY1	1a	600	0.09	-40~ +85	5,000
DIP4	G3VM-601AY2/DY2	1a	600	0.09	-40~ +110	5,000

Voltage Driven Type

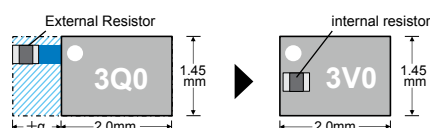
Voltage-driven MOS FET relays are ideal for applications that require a compact size. Resistor selection on the input side can be omitted, and circuit changes and additional parts can be reduced by replacing mechanical relays with MOS FET relays.

S-VSON (L) Current driving type

Use with input current limiting resistor
Mounting area 2.90mm² +resistor area

S-VSON (L) Voltage Driven Type

Built-in input current limiting resistor
Mounting Area of 2.90 mm²



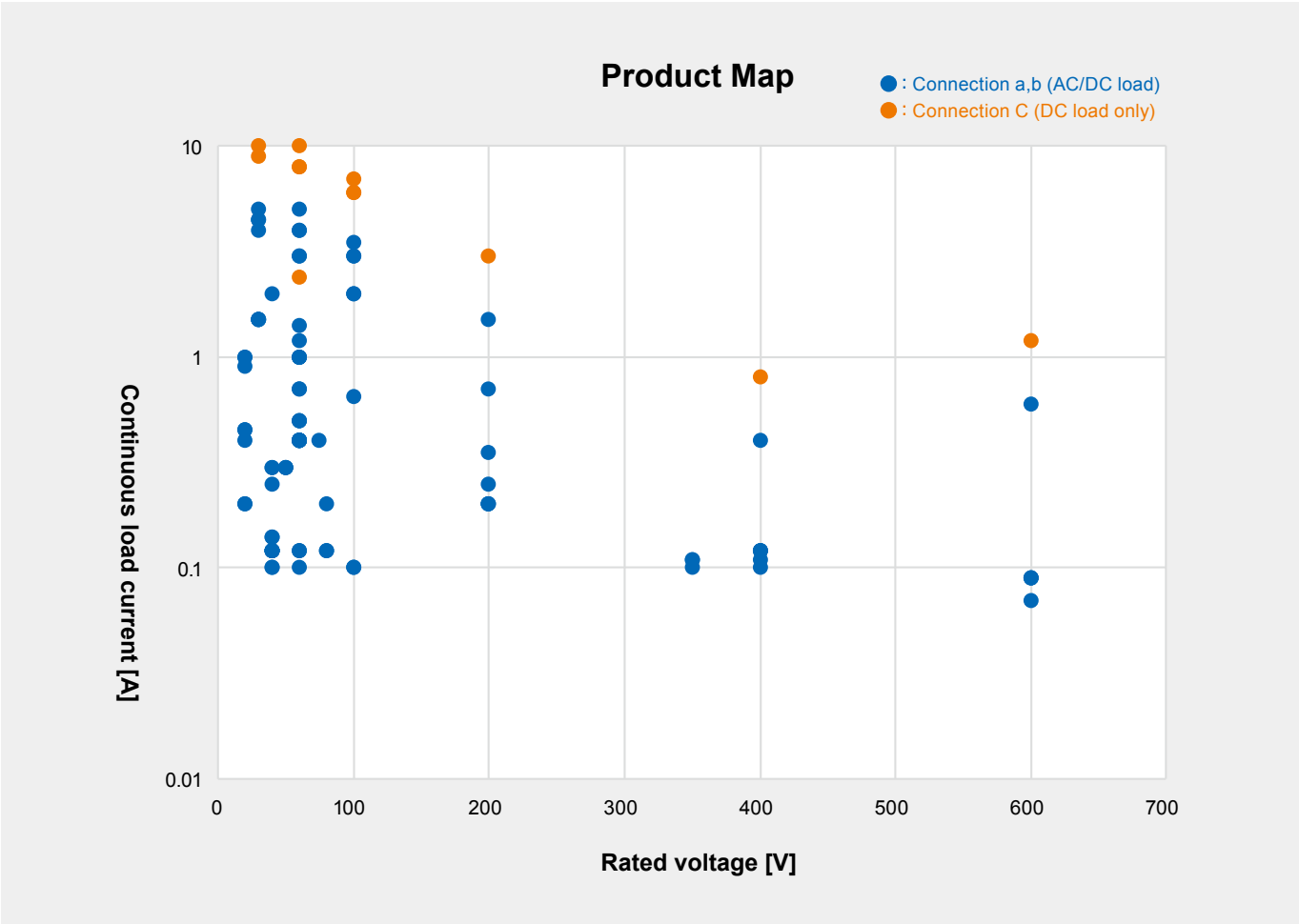
Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)	Operating input voltage (V)
VSON(R)4	G3VM-21UV11	1a	20	1	≤ 5.0
S-VSON(L)4	G3VM-31QVH	1a	30	1.5	≤ 5.0
S-VSON(L)4	G3VM-31QVL	1a	30	1.5	≤ 2.5
S-VSON(L)4	G3VM-31QV2H	1a	30	1.5	≤ 5.0
VSON(R)4	G3VM-51UV	1a	50	0.3	≤ 5.0
VSON(R)4	G3VM-61UV	1a	60	0.4	≤ 5.0
S-VSON(L)4	G3VM-61QVH	1a	60	0.4	≤ 5.0
S-VSON(L)4	G3VM-61QV2H	1a	60	1	≤ 5.0
S-VSON(L)4	G3VM-61QV2L	1a	60	1	≤ 2.5
S-VSON(L)4	G3VM-61QV3H	1a	60	1	≤ 5.0
S-VSON(L)4	G3VM-61QV4H	1a	60	0.4	≤ 5.0
S-VSON(L)4	G3VM-61QV3L	1a	60	0.4	≤ 2.5

High Temperature Type

High-temperature type MOS FET relays have high heat resistance to cope with the heat generated in equipment due to high-density mounting, such as inspection equipment. Even in high-temperature environments exceeding 85°C, the temperature design can provide a margin of safety.

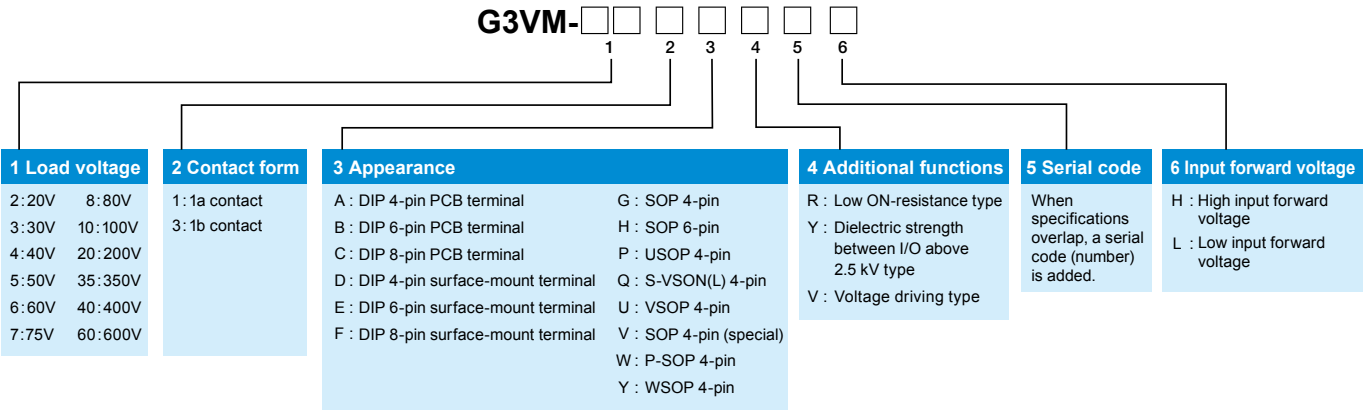
Package	Model specification	Contact	Load voltage (V)	Continuous load current (A)	Ambient operating temperature (°C)
S-VSON(L)4	G3VM-31QV2H	1a	30	1.5	-40~ +125
S-VSON(L)4	G3VM-61QV3H	1a	60	1	-40~ +125
S-VSON(L)4	G3VM-61QV4H	1a	60	0.4	-40~ +125
S-VSON(L)4	G3VM-61QV3L	1a	60	0.4	-40~ +125

Product Map / Model Standard



NOTE . Continuous load current (max.), Load voltage (max.) : Indicates peak AC and DC

Model Number Legend



*Some voltage driving types only

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.

Note 3: When ordering reel packaging, select the format with (TR) or (TR05) at the end of the format.

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) (Ω)	Current leakage when relay is open (max.) (μA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	Dielectric strength between I/O (Vrms)	Ambient operating temperature (°C)
30	G3VM-31AR/DR	4	1a	4000	0.025	1	450	3	1	2500	-40~+110
30	G3VM-31BR/ER	6	1a	5000 (10000)*	0.02	1	1100	5	0.5	2500	-40~+110
40	G3VM-41AY1/DY1	4	1a	2000	0.09	1	300	5	1	5000	-40~+85
60	G3VM-61AY1/DY1	4	1a	500	0.6	1	130	3	1	5000	-40~+85
60	G3VM-61AR1/DR1	4	1a	3000	0.045	1	250	2	1	2500	-40~+110
60	G3VM-61BR2/ER2	6	1a	4000 (8000)*	0.035	1	640	5	0.5	2500	-40~+110
60	G3VM-61CR1/FR1	8	1a	5000 (10000)*	0.022	10	850	5	1	2500	-40~+85
60	G3VM-63BR/ER	6	1b	1200 (2400)*	0.3	1	550	2	3	5000	-40~+110
100	G3VM-101AR1/DR1	4	1a	2000	0.11	1	110	2	0.5	2500	-40~+110
100	G3VM-101BR1/ER1	6	1a	3500 (7000)*	0.05	1	450	5	0.5	2500	-40~+110
100	G3VM-101CR/FR	8	1a	3000 (6000)*	0.06	1	720	5	1	2500	-40~+110
200	G3VM-201AY1/DY1	4	1a	250	5	1	90	3	1	5000	-40~+85
200	G3VM-201AR/DR	4	1a	700	0.9	1	110	1	0.5	2500	-40~+110
200	G3VM-201CR/FR	8	1a	1500 (3000)*	0.25	1	400	5	1	2500	-40~+110
350	G3VM-351AY1/DY1	4	1a	100	35	1	30	2	1	5000	-40~+85
400	G3VM-401AY1/DY1	4	1a	120	22	1	80	2	1	5000	-40~+85
400	G3VM-401AY2/DY2	4	1a	120	22	1	80	1	0.5	5000	-40~+110
400	G3VM-401CR/FR	8	1a	400 (800)*	3	1	410	1	1	2500	-40~+85
600	G3VM-601AY1/DY1	4	1a	90	45	1	75	2	1	5000	-40~+85
600	G3VM-601AY2/DY2	4	1a	90	45	1	75	0.5	0.2	5000	-40~+110
600	G3VM-601CR/FR	8	1a	600 (1200)*	1.3	10	4300	3	1	2500	-40~+85

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

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.) (μA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	Dielectric strength between I/O (Vrms)	Ambient operating temperature (°C)
30	G3VM-31HR1	6	1a	4500 (9000) ¹	0.022	1	1200	2	0.5	1500	-40~+110
40	G3VM-41GR6	4	1a	120	10	0.001	1	0.5	0.5	1500	-20~+85
40	G3VM-41GR5	4	1a	300	1	0.001	10	0.5	0.5	1500	-20~+85
60	G3VM-61VY1 ²	4	1a	100	25	1	10	5	5	3750	-40~+85
60	G3VM-61G2	4	1a	400	1	1	130	8	3	1500	-40~+85
60	G3VM-61G3	4	1a	400	1	1	130	10	5	1500	-40~+85
60	G3VM-61VY2 ²	4	1a	500	1	1	20	2	0.5	3750	-40~+110
60	G3VM-61VY3 ²	4	1a	700	0.15	1	100	3	0.5	3750	-40~+110
60	G3VM-61VY4 ²	4	1a	700	0.15	1	100	6	1	3750	-40~+85
60	G3VM-61VR ²	4	1a	1400	0.13	1	100	3	1	3750	-40~+110
60	G3VM-63G	4	1b	500	1	1	100	1	3	1500	-40~+105
60	G3VM-61HR2	6	1a	4000 (8000) ¹	0.028	1	750	2	0.5	1500	-40~+110
80	G3VM-81GR1	4	1a	200	5	0.001	6.5	0.5	0.5	1500	-20~+85
100	G3VM-101HR2	6	1a	3000 (6000) ¹	0.05	1	460	2	0.5	1500	-40~+110
200	G3VM-201G1	4	1a	200	5	1	90	8	3	1500	-40~+85
200	G3VM-201G2	4	1a	200	5	1	90	10	5	1500	-40~+85
200	G3VM-S5	4	1a	200	5	1	100	1.5	1	1500	-40~+85
350	G3VM-351VY ²	4	1a	110	35	1	30	1	0.5	3750	-40~+110
350	G3VM-351VY1 ²	4	1a	110	28	1	30	2	1	3750	-40~+85
350	G3VM-353G	4	1b	120	15	1	65	1	3	1500	-40~+85
400	G3VM-401G1	4	1a	100	18	1	70	10	5	1500	-40~+85
400	G3VM-401G	4	1a	120	17	1	70	1	1	1500	-40~+85
400	G3VM-401VY ²	4	1a	110	40	1	30	1	0.5	3750	-40~+110
600	G3VM-601G1	4	1a	70	35	1	75	10	5	1500	-40~+85
600	G3VM-601G	4	1a	90	45	1	75	8	3	1500	-40~+85

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

² VY, VY1, VY2, VY3, VY4 and VR types: SOP 4-pin (special) package

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)	Ambient operating temperature (°C)
30	G3VM-31WR	4	1a	4500	0.025	10	450	5	1	500	-40~+110
60	G3VM-61WR	4	1a	3000	0.045	10	250	5	1	500	-40~+110
100	G3VM-101WR	4	1a	2000	0.13	10	170	3	1	500	-40~+110
200	G3VM-201WR	4	1a	350	4.5	10	75	1	1	500	-40~+110

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)	Ambient operating temperature (°C)
20	G3VM-21PR10	4	1a	200	3	1	0.8	0.2	0.2	500	-40~+85
20	G3VM-21PR1	4	1a	450	0.6	1	5	0.5	0.5	500	-40~+85
20	G3VM-21PR11	4	1a	900	0.18	1	40	2	1	500	-40~+85
40	G3VM-41PR12	4	1a	100	15	1	0.3	0.2	0.2	500	-40~+85
40	G3VM-41PR10	4	1a	120	12	1	0.45	0.2	0.3	500	-40~+85
40	G3VM-41PR6	4	1a	120	10	0.2	1	0.2	0.3	500	-40~+85
40	G3VM-41PR11	4	1a	140	7	1	0.7	0.2	0.2	500	-40~+85
40	G3VM-41PR5	4	1a	300	1	1	10	0.5	0.3	500	-40~+85
50	G3VM-51PR	4	1a	300	1	1	12	0.5	0.4	500	-40~+85
60	G3VM-61PR1	4	1a	120	10	1	0.7	0.2	0.2	500	-40~+85
60	G3VM-61PR	4	1a	400	1	1	20	0.5	0.5	500	-40~+85
75	G3VM-71PR	4	1a	400	1	1	30	2	1	500	-40~+85
80	G3VM-81PR	4	1a	120	7	0.02	5	0.5	0.2	500	-40~+85
100	G3VM-101PR	4	1a	100	8	0.2	6	0.3	0.3	500	-40~+85

VSON(R) (Very Small Outline Package Non-leaded with Resistance) Voltage Driven 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)	Ambient operating temperature (°C)
20	G3VM-21UV11	4	1a	1000	0.18	1	40	2	1	5	500	-40~+110
50	G3VM-51UV	4	1a	300	1	1	12	0.5	0.4	5	500	-40~+110
60	G3VM-61UV	4	1a	400	1	1	20	0.5	0.5	5	500	-40~+110

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)	Ambient operating temperature (°C)
20	G3VM-21UR10	4	1a	200	3	1	0.8	0.2	0.2	500	-40~+110
20	G3VM-21UR1	4	1a	450	0.8	1	5	0.4	0.4	500	-40~+110
20	G3VM-21UR11	4	1a	1000	0.18	1	40	2	1	500	-40~+110
40	G3VM-41UR12	4	1a	100	15	1	0.3	0.2	0.2	500	-40~+110
40	G3VM-41UR10	4	1a	120	12	1	0.45	0.2	0.3	500	-40~+110
40	G3VM-41UR11	4	1a	140	5	1	0.7	0.2	0.2	500	-40~+110
40	G3VM-41UR4	4	1a	250	2	1	5	0.3	0.3	500	-40~+110
50	G3VM-51UR	4	1a	300	1	1	12	0.5	0.4	500	-40~+110
60	G3VM-61UR1	4	1a	120	10	1	0.7	0.2	0.2	500	-40~+110
60	G3VM-61UR	4	1a	400	1	1	20	0.5	0.5	500	-40~+110
80	G3VM-81UR	4	1a	120	7	0.02	5	0.5	0.2	500	-40~+110
80	G3VM-81UR1	4	1a	200	6	1	6.5	0.4	0.4	500	-40~+110
100	G3VM-101UR	4	1a	100	8	0.2	6	0.3	0.3	500	-40~+110

Product Lineup INDEX

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

S-VSON (L) (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)	Ambient operating temperature ($^{\circ}$ C)
30	G3VM-31QR	4	1a	1500	0.1	1	120	2	1	500	-40~+110
40	G3VM-41QR10	4	1a	120	11	1	0.45	0.2	0.3	500	-40~+110
60	G3VM-61QR	4	1a	400	1.1	1	12	0.5	0.3	500	-40~+110
60	G3VM-61QR2	4	1a	1000	0.2	1	80	2	0.3	500	-40~+110
60	G3VM-61QR3	4	1a	400	1.1	1	12	0.25	0.2	500	-40~+110
100	G3VM-101QR1	4	1a	650	0.4	1	50	2	0.3	500	-40~+110

S-VSON (L) (Super - Very Small Outline Package Non-leaded) Voltage Driven 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)	Ambient operating temperature ($^{\circ}$ C)
30	G3VM-31QVH	4	1a	1500	0.1	1	120	2	0.2	5	500	-40~+110
30	G3VM-31QVL	4	1a	1500	0.1	1	120	2	0.2	2.5	500	-40~+110
60	G3VM-61QV2H	4	1a	1000	0.2	1	80	2	0.2	5	500	-40~+110
60	G3VM-61QV2L	4	1a	1000	0.2	1	80	1	0.2	2.5	500	-40~+110
60	G3VM-61QVH	4	1a	400	1	1	20 (max)	0.5	0.2	5	500	-40~+110
30	G3VM-31QV2H	4	1a	1500	0.1	1000	120	2	0.2	5	500	-40~+125
60	G3VM-61QV3H	4	1a	1000	0.2	1000	80	20	1	5	500	-40~+125
60	G3VM-61QV4H	4	1a	400	1	1000	12	0.5	0.2	5	500	-40~+125
60	G3VM-61QV3L	4	1a	400	1	1000	17	0.35	0.15	2.5	500	-40~+125

WSON (Very Very Small Outline Package Non-leaded)

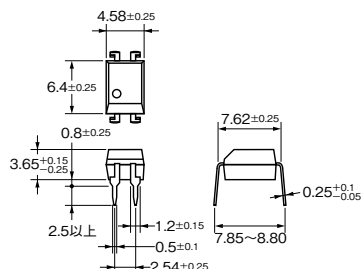
Load voltage (max.) (V)	Model	Number of terminals	Contact form	Continuous load current (max.) (mA)	Maximum resistance with output ON (typical) (Ω)	Current leakage when relay is open (max.) (nA)	Capacitance between terminals (typical) (pF)	Turn-ON time (max.) (ms)	Turn-OFF time (max.) (ms)	Dielectric strength between I/O (Vrms)	Ambient operating temperature ($^{\circ}$ C)
60	G3VM-61YR	4	1a	400	1.1	1000	12	0.25	0.2	300	-40~+110

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

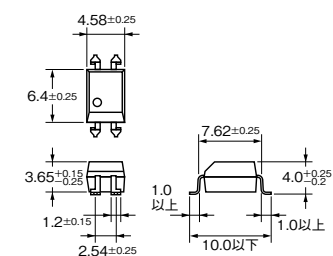
DIP

PCB terminal

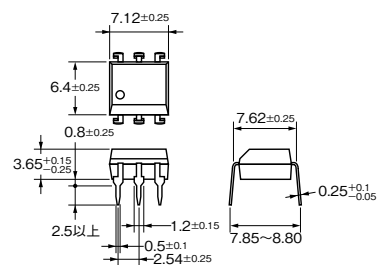
■ DIP 4-pin Mass : 0.25g



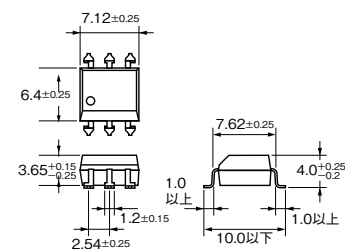
surface-mount terminal



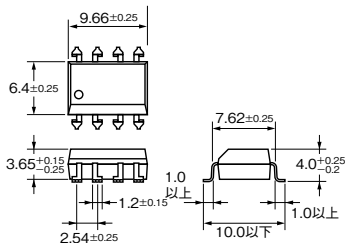
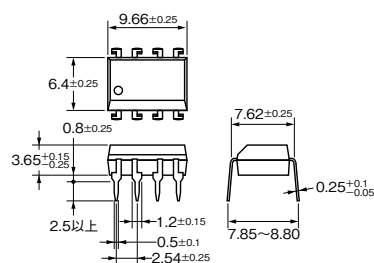
■ DIP 6-pin Mass : 0.4g



(Except G3VM-61BR/ER)



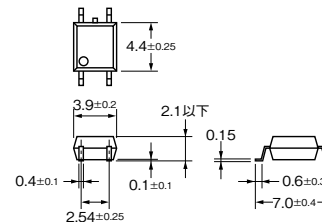
■ DIP 8-pin Mass : 0.54g



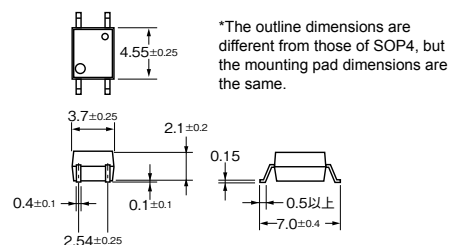
SOP

surface-mount terminal

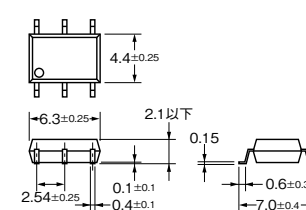
■ SOP 4-pin Mass : 0.1g



■ SOP4 special Mass : 0.1g



■ SOP 6-pin Mass : 0.13g

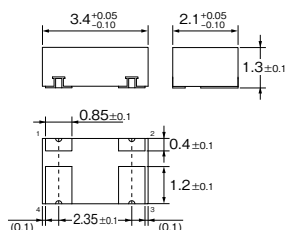


MOS FET Relay Package Outline Dimensions / Appearance Example (Unit: mm)

P-SON

surface-mount terminal

■ P-SON 4-pin Mass : 0.02g

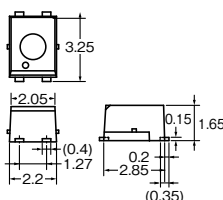


The unspecified dimension tolerance is ± 0.1 mm.

USOP

surface-mount terminal

■ USOP 4-pin Mass : 0.03g

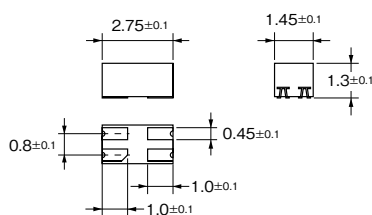


The unspecified dimension tolerance is ± 0.2 mm.

VSON (R)

surface-mount terminal

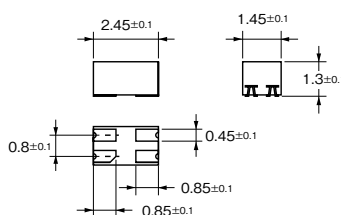
■ VSON (R) 4-pin Mass : 0.01g



VSON

surface-mount terminal

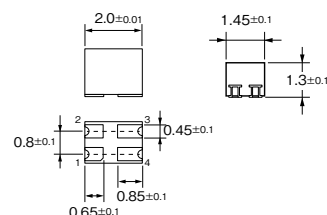
■ VSON 4-pin Mass : 0.01g



S-VSON (L)

surface-mount terminal

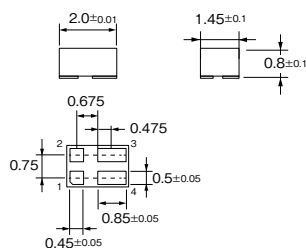
■ S-VSON (L) 4-pin Mass : 0.01g



WSN

surface-mount terminal

■ WSON 4-pin Mass : 0.01g



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