

G3VM-61G1 Datasheet

www.digi-electronics.com



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	G3VM-61G1-DG
Manufacturer	Omron Electronics Inc-EMC Div
Manufacturer Product Number	G3VM-61G1
Description	SSR RELAY SPST-NO 400MA 0-60V
Detailed Description	Solid State SPST-NO (1 Form A) 4-SOP (0.173", 4.40 mm)

This model G3VM-61G1 is available at DiGi Electronics.

DiGi Electronics offers a global database of semiconductor and electronic component datasheets.

We welcome your inquiries regarding pricing, lead time, or other product-related questions.

 [Request a Quote](#)

 [Datasheet Search](#)



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

G3VM-61G1

Series:

G3VM

Mounting Type:

Surface Mount

Output Type:

AC, DC

Voltage - Load:

0 V ~ 60 V

On-State Resistance (Max):

2 Ohms

Package / Case:

4-SOP (0.173", 4.40mm)

Manufacturer:

Omron Electronics Inc-EMC Div

Product Status:

Obsolete

Circuit:

SPST-NO (1 Form A)

Voltage - Input:

1.15VDC

Load Current:

400 mA

Termination Style:

Gull Wing

Supplier Device Package:

4-SOP

Environmental & Export classification

Moisture Sensitivity Level (MSL):

1 (Unlimited)

HTSUS:

8536.49.0055

ECCN:

EAR99

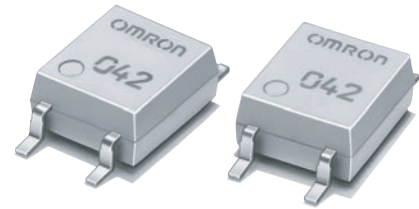
G3VM-61G1

MOS FET Relays

MOS FET Relays Designed for Switching Minute Signals and Analog Signals.



- Upgraded G3VM-S1 Series.
- Continuous load current of 400 mA.



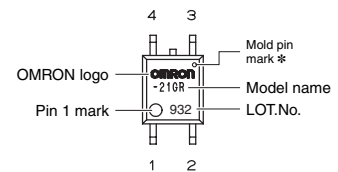
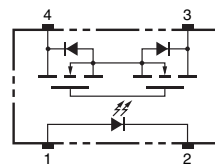
Note: The actual product is marked differently from the image shown here.

RoHS compliant

Application Examples

- Semiconductor test equipment
- Test & Measurement equipment
- Communication equipment
- Data loggers

Terminal Arrangement/Internal Connections



Note: The actual product is marked differently from the image shown here.
* The indentation in the corner diagonally opposite from the pin 1 mark is from a pin on the mold.

List of Models

Package type	Contact form	Terminals	Load voltage (peak value) *	Model	Minimum package quantity	
					Number per tube	Number per tape and reel
SOP4	1a (SPST-NO)	Surface-mounting Terminals	60 V	G3VM-61G1	100	-
				G3VM-61G1 (TR)	-	2,500

* The AC peak and DC value are given for the load voltage.

Absolute Maximum Ratings (Ta = 25°C)

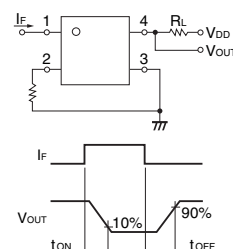
Item	Symbol	Rating	Unit	Measurement conditions	
Input	LED forward current	I _F	50	mA	
	LED forward current reduction rate	ΔI _F /°C	-0.5	mA/°C	Ta ≥ 25°C
	LED reverse voltage	V _R	5	V	
	Connection temperature	T _J	125	°C	
Output	Load voltage (AC peak/DC)	V _{OFF}	60	V	
	Continuous load current (AC peak/DC)	I _o	400	mA	
	ON current reduction rate	ΔI _o /°C	-4.0	mA/°C	Ta ≥ 25°C
	Connection temperature	T _J	125	°C	
Dielectric strength between I/O (See note 1.)	V _{I-O}	1500	V _{rms}	AC for 1 min	
Ambient operating temperature	T _a	-40 to +85	°C	With no icing or condensation	
Ambient storage temperature	T _{stg}	-55 to +125	°C	With no icing or condensation	
Soldering temperature	-	260	°C	10 s	

Note: 1. The dielectric strength between the input and output was checked by applying voltage between all pins as a group on the LED side and all pins as a group on the light-receiving side.

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Minimum	Typical	Maximum	Unit	Measurement conditions	
Input	LED forward voltage	V _F	1.0	1.15	1.3	V	I _F = 10 mA
	Reverse current	I _R	-	-	10	μA	V _R = 5 V
	Capacity between terminals	C _T	-	30	-	pF	V = 0, f = 1 MHz
	Trigger LED forward current	I _{FT}	-	1.6	3	mA	I _o = 400 mA
Output	Maximum resistance with output ON	R _{ON}	-	1	2	Ω	I _F = 5 mA, I _o = 400 mA
	Current leakage when the relay is open	I _{LEAK}	-	-	1.0	μA	V _{OFF} = 60 V
	Capacity between terminals	C _{off}	-	130	-	pF	V = 0, f = 1 MHz
	Capacity between I/O terminals	C _{I-O}	-	0.8	-	pF	f = 1 MHz, V _s = 0 V
Insulation resistance between I/O terminals	R _{I-O}	1000	-	-	MΩ	V _{I-O} = 500 VDC, R _{oH} ≤ 60 %	
Turn-ON time	t _{ON}	-	0.8	2.0	ms	I _F = 5 mA, R _L = 200 Ω, V _{DD} = 20 V (See note 2.)	
Turn-OFF time	t _{OFF}	-	0.1	0.5	ms		

Note: 2. Turn-ON and Turn-OFF Times



G3VM-61G1

MOS FET Relays

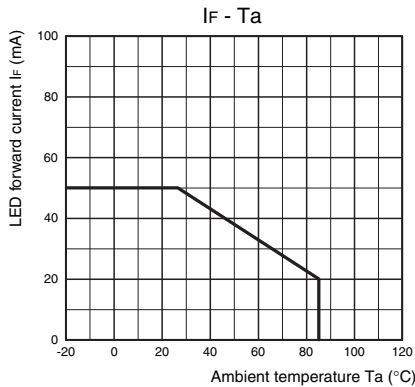
Recommended Operating Conditions

Use the G3VM under the following conditions so that the Relay will operate properly.

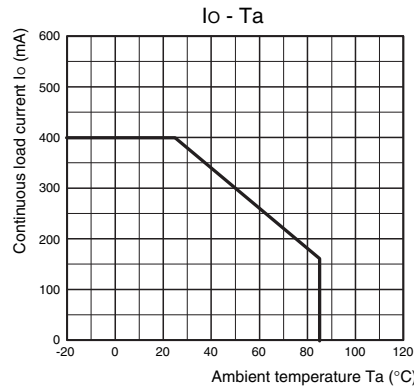
Item	Symbol	Minimum	Typical	Maximum	Unit
Load voltage (AC peak/DC)	V_{DD}	-	-	48	V
Operating LED forward current	I_F	5	7.5	25	mA
Continuous load current (AC peak/DC)	I_O	-	-	400	mA
Ambient operating temperature	T_a	-20	-	65	°C

Engineering Data

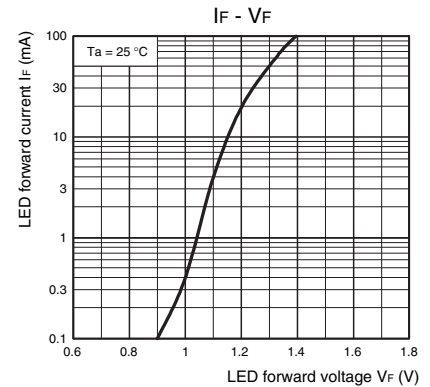
LED forward current vs. Ambient temperature



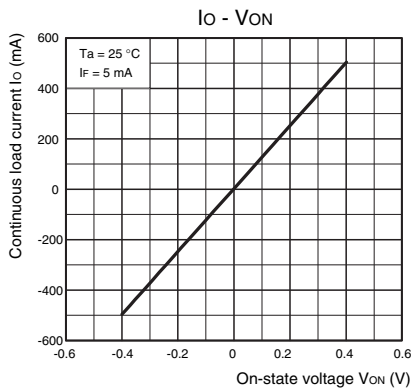
Continuous load current vs. Ambient temperature



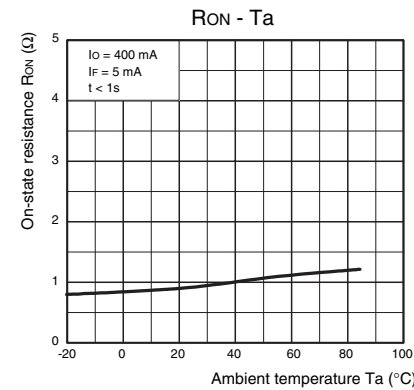
LED forward current vs. LED forward voltage



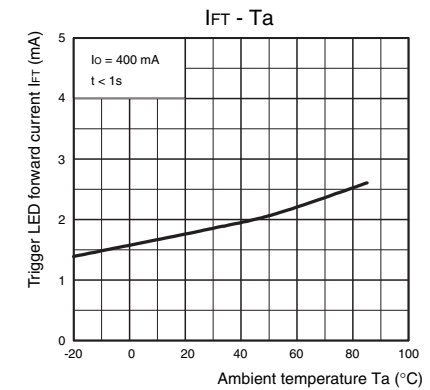
Continuous load current vs. On-state voltage



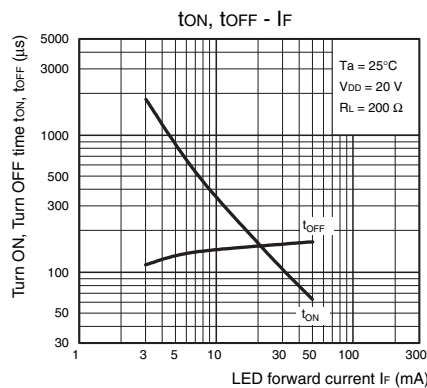
On-state resistance vs. Ambient temperature



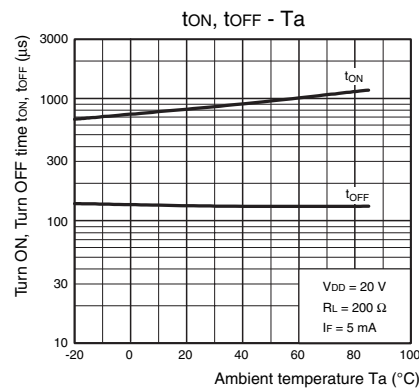
Trigger LED forward current vs. Ambient temperature



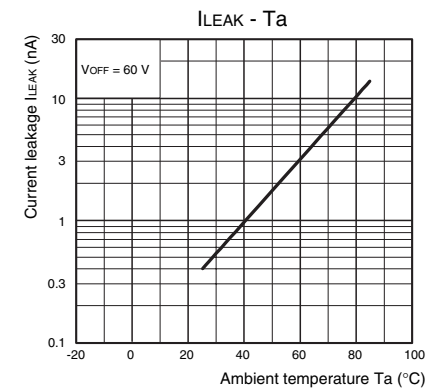
Turn ON, Turn OFF time vs. LED forward current



Turn ON, Turn OFF time vs. Ambient temperature



Current leakage vs. Ambient temperature



Safety Precautions

- Refer to "Common Precautions" for all G3VM models.

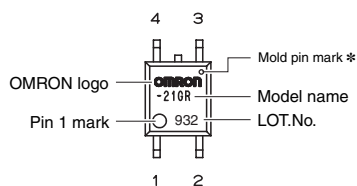
Appearance/Dimensions

SOP4 type

■ Appearance

SOP (Small Outline Package)

SOP4

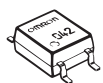


Note: The actual product is marked differently from the image shown here.

* The indentation in the corner diagonally opposite from the pin 1 mark is from a pin on the mold.

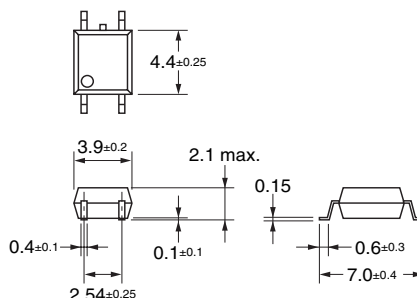
■ Dimensions

(Unit: mm)



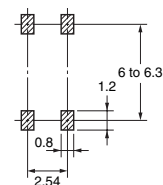
Surface-mounting Terminals

Weight: 0.1 g



Actual Mounting Pad Dimensions

(Recommended Value, TOP VIEW)



Note: The actual product is marked differently from the image shown here.

- Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.
- Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the ratings and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.

Note: Do not use this document to operate the Unit.

OMRON Corporation

ELECTRONIC AND MECHANICAL COMPONENTS COMPANY

Contact: www.omron.com/ecb

Cat. No. **K152-E1-01**
0412(0412)(O)

OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we stricly control the quality of products and services. Welcome your RFQ to

Email: Info@DiGi-Electronics.com



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.