

Electronic Components

G3VM Selection Guide



RELAYS

SWITCHES

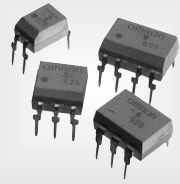

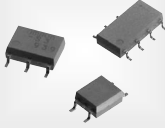

PHOTOMICROSENSORS

MICRO SENSORS

CONNECTORS



SELECTION GUIDE – MOS FET Relays

MOS FET				
				
	G3VM PCB Mount	G3VM SMT	G3VM SOP	G3VM SSOP
Dimensions mm (in)	Please refer to data sheets for all dimension information	Please refer to data sheets for all dimension information	Please refer to data sheets for all dimension information	4 pin: 3.8 L x 2.04 W x 1.8 H (0.15 x 0.08 x 0.07)
Features	<ul style="list-style-type: none"> • Solid-state relay with MOS FET output and photo-LED input • Ideal for communications (telecom and datacom), computer peripheral, office automation, security, and control applications 	<ul style="list-style-type: none"> • Solid-state relay with MOS FET output and photo-LED input • Ideal for communications (telecom and datacom), computer peripheral, office automation, security, and control applications 	<ul style="list-style-type: none"> • Solid-state relay with MOS FET output and photo-LED input • Ideal for communications (telecom and datacom), computer peripheral, office automation, security, and control applications • Low ON resistance and low output capacitance versions ideal for ATE and Instrumentation 	<ul style="list-style-type: none"> • Solid-state relay with MOS FET output and photo-LED input • Ideal for communications (telecom and datacom), computer peripheral, office automation, security, and control applications • Low ON resistance and low output capacitance versions ideal for ATE and Instrumentation
Load voltage	60 – 600 V	20 – 600 V	20 – 400 V	20 – 40 V
Contact form	1 Form A, 2 Form A, 1 Form B, 2 Form B, 1 Form A+1 Form B	1 Form A, 2 Form A, 1 Form B, 2 Form B, 1 Form A+1 Form B	1 Form A, 2 Form A, 1 Form B, 2 Form B	1 Form A
Load current	100 – 2000 mA	120 – 2000 mA	80 – 1250 mA	80 – 300 mA
Dielectric strength (50/60 Hz for 1 minute)	1500 VAC, 2500 VAC, 5000 VAC	1500 VAC, 2500 VAC, 5000 VAC	1500 VAC	1500 VAC
Surge withstand (50/60 Hz for 1 second)	3,000 VAC, 5,000 VAC, 10,000 VAC	3,000 VAC, 5,000 VAC, 10,000 VAC	3,000 VAC	3,000 VAC
ON resistance	0.12 – 45 Ohm	0.12 – 35 Ohm	0.15 – 35 Ohm	1.5 – 35 Ohm
Output capacitance	30 – 1400 pF	8 – 1400 pF	2.5 – 1000 pF	1.0 – 14 pF
Packaging	Tube	Tube or tape and reel	Tube or tape and reel	Tape and reel
Additional features	Low ON resistance, current limiting, high I/O isolation	Low ON resistance, current limiting, high I/O isolation	Low ON resistance, low output capacitance	Low ON resistance, low output capacitance

► Normally Open Relays – G3VM Series

Load voltage		20 V	40 V	60 V			80 V	
Number of terminals		4	4	4	6	8	4	6
SPST-NO	Through hole			G3VM-61A1	G3VM-61B1	G3VM-61CR		
	SMD			G3VM-61D1	G3VM-61E1	G3VM-61FR		
	SOP	G3VM-21GR G3VM-21GR1	G3VM-41GR5 G3VM-41GR6	G3VM-61G1	G3VM-61H1		G3VM-81G1	G3VM-81HR
	SSOP	G3VM-21LR G3VM-21LR1	G3VM-41LR5 G3VM-41LR6					

Load voltage		200 V		350V		400 V		600 V
Number of terminals		4	6	4	6	4	6	6
SPST-NO	Through hole			G3VM-351A	G3VM-351B	G3VM-401A	G3VM-401B G3VM-401BY	G3VM-601BY
	SMD			G3VM-351D	G3VM-351E	G3VM-401D	G3VM-401E G3VM-401EY	G3VM-601EY
	SOP	G3VM-S5	G3VM-201H1	G3VM-351G	G3VM-351H	G3VM-401G	G3VM-401H	

Load voltage		20 V	60 V	200 V	350 V	400 V
Number of terminals		8	8	8	8	8
DPST-NO	Through hole	G3VM-22C0	G3VM-62C1		G3VM-352C	G3VM-402C
	SMD	G3VM-22F0	G3VM-62F1		G3VM-352F	G3VM-402F
	SOP		G3VM-62J1	G3VM-202J1	G3VM-352J	G3VM-402J

► Normally Closed Relays – G3VM Series

Load voltage		350 V	
Number of terminals		4	6
SPST-NC	Through hole	G3VM-353A	G3VM-353B
	SMD	G3VM-353D	G3VM-353E
	SOP	G3VM-353G	G3VM-353H

Load voltage		350 V
Number of terminals		8
DPST-NC	Through hole	G3VM-354C
	SMD	G3VM-354F
	SOP	G3VM-354J

► SPST-NO/SPST-NC Relays – G3VM Series

Load voltage		350 V	
Number of terminals		8	
SPST-NO/ SPST-NC	Through hole	G3VM-355C G3VM-355CR	
	SMD	G3VM-355F G3VM-355FR	
	SOP	G3VM-355J G3VM-355JR	

► Current-limiting Relays – G3VM Series

Load voltage		350 V	
Number of terminals		4	6
SPST-NO	Through hole	G3VM-2L	G3VM-3L
	SMD	G3VM-2FL	G3VM-3FL

Load voltage		350 V	
Number of terminals		8	
DPST-NO	Through hole	G3VM-WL	
	SMD	G3VM-WFL	

MODEL NUMBER STRUCTURE

► G3VM Model Number Legend

G3VM-
 1 2 3 4 5

Note: Some products may have a different model number structure.

1. Load Voltage

2: 20 V
4: 40 V
6: 60 V
8: 80 V
10: 100 V
20: 200 V
25: 250 V
35: 350 V
40: 400 V
60: 600 V

2. Contact Form

1: SPST-NO
2: DPST-NO
3: SPST-NC
4: DPST-NC
5: SPST-NO/SPST-NC
6: Other form

3. Package Type

A: 4-pin DIP
B: 6-pin DIP
C: 8-pin DIP
D: 4-pin SMD
E: 6-pin SMD
F: 8-pin SMD
G: 4-pin SOP
H: 6-pin SOP
J: 8-pin SOP
K: 18-pin SOP
L: 4-pin SSOP

4. Additional Functions

L: Current limit
M: Basic multifunction
N: Multifunction without diode
O: Single input LED
P: Special pin arrangement
Q: Multifunction with current limiter
R: Low ON-resistance
S: Slow ON/OFF
T: Multifunction with current limiter and without diode
Y: Dielectric strength between I/O above 2.5 kV

5. Other Information

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

Note: 1. The letter "I" is not used because it may be confused with the number "1."

2. 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.

► G3VM Series

Load Voltage	Contact Form	Package/ Terminal Shape	No. of Terminals	Part Number	Load Current	Voltage Withstand (1 minute)	ON-resistance (max)	Output Capacitance (typ)	Leakage Current (max)	Additional Features	Page Number
20V	1 Form A	SOP	4	G3VM-21GR	160mA	1,500VAC	8 Ohms	1pF	0.001µA		396
				G3VM-21GR1	300mA	1,500VAC	1.5 Ohms	5pF	0.001µA		398
		SSOP	4	G3VM-21LR	160mA	1,500VAC	8 Ohms	1pF	0.001µA		444
				G3VM-21LR1	450mA	1,500VAC	1.2 Ohms	5pF	0.001µA		446
		DIP	8	G3VM-22C0	150mA	2,500VAC	4 Ohms	8pF	1.0µA		354
SMT	8	G3VM-22F0	150mA	2,500VAC	4 Ohms	8pF	1.0µA		354		
40V	1 Form A	SOP	4	G3VM-41GR5	250mA	1,500VAC	1.5 Ohms	10pF	0.001µA		400
				G3VM-41GR6	120mA	1,500VAC	15 Ohms	1pF	0.001µA		402
		SSOP	4	G3VM-41LR5	300mA	1,500VAC	1.5 Ohms	10pF	0.001µA		448
				G3VM-41LR6	120mA	1,500VAC	15 Ohms	1pF	0.001µA		450
60V	1-Form-A	DIP	4	G3VM-61A1	500mA	2,500VAC	2 Ohms	130pF	1.0µA		356
				G3VM-61B1	500mA	2,500VAC	2 Ohms	130pF	1.0µA		358
				G3VM-61CR	2 Amps	1,500VAC	0.12 Ohms	600pF	0.004µA		360
		SMT	4	G3VM-61D1	500mA	2,500VAC	2 Ohms	130pF	1.0µA		356
				G3VM-61E1	500mA	2,500VAC	2 Ohms	130pF	1.0µA		358
				G3VM-61FR	2 Amps	1,500VAC	0.12 Ohms	600pF	0.004µA		360
		SOP	4	G3VM-61G1	400mA	1,500VAC	2 Ohms	130pF	1.0µA		404
				G3VM-61H1	400mA	1,500VAC	2 Ohms	130pF	1.0µA		406
	2-Form-A	8	G3VM-62C1	500mA	2,500VAC	2 Ohms	130pF	1.0µA		362	
			G3VM-62F1	500mA	2,500VAC	2 Ohms	130pF	1.0µA		362	
G3VM-62J1			400mA	1,500VAC	2 Ohms	130pF	1.0µA		408		
80V	1-Form-A	SOP	4	G3VM-81G1	350mA	1,500VAC	1.2 Ohms	---	0.001µA		410
				G3VM-81HR	1.25 Amps	1,500VAC	0.15 Ohms	460pF	0.0015µA		412
200V	1-Form-A	SOP	4	G3VM-S5	150mA	1,500VAC	8 Ohms	100pF	1.0µA		414
				G3VM-201G	50mA	1,500VAC	50 Ohms	15pF	0.01µA		416
				G3VM-201H1	200mA	1,500VAC	8 Ohms	100pF	1.0µA		418
	2-Form-A	SOP	8	G3VM-202J1	200mA	1,500VAC	8 Ohms	100pF	1.0µA		420

Continued on next page.

► G3VM Series

Continued from previous page.

Load Voltage	Contact Form	Package/Terminal Shape	No. of Terminals	Part Number	Load Current	Voltage Withstand (1 minute)	ON-resistance (max)	Output Capacitance (typ)	Leakage Current (max)	Additional Features	Page Number	
350V	1 Form A	DIP	4	G3VM-351A	120mA	2,500VAC	35 Ohms	30pF	1.0μA		364	
				G3VM-2L	120mA	2,500VAC	35 Ohms	40pF	1.0μA	Current limiting	366	
			6	G3VM-351B	120mA	2,500VAC	35 Ohms	30pF	1.0μA		370	
				G3VM-3L	120mA	2,500VAC	35 Ohms	40pF	1.0μA	Current limiting	372	
		SMT	4	G3VM-351D	120mA	2,500VAC	35 Ohms	30pF	1.0μA		364	
				G3VM-2FL	120mA	2,500VAC	35 Ohms	40pF	1.0μA	Current limiting	366	
			6	G3VM-351E	120mA	2,500VAC	35 Ohms	30pF	1.0μA		370	
				G3VM-3FL	120mA	2,500VAC	35 Ohms	40pF	1.0μA	Current limiting	372	
		SOP	4	G3VM-351G	110mA	1,500VAC	35 Ohms	30pF	1.0μA		422	
			6	G3VM-351H	110mA	1,500VAC	35 Ohms	30pF	1.0μA		426	
		2 Form A	DIP	8	G3VM-352C	120mA	2,500VAC	35 Ohms	30pF	1.0μA		376
					G3VM-WL	120mA	2,500VAC	35 Ohms	40pF	1.0μA	Current limiting	378
			SMT	8	G3VM-352F	120mA	2,500VAC	35 Ohms	30pF	1.0μA		376
					G3VM-WFL	120mA	2,500VAC	35 Ohms	40pF	1.0μA	Current limiting	378
	SOP		8	G3VM-352J	110mA	1,500VAC	35 Ohms	30pF	1.0μA		430	
	1 Form B		DIP	4	G3VM-353A	150mA	2,500VAC	25 Ohms	85pF	1.0μA		368
		6		G3VM-353B	150mA	2,500VAC	25 Ohms	85pF	1.0μA		374	
		SMT	4	G3VM-353D	150mA	2,500VAC	25 Ohms	85pF	1.0μA		368	
			6	G3VM-353E	150mA	2,500VAC	25 Ohms	85pF	1.0μA		374	
		SOP	4	G3VM-353G	120mA	1,500VAC	25 Ohms	65pF	1.0μA		424	
			6	G3VM-353H	120mA	1,500VAC	25 Ohms	65pF	1.0μA		428	
	2 Form B	DIP	8	G3VM-354C	150mA	2,500VAC	25 Ohms	85pF	1.0μA		380	
		SMT	8	G3VM-354F	150mA	2,500VAC	25 Ohms	85pF	1.0μA		380	
		SOP	8	G3VM-354J	120mA	1,500VAC	25 Ohms	65pF	1.0μA		432	
	1 A + 1 B	DIP	8	G3VM-355C	100mA	2,500VAC	35 Ohms	30pF	1.0μA		382	
				G3VM-355CR	120mA	2,500VAC	25 Ohms	65pF	1.0μA		384	
		SMT	8	G3VM-355F	100mA	2,500VAC	35 Ohms	30pF	1.0μA		382	
				G3VM-355FR	120mA	2,500VAC	25 Ohms	65pF	1.0μA		384	
SSOP		8	G3VM-355J	90mA	1,500VAC	35 Ohms	30pF	1.0μA		434		
			G3VM-355JR	120mA	1,500VAC	25 Ohms	65pF	1.0μA		436		
400V	1-Form-A	DIP	4	G3VM-401A	120mA	2,500VAC	35 Ohms	---	1.0μA		386	
			6	G3VM-401B	120mA	2,500VAC	35 Ohms	40pF	1.0μA		388	
				G3VM-401BY	120mA	5,000VAC	35 Ohms	40pF	1.0μA		390	
		SMT	4	G3VM-401D	120mA	2,500VAC	35 Ohms	---	1.0μA		386	
				G3VM-401E	120mA	2,500VAC	35 Ohms	40pF	1.0μA		388	
			G3VM-401EY	120mA	5,000VAC	35 Ohms	40pF	1.0μA		390		
		SOP	4	G3VM-401G	120mA	1,500VAC	35 Ohms	70pF	1.0μA		438	
			6	G3VM-401H	120mA	1,500VAC	35 Ohms	70pF	1.0μA		440	
		DIP	8	G3VM-402C	120mA	2,500VAC	35 Ohms	---	1.0μA		394	
		SMT	8	G3VM-402F	120mA	2,500VAC	35 Ohms	---	1.0μA		394	
		SOP	8	G3VM-402J	120mA	1,500VAC	35 Ohms	70pF	1.0μA		442	
		600V	1 Form A	DIP	6	G3VM-601BY	100mA	5,000VAC	35 Ohms	120pF	1.0μA	
SMT				G3VM-601EY	100mA	5,000VAC	35 Ohms	120pF	1.0μA		392	

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