# **MOS FET Relay**

## **Selection Guide**

General Attributes	G3VM PCB	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)
	Solid-state relay with MOS FET output and photo-LED input Ideal for communication equipment, medical devices, computer peripheral, office automation, security, and control applications	Solid-state relay with MOS FET output and photo-LED input Ideal for communication equipment, medical devices, computer peripheral, office automation, security, and control applications	Solid-state relay with MOS FET output and photo-LED input Ideal for communication equipment, medical devices, computer peripheral, office automation, security, and control applications Low ON resistance and low output capacitance versions ideal for ATE and Instrumentation	Solid-state relay with MOS FET output and photo-LED input Ideal for communication equipment, medical devices, 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	60 – 600 V	20 – 600 V	20 – 100 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+1 Form B	1 Form A
Load current	100 – 2,500 mA	100 – 2,500 mA	80 – 1,250 mA	80 – 900 mA
Dielectric strength (50/60 Hz for 1 minute)		1,500 VAC, 2,500 VAC, 5,000 VAC	1,500 VAC	1,500 VAC
	$0.065 - 40 \Omega$ (typical)	$0.065 - 40 \Omega$ (typical)	$0.02 - 40 \Omega$ (typical)	$0.18 - 25 \Omega$ (typical)
Output capacitance	30 – 400 pF (typical)	30 – 400 pF (typical)	0.6 - 1,000 pF (typical)	0.45 - 40 pF (typical)
Packaging	Tube	Tube or tape-and-reel	Tube or tape-and-reel	Tape-and-reel or cut tape
Additional features	Low ON resistance, Current limiting, High I/O isolation, High Current	Low ON resistance, Current limiting, High I/O isolation, High Current	Low ON resistance, Low output capacitance, Current limiting, High Current, Low LED Trigger	Low ON resistance, Low output capacitance, Low Leakage

## ■ Normally Open Relays

Load	voltage	20	V	40 V	6	0 V	80	) V	100 V
Number of	of terminals	4	6	4	4	6	4	6	4
SPST-NO	Through hole				G3VM-61A1	G3VM-61B1 G3VM-61BR			
	SMT				G3VM-61D1	G3VM-61E1 G3VM-61ER			
	SOP	G3VM-21GR G3VM-21GR1	G3VM-21HR	G3VM-41GR3 G3VM-41GR4 G3VM-41GR5 G3VM-41GR6 G3VM-41GR7 G3VM-41GR8	G3VM-61G1 G3VM-61G2 G3VM-61GR1	G3VM-61H1	G3VM-81G1 G3VM-81GR G3VM-81GR1	G3VM-81HR	
	SSOP	G3VM-21LR G3VM-21LR1 G3VM-21LR10 G3VM-21LR11		G3VM-41LR3 G3VM-41LR4 G3VM-41LR5 G3VM-41LR6 G3VM-41LR10 G3VM-41LR11	G3VM-61LR		G3VM-81LR		G3VM-101LR

Load	voltage	20	0 V	3!	50V	400 V		60	600 V	
Number of terminals		4 6		4 6		4	4 6		6	
SPST-NO	Through hole			G3VM-351A	G3VM-351B	G3VM-401A	G3VM-401B G3VM-401BY		G3VM-601BY	
	SMT			G3VM-351D	G3VM-351E	G3VM-401D	G3VM-401E G3VM-401EY		G3VM-601EY	
	SOP	G3VM-S5 G3VM-201G G3VM-201G1	G3VM-201H1	G3VM-351G G3VM-351G1	G3VM-351H	G3VM-401G	G3VM-401H	G3VM-601G		

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

## ■ Normally Open Current-limiting Relays

Load	voltage	350 V
Number o	f terminals	4
SPST-NO	Through hole	G3VM-2L
	SMT	G3VM-2FL
	SOP	G3VM-351GL

Load v	oltage/	350 V
Number of	f terminals	8
DPST-NO	Through hole	G3VM-WL
	SMT	G3VM-WFL

#### ■ Normally Closed Relays

Load	voltage	350 V				
Number of	of terminals	4	6			
SPST-NC	Through hole	G3VM-353A G3VM-353A1	G3VM-353B G3VM-353B1			
	SMT	G3VM-353D G3VM-353D1	G3VM-353E G3VM-353E1			
	SOP	G3VM-353G G3VM-353G1	G3VM-353H G3VM-353H1			

Load	voltage	350 V
Number o	f terminals	8
DPST-NC	Through hole	G3VM-354C G3VM-354C1
	SMT	G3VM-354F G3VM-354F1
	SOP	G3VM-354J G3VM-354J1

## **■** SPST-NO/SPST-NC Relays

Load vo	oltage	350 V	
Number of	Number of terminals		
SPST-NO/ SPST-NC	Through hole	G3VM-355C G3VM-355CR	
	SMT	G3VM-355F G3VM-355FR	
	SOP	G3VM-355J G3VM-355JR	

#### **Model Number Structure**

#### ■ G3VM Model Number Legend

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

1. Load \	/oltage	2. Conta	act Form	3. Packa	age Type	4. Additi	onal Functions	5. Other Information
2:	20 V	1:	SPST-NO	A:	4-pin DIP	L:	Current limit	When specifications
4:	40 V	2:	DPST-NO	B:	6-pin DIP	M:	Basic multifunction	overlap, serial code
6:	60 V	3:	SPST-NC	C:	8-pin DIP	N:	Multifunction without	is added in the
8:	80 V	4:	DPST-NC	D:	4-pin SMD		diode	recorded order.
10:	100 V	5:	SPST-NO/SPST-NC	E:	6-pin SMD	O:	Single input LED	
20:	200 V	6:	Other form	F:	8-pin SMD	P:	Special pin arrangemer	nt
25:	250 V			G:	4-pin SOP	Q:	Multfunction with	
35:	350 V			H:	6-pin SOP		current limiter	
40:	400 V			J:	8-pin SOP	R:	Low ON-resistance	
60:	600 V			K:	18-pin SOP	S:	Slow ON/OFF	
				L:	4-pin SSOP	T:	Multifunction with curre	nt
							limiter and without diod	e
						Y:	Dielectric strength	
							between I/O above 2.5	kV

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.

#### OMRON

### **G3VM Series**

Load Voltage (VAC/VDC)	Contact Form	Package Type	No. of Terminals	Part #	Load Current mA	Voltage Withstand (1 min) VAC	On Resistance (typ.)	Output Offstate capacitance (typ.) pF	Leakage Current (typ.) nA	Key Features	Page Number		
			4	G3VM-21GR	160	1,500	5	1	0.2	Low CxR	89		
		SOP	4	G3VM-21GR1	300	1,500	1	5	0.2	Low CxR	93		
			6	G3VM-21HR	2,500	1,500	0.02	1000	2	High Current	85		
				G3VM-21LR	160	1,500	5	1	0.2	Low CxR	231		
20	1 Form A			G3VM-21LR1	450	1,500	0.8	5	0.2	Low CxR	235		
	SSOP		SSOP	4	G3VM-21LR10	200	1,500	3	0.8	0.01	Low CxR, Low Leak, Fast On/Off	239	
				G3VM-21LR11	900	1,500	0.18	40	0.2	Low CxR, High Current	243		
				G3VM-41GR3	80	1,500	25	0.6	0.01	Low CxR, Low Leak	97		
				G3VM-41GR4	250	1,500	2.0	5.0	0.009	Low CxR, Low Leak	101		
		SOP	4	G3VM-41GR5	300	1,500	1	10	0.2	Low CxR	105		
				G3VM-41GR6	120	1,500	10	1	0.2	Low CxR	109		
				G3VM-41GR7	120	1,500	6.5	1.65	0.2	Low CxR	113		
				G3VM-41GR8	1,000	1,500	0.1	300	0.2	High Current	117		
40	1 Form A			G3VM-41LR3	80	1,500	25	0.6	0.2	Low CxR	247		
				G3VM-41LR4	250	1,500	2	5	0.2	Low CxR	251		
		SSOP		G3VM-41LR5	300	1,500	1	10	0.2	Low CxR	255		
				G3VM-41LR6	120	1,500	10	1	0.2	Low CxR	259		
			550P	330F	4	G3VM-41LR10	120	1,500	12	0.45	0.01	Low CxR, Low Leak, Fast On/Off	263
				G3VM-41LR11	140	1,500	7	0.7	0.01	Low CxR, Low Leak, Fast On/Off	267		
		DIP	DIP	4	G3VM-61A1	500	2,500	1	130	1		11	
				6	G3VM-61B1	500	2,500	1	130	1		15	
				U	G3VM-61BR	2,500	2,500	0.065	400	1	High Current	19	
		SMT	4	G3VM-61D1	500	2,500	1	130	1		11		
			SMT	6	G3VM-61E1	500	2,500	1	130	1		15	
	1 Form A		Ů	G3VM-61ER	2,500	2,500	0.065	400	1	High Current	19		
				G3VM-61G1	400	1,500	1	130	1		121		
60		SOP	4	G3VM-61G2	400	1,500	1	130	1	Low LED Trigger	125		
				G3VM-61GR1	1,000	1,500	0.25	90	0.2	High Current	129		
			6	G3VM-61H1	400	1,500	1	130	1		133		
		SSOP	4	G3VM-61LR	400	1,500	1	20	0.04	Low CxR, Low Leak	271		
		DIP	8	G3VM-62C1	500	2,500	1	130	1		23		
	2 Form A	SMT	8	G3VM-62F1	500	2,500	1	130	1		23		
		SOP	8	G3VM-62J1	400	1,500	1	130	1		137		
				G3VM-81G1	350	1,500	1	30	0.2	Low CxR	141		
		SOP	4	G3VM-81GR	40	1,500	16	2.5	0.5		145		
80	1 Form A			G3VM-81GR1	200	1,500	5	6.5	0.5	Low CxR	149		
			6	G3VM-81HR	1,250	1,500	0.11	460	1.2	High Current	153		
100	4.5	SSOP	4	G3VM-81LR	120	1,500	7.5	5	0.1	Fast On/Off	275		
100	1 Form A	SSOP	4	G3VM-101LR	80	1,500	8	6	0.1	Fast On/Off	279		
				G3VM-201G	50	1,500	40	15	0.07		161		
000	1 Form A	SOP	4	G3VM-201G1	200	1,500	5	90	1	Low LED Trigger	165		
200				G3VM-S5	150	1,500	5	100	0.45		157		
	0.5- 1	005	6	G3VM-201H1	200	1,500	5	100	0.35		169		
	2 Form A	SOP	8	G3VM-202J1	200	1,500	5	100	3.1		173		

#### (continued from previous page)

Load Voltage (VAC/VDC)	Contact Form	Package Type	No. of Terminals	Part #	Load Current mA	Voltage Withstand (1 min.) VAC	On Resistance (typ.)	Output Offstate Capacitance (typ.) pF	Leakage Current (typ.) nA	Additional Features	Page Number	
			4	G3VM-2L	120	2,500	22	40	0.5	Current Limiting *	31	
		DIP	4	G3VM-351A	120	2,500	35	30	1.5		27	
			6	G3VM-351B	120	2,500	35	30	1.5		39	
			4	G3VM-2FL	120	2,500	22	40	0.5	Current Limiting *	31	
	1 Form A	SMT	4	G3VM-351D	120	2,500	35	30	1.5		27	
	T T OIIII A		6	G3VM-351E	120	2,500	35	30	1.5		39	
				G3VM-351G	110	1,500	35	30	1.5		177	
		SOP	4	G3VM-351G1	100	1,500	35	35	1	Low LED Trigger	181	
				G3VM-351GL	120	1,500	15	70	0.5	Current Limiting*	185	
			6	G3VM-351H	110	1,500	35	30	1.8		193	
		DIP	8	G3VM-352C	120	2,500	35	30	1.5		47	
				G3VM-WL	120	2,500	22	40	0.5	Current Limiting*	51	
	2 Form A	orm A SMT	8	G3VM-352F	120	2,500	35	30	1.5	0 11: ": +	47	
		000	0	G3VM-WFL	120	2,500	22	40	0.5	Current Limiting*	51	
		SOP	8	G3VM-352J	110	1,500	35	30	1.5		201	
			4	G3VM-353A G3VM-353A1	150 100	2,500 2,500	15 30	85 30	10.5		35 35	
		DIP		G3VM-353A1	150		15	85	10.5		43	
			6	G3VM-353B1	100	2,500 2,500	27	30	3		43	
350					G3VM-353D	150	2,500	15	85	10.5		35
330		SMT	4	G3VM-353D1	100	2,500	30	30	3		35	
	1 Form B		Form B		G3VM-353E	150	2,500	15	85	10.5		43
		SMT	SMT	6	G3VM-353E1	100	2,500	27	30	3		43
				G3VM-353G	120	1,500	15	65	10.5		189	
			4	G3VM-353G1	90	1,500	30	30	3		189	
		SOP		G3VM-353H	120	1,500	15	65	10.5		197	
			6	G3VM-353H1	90	1,500	27	30	3		197	
				G3VM-354C	150	2,500	15	85	10.5		55	
		DIP	8	G3VM-354C1	100	2,500	30	30	3		55	
	0.F. D	OME	_	G3VM-354F	150	2,500	15	85	10.5		55	
	2 Form B	SMT	8	G3VM-354F1	100	2,500	30	30	3		55	
		SOP	SOP	8	G3VM-354J	120	1,500	15	65	10.5		211
		30F	0	G3VM-354J1	90	1,500	30	30	3		211	
		DIP	8	G3VM-355C	100	2,500	40	30	6 NO, 3 NC		59	
		DIF	0	G3VM-355CR	120	2,500	15	65	1.5 NO, 10.5 NC		59	
	1 A + 1 B	SMT	8	G3VM-355F	100	2,500	40	30	6 NO, 3 NC		59	
		J1	ŭ	G3VM-355FR	120	2,500	15	65	1.5 NO, 10.5 NC		59	
		SOP	8	G3VM-355J	90	1,500	40	30	6 NO, 3 NC		205	
				G3VM-355JR	120	1,500	15	65	1.5 NO, 10.5 NC		205	
			4	G3VM-401A	120	2,500	18	40	0.8		65	
		DIP	6	G3VM-401B	120	2,500	17	40	0.8		69	
				G3VM-401BY	120	5,000	17	40	0.4	High Dielectric	73	
	1 Form ^		4	G3VM-401D	120	2,500	18	40	0.8		65	
	1 Form A	SMT	_	G3VM-401E	120	2,500	17	40	0.8		69	
400			6	G3VM-401EY	120	5,000	17	40	0.4	High Dielectric	73	
			4	G3VM-401G	120	1,500	17	70	3	=	215	
		SOP	6	G3VM-401H	120	1,500	17	70	3		219	
		DIP	8	G3VM-40111	120	2,500	18	40	0.8		81	
	0.50											
	2 Form A	SMT	8	G3VM-402F	120	2,500	18	40	0.8		81	
		SOP	8	G3VM-402J	120	1,500	17	70	3		223	
		DIP	6	G3VM-601BY	100	5,000	30	120	0.5	High Dielectric	77	
600	1 Form A	SMT	6	G3VM-601EY	100	5,000	30	120	0.5	High Dielectric	77	
		SOP	4	G3VM-601G	90	1,500	45	75	1	Low LED Trigger	227	

<sup>\*</sup>Current Limiting Range = 150 to 300 mA