

New Product Information

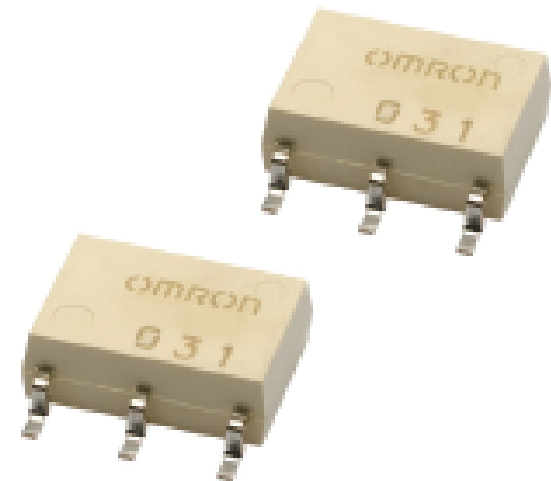
MOS FET Relay

SOP 6-pin; High current models

NEW

G3VM-31HR1

G3VM-61HR2



Feb 2020

Relay Application Division

OMRON

Value Offered

1. High switching performance of 4.5A @ 30VDC/4A @ 60VDC

⇒ Achieves a higher switching performance than existing models.

These products can be used for applications that require higher load switching.

2. High speed switching

⇒ Achieves high speed switching at a larger switching current.

(Example Applications: Semiconductor test, heater control)

3. High reliability

⇒ No arc will be generated by contact switching, and failures will not happen due to contact wear.

SOP6 High current

G3VM-31HR1/61HR2

Features

- High current & speed
- High temp rating (+110°C Max.)
- SPST-NO contact form



→ Increased → No Change

Performance

	Existing		New!		Existing		New!
	G3VM-31HR		G3VM-31HR1		G3VM-61HR1		G3VM-61HR2
Package	SOP6						
Contact form	1a						
Load voltage Absolute Max Ratings Max.(V _{OFF}) *	30V				60V		
Load current Absolute Max Ratings Max.(I _O) connection A*	4A	→	4.5A		3.3A	→	4A
Load current Absolute Max Ratings Max.(I _O) connection C*	8A	→	9A		6.6A	→	8A
On resistance with output Max. (R _{ON}) connection A	40mΩ	→	30mΩ		60mΩ	→	40mΩ
Trigger LED forward current Max. (I _{FT})	3.0mA	→	3.0mA		3.0mA	→	3.0mA
Turn on time Max. (t _{ON})	5.0ms	→	2.0ms		5.0ms	→	2.0ms
Turn off time Max. (t _{OFF})	1.0ms	→	0.5ms		1.0ms	→	0.5ms
Dielectric strength between I-O (V _{I-O})	1500Vrms	→	1500Vrms		1500Vrms	→	1500Vrms
Ambient operating temperature (T _a)	-40 to +85°C	→	-40 to +110°C		-40 to +85°C	→	-40 to +110°C

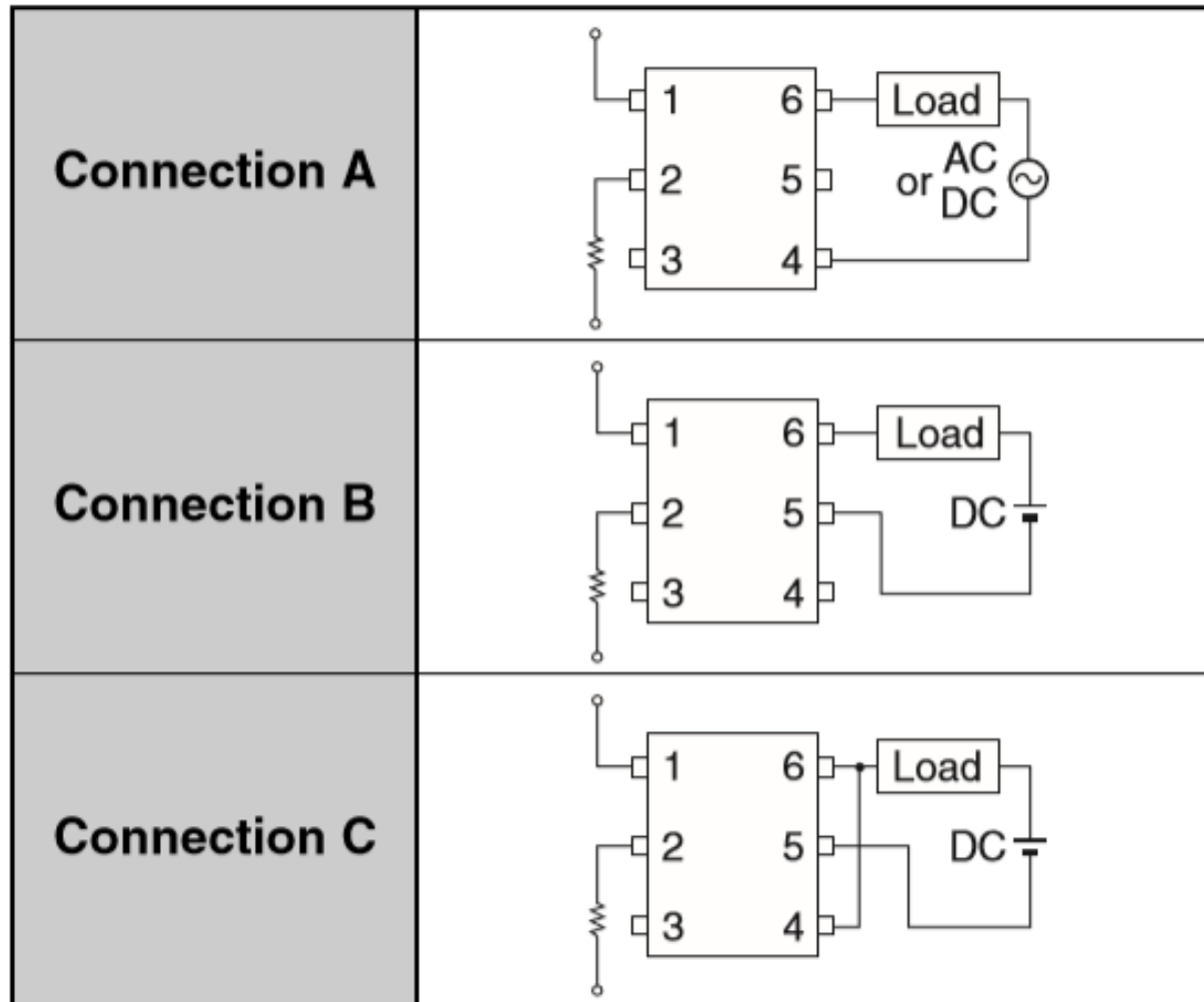
*AC peak/DC

*Please refer to slide 4 for connection arrangements

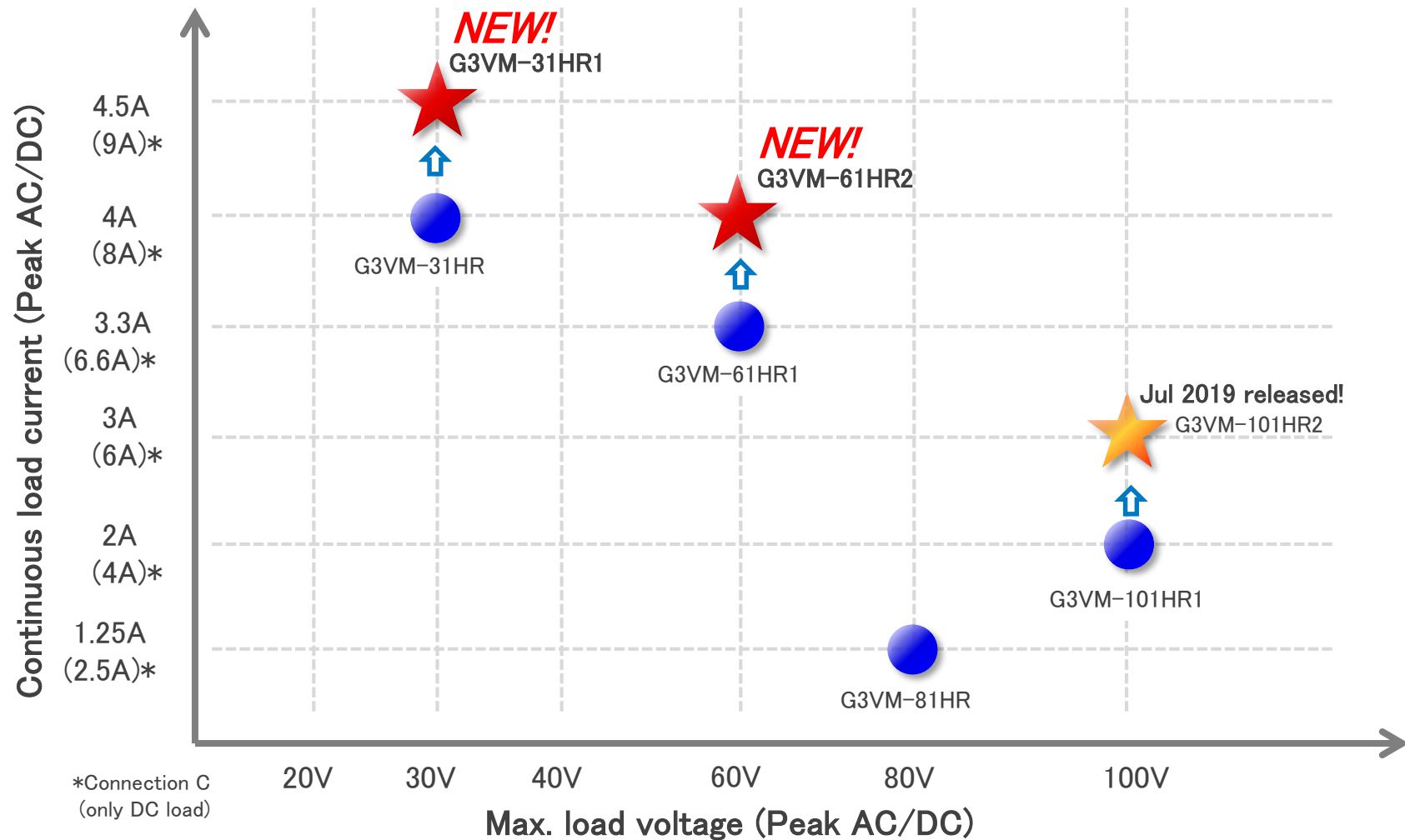
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Connection Types

Connection Diagram



SOP6 High current product family



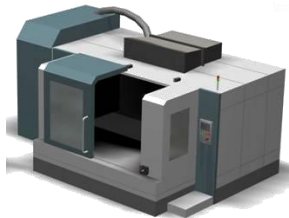
Target Applications

Main focus applications are Factory Automation (FA) and Automatic Test Equipment (ATE).

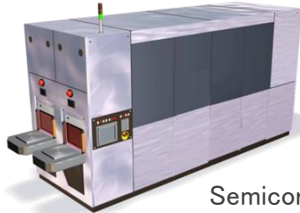
These relays can also be used for applications such as Building Automation and HVAC. One example would be thermostat controls.

FA equipment

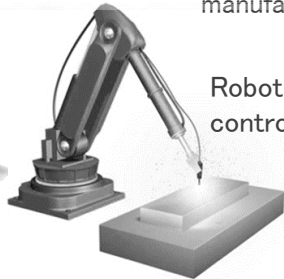
- Various controls



Machine
Tools



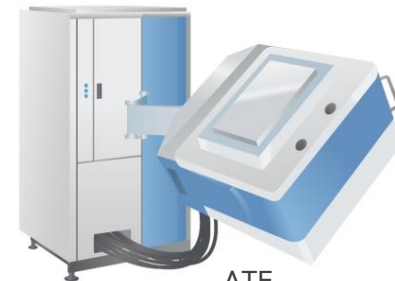
Semiconductor
manufacturing



Robot
controller

ATE/M Measurement

- Device Power Supply (DPS)
- Testing signal switching



ATE

Others

- HVAC
- Building automation





Thank you!