

New Product Information

MOSFET Relay

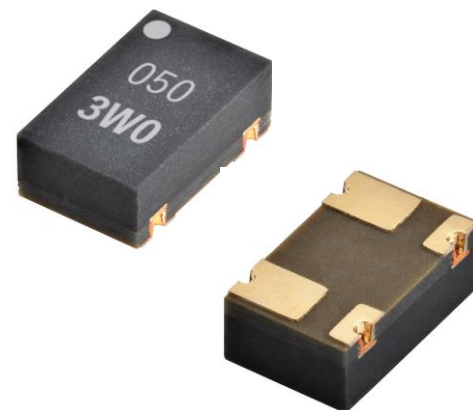
P-SON Higher current type
(New Package Series)

NEW

G3VM-31WR

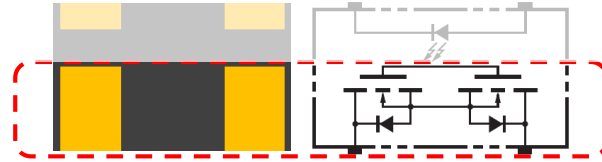
G3VM-61WR

G3VM-101WR



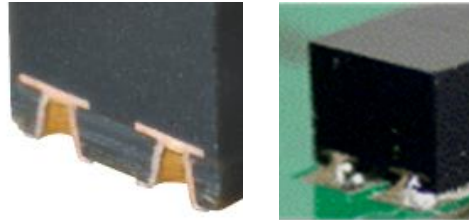
Dec. 2020
Signal Relay Group
Diversified Products Division

- Higher current in small package
Design to improve radiation performance



Expand output terminal pad

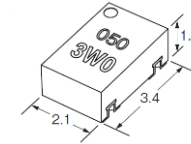
- Achievement of good soldering shape
Terminal shape improve Solder Joint & Solder Visibility



- Small Qty. packing
500pcs. Per unit Taping Reel is easy to use for customers

G3VM-31WR,-61WR,-101WR

- Feature**
- New line up with new package **P-SON**
 - Balancing higher current and small size --- Suitable for ATE (Pin electronics)
 - 1a (SPST-NO) contact form
 - High operating temperature range (**up to +110°C**)



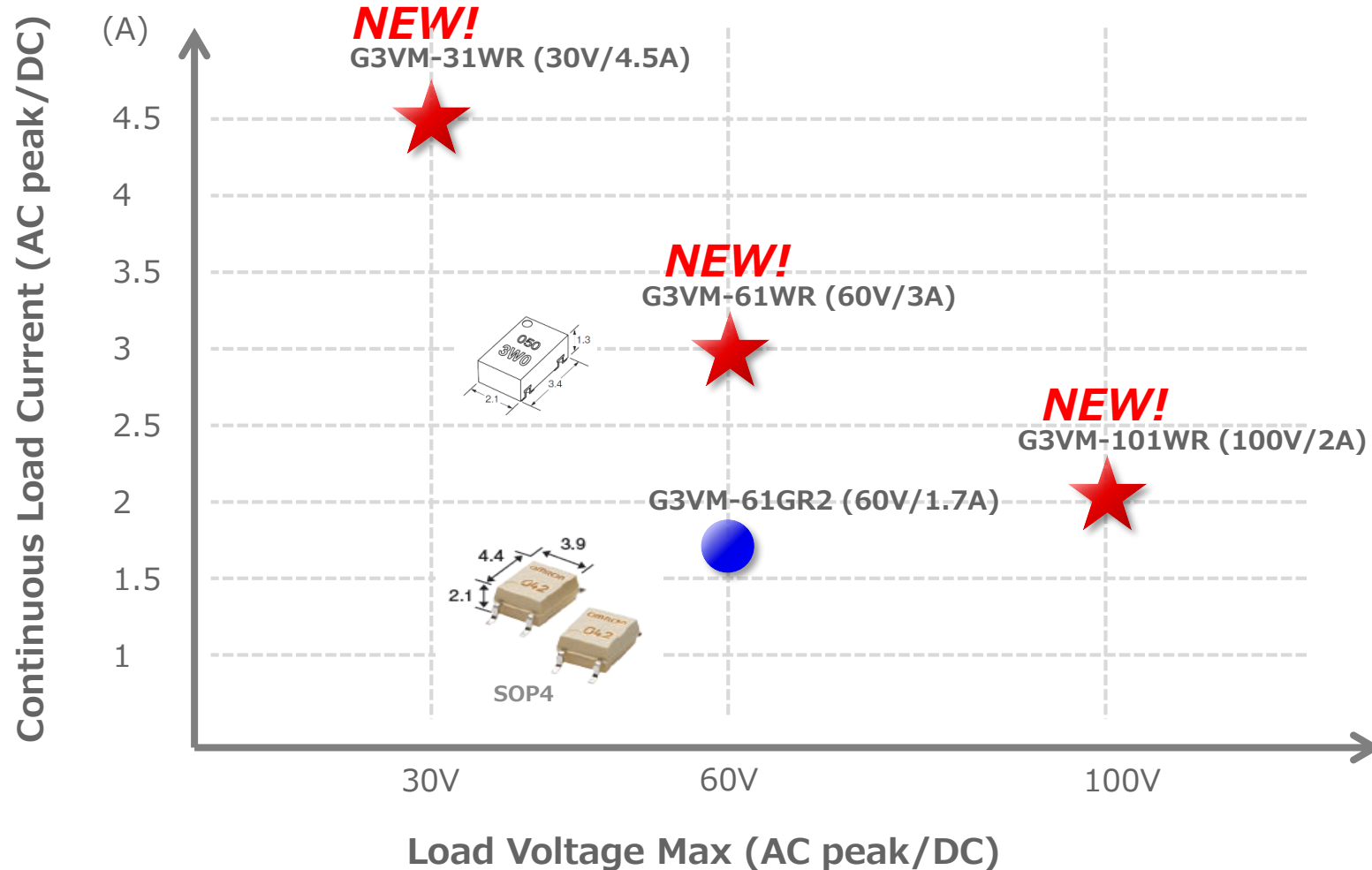
Performance

	New!	New!	New!
	G3VM-31WR	G3VM-61WR	G3VM-101WR
Type	Small Size & Higher Current		
Package	P-SON4		
Contact form	1a		
Load voltage max. (V _{OFF})	30V	60V	100V
Continuous load current Max. (I _O)	4.5A	3A	2A
Pulse ON current (I _{op}) t=100ms, Duty=1/10	10A	9A	6A
Resistance with Output ON Typ. (R _{ON})	50 m ohm	100 m ohm	200 m ohm
Capacitance between output terminal Typ.(C _{OFF})	450pF	250pF	170pF
Trigger LED forward current Max. (I _{FT})	3.0mA		
Turn-ON Time Max. (t _{ON})	5ms		3ms
Turn-OFF Time Max. (t _{OFF})	1ms		
Dielectric strength between I/O (V _{I-O}) *	500Vrms		
Ambient operating temperature (Ta)	-40 to +110°C		

*AC peak/DC

PERSON Product Map

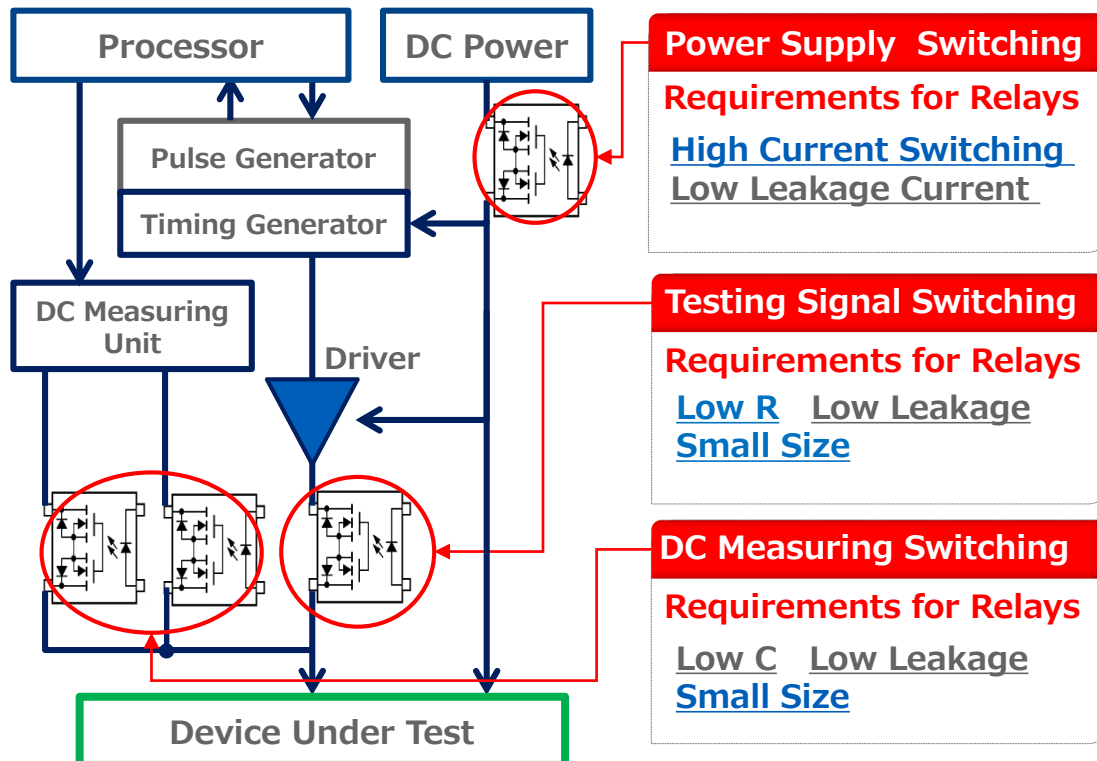
New Product is smaller than existing SOP4 product.
New Product achieve roughly twice the performance of Load Current.



Application Examples

ATE/Measurement

- Device Power Supply (DPS)
- Testing signal switching



P-SON	V_{OFF}	I_O	R_{ON}	C_{OFF}	I_{LEAK}
	(V Max.)	(A Max.)	(mΩ max.)	(pF typ.)	(nA Max.)
G3VM-31WR	30	4.5	50	450	10 at 20V
G3VM-61WR	60	3	100	250	10 at 40V
G3VM-101WR	100	2	200	170	10 at 80V

[Ref.] Target Application

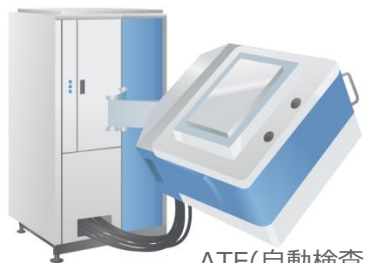
Mainly target is ATE.

It can be used for various other applications

---FA and air conditioning equipment. *

ATE/Measurement

- Power Supply Switching
- Testing Signal Switching



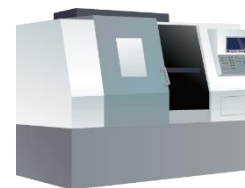
ATE(自動検査装置)

FA

- For Controls



Semiconductor
Manufacturing
Equipment



Machining



Motion Controller

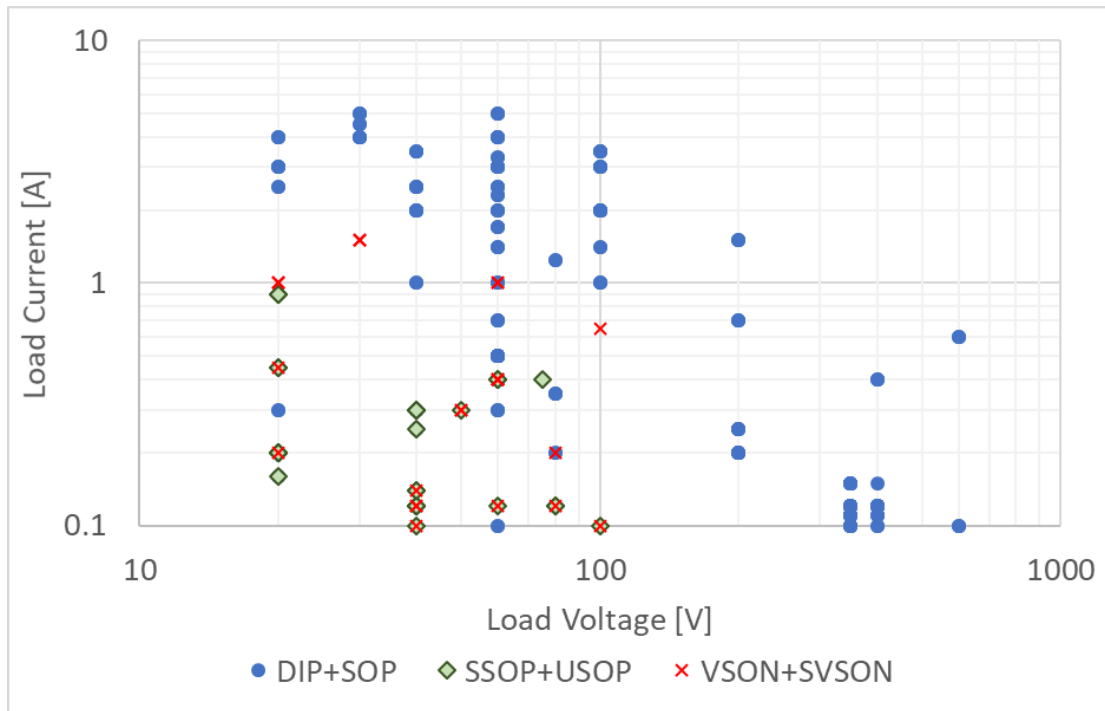
Others

- Air Conditioning
- Building Automation



Existing MOSFET relay Line-Up

MOSFET relay Line-Up (Voltage vs Current)



DIP, SOP
High current, Diversity

SSOP,USOP
Diversity

VSON, S-VSON
Focus on ATE

DIP	SOP	SSOP	USOP	VSON(R)	VSON	S-VSON
Bottom surface 100%	Bottom surface 59%	Bottom surface 26%	Bottom surface 21%	Bottom surface 12%	Bottom surface 12%	Bottom surface 12%
						<p>* 82% of VSON</p>

Pick Up G3VM for ATE customer



New Product "PSON" have higher current.
 We propose following existing products at the same time
 because some customer request smaller size.

Package	Product Name	Load Voltage	Load Current	Output Resistance (typ.)	Output Capacitance (typ.)	tON (typ.)	tON (max)	tOFF (typ.)	tOFF (max)	
		[V]	[A]	[Ohm]	[pF]	[ms]	[ms]	[ms]	[ms]	
	G3VM-21UR10	20	0.20	3.00	0.80	0.05	0.20	0.02	0.20	
	G3VM-21UR1		0.45	0.80	5.00	0.17	0.40	0.02	0.40	
	G3VM-21UR11		1.00	0.18	40.00	-	2.00	-	1.00	
	G3VM-41UR12	40	0.10	15.00	0.30	0.05	0.20	0.03	0.20	
	G3VM-41UR10		0.12	12.00	0.45	-	0.20	-	0.30	
	G3VM-41UR11		0.14	7.00	0.70	0.06	0.20	0.03	0.20	
	G3VM-51UR	50	0.30	1.00	12.00	-	0.50	-	0.40	
	G3VM-61UR1	60	0.12	10.00	0.70	0.05	0.20	0.02	0.20	
	G3VM-61UR		0.40	1.00	20.00	-	0.50	-	0.50	
	G3VM-81UR	80	0.12	7.00	5.00	-	0.50	-	0.20	
	G3VM-81UR1		0.20	6.00	6.50	-	0.40	-	0.40	
	G3VM-101UR	100	0.10	8.00	6.00	-	0.30	-	0.30	
		G3VM-31QR	30	1.50	0.10	120.00	0.80	2.00	0.05	1.00
		G3VM-41QR10*	40	0.12	11.00	0.45	0.08	0.20	0.04	0.30
G3VM-61QR		60	0.40	1.10	12.00	-	0.50	-	0.30	
G3VM-61QR2			1.00	0.20	80.00	0.75	2.00	0.04	0.30	
G3VM-101QR1		100	0.65	0.40	50.00	0.60	2.00	0.04	0.30	

*S-VSON(L)

Pulse current is 3times of Load Current(Almost of all) 100ms. Duty=1/10



■ Thank You