For Reference

Number: G3VM-0510031B
Date of Issue: Dec.01.2005

OMRON Corporation
OMRON Relay & Devices Corporation

Prepared by	Checked by	Authorized by
T.ASO		

PRODUCT SPECIFICATIONS

Name: MOS FET RELAY

Model:G3VM-41LR11

Item: -------

Registration part number for Customer
Type name : Type number :

Receipt Stamp(For receipt purpose only)
Please accept handling of this specification sheet as for reference use if no reply received.

Handled by

Distribution

	Copy
Customer	
Sales( )	

Revision Record

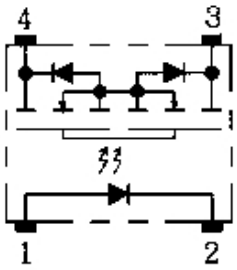
Mark	Date	Contents

1.Constructions

1.1 Outline drawing　　９４２３３７９－２

1.2 Contact Form　　１ａ

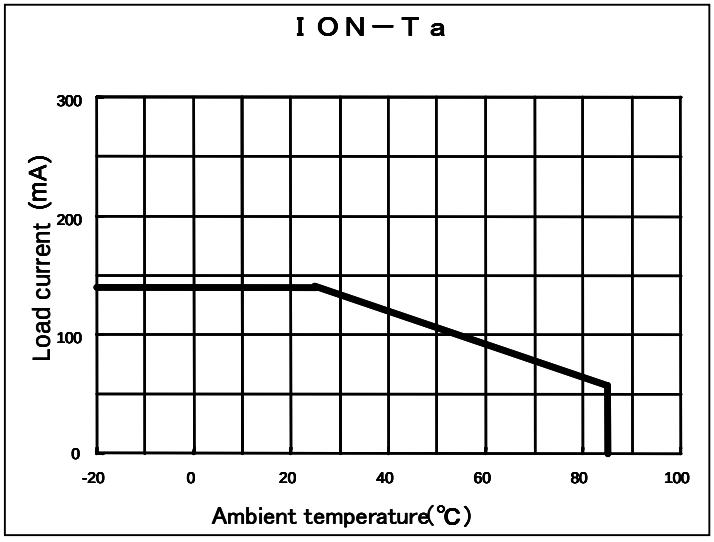
1.3 Internal Circuit



2.Maximum Rating（Ta＝25℃）

ITEM		MARK	RATE	UNIT	CONDITION
Input	LED forward current	I_F	30	mA	
	Forward Current Derating	ΔI_F/℃	-0.3	mA/℃	$T_a \geqq 25$℃
	LED reverse voltage	V_R	5	V	
	Junction Temperature	T_J	125	℃	
Output	Output voltage strength	V_{OFF}	40	V	
	Continuous load current See Diagram 1	I_O	140	mA	
	On-State Current Derating	ΔI_{ON}/℃	-1.4	mA/℃	$T_a \geqq 25$℃
	Junction Temperature	T_J	125	℃	
Dielectric strength		V_{I-O}	1500	VAC	1 min.
Ambient temperature		T_a	-20～+85	℃	w/o no icing
Storage temperature		T_{stg}	-40～+125	℃	w/o no icing
Max. soldering temperature		－	260	℃	10s

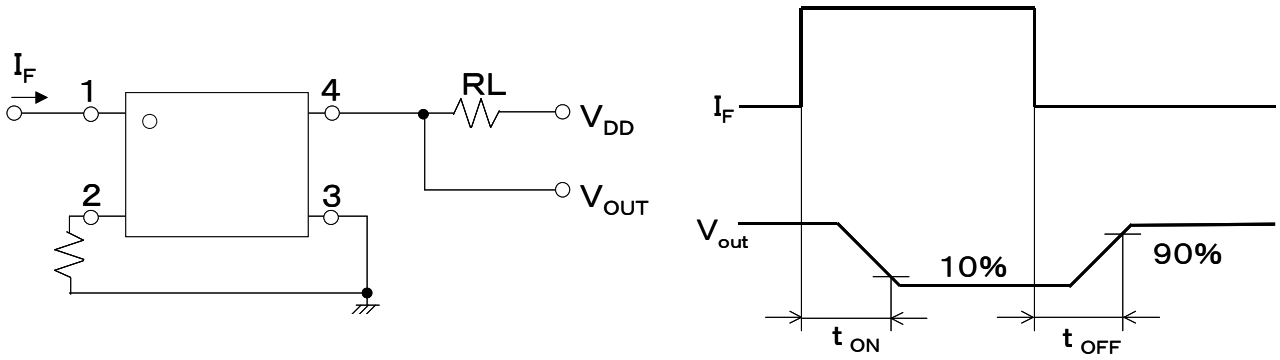
Diagram 1　　Load current VS Ambient temperature



3．Electrical Characteristics　(Ta=25℃)

ITEM		MARK	MIN.	TYP.	MAX.	UNIT	CONDITION
Input	LED forward voltage	V_F	1.15	1.30	1.45	V	I_F=5mA
	Reverse Current	I_R	－	－	10	μA	V_R=5V
	Capacitance	C_T	－	70	－	pF	V=0、 f=1MHz
	Keep ON LED current	I_{FT}	－	－	3	mA	I_O=100mA
Output	Output ON-resistance	R_{ON}	－	7	10	Ω	I_F=5mA、I_O=140mA, t＜1s
	Leakage current	I_{LEAK}	－	10	200	pA	V_{OFF}=35V, Ta=25℃
	Capacitance	C_{OFF}	－	0.7	1.3	pF	V=0, f=100MHz, t＜1s
Capacity for I/O		C_{I-O}	－	0.3	－	pF	f=1MHz　Vs=0V
Resistance for I/O		R_{I-O}	1000	－	－	MΩ	V_{I-O}=500VDC　R_OH≦60%
Operate time		t_{ON}	－	－	0.2	ms	I_F=5mA、R_L=200Ω、V_{DD}=10V
Release time		t_{OFF}	－	－	0.2	ms	See Diagram 2

Diagram 2. Operate.Release Time



4．Operate Condition

Please keep these conditions below to make it clear Operate and Release of Relay.

	MARK	MIN.	TYP.	MAX.	UNIT
Output voltage strength	V_{DD}	—	—	32	V
Operate LED forward current	I_F	—	—	20	mA
Continuous load current	I_O	—	—	140	mA
Ambient temperature	T_a	25	—	60	℃

5 . Other requirement

5.1 For special application

1 A safe design of your products to have considered a failure to be usually estimated.

2 It should be used with the description of usage and disposal.(Include The precaution on the manual, catalog and product specification)

3 At any condition and circumstance besides on the specification, for nuclear control, train airplane, vehicle, burner control and for hospital equipment, amusement and safety machine, required of the most safety otherwise influence to human life and their property, then it should be considered to use the product enough to the rating and the characteristics, further, any failsafe is required for the safety.

4 When an accident occurs with failure products, contact with the sales office.

5.2 Terms of guarantee

Guarantee of this product is valid for a year after the delivery.

5.3 Frame of guarantee

When product is specified to cause the application failure, the responsibility Can be accepted with repair work; however, the following are not responsible For the product

1 Usage under unsuitable condition, circumstance, out of specification.

2 Repair or modification without us.

3 Failure by other components than the product.

4 Against 10.1 " For special application".

5 Unrecognized causes with the science, technology at the time.(Include disaster)

5.4 Services

The cost of manpower does not include in the product; however, we consider it When customer demands

5.5 Dropping shock should be careful because of maintaining the initial characteristics.

6 . Storage and operating conditions

(1)Store in locations in normal temperature, humidity and atmosphere pressure.

(2)Environments

・Store in locations where the product or container is not exposed to corrosive gas such as hydrogen sulfide gas or salty air.

・Store in locations where no visible dust exists.

・Store in locations where the product is not exposed to the direct ray of the sun and rain, snow.
Also please do not apply the force to product which may result in the deformation or a change in quality of the product.

7 . Precautions

(1)Dropping shock should be careful because of maintaining the initial characteristics.

(2)If wash the product after soldered the relay on PCB, please use water-based solvent or alcohol-based solvent. At that time, please keep the solvent temp. less than ４０ degree Ｃ. Do not put the relay in a cold cleaning bath immediately after soldering.

8 . Agreement when Placing Orders

Thank you for using OMRON products.

Unless otherwise specified in a written estimate, contract, or specifications, the following conditions and warranty information apply when an OMRON control device (hereafter called "OMRON Product") is ordered from catalogs. Ordering an OMRON Product implies consent to these terms and conditions.

8.1. Warranty

a) Warranty Period

The warranty period for an OMRON Product is one year from either the date of purchase or the date on which the OMRON Product is delivered to the specified location.

b) Extent of Warranty

I f an OMRON Product is subject to a failure for which OMRON is responsible during the warranty period, either a replacement product will be provided or the defective product will be repaired free of charge at the place of purchase. This warranty, however, will not cover problems that occur as a result of any of the following.

a: Using the OMRON Product under conditions or in an environment not described in catalogs or in the specifications, or not operating the OMRON Product according to the instructions contained in catalogs or in the specifications.

b: Problem caused by something other than the OMRON Product.

c: Modifications or repairs performed by a party other than OMRON.

d: Using the OMRON Product for other than its designed purpose.

e: Problems that could not have been foreseen with the level of science and technology that existed at the time the OMRON Product was shipped.

f: Problems caused by an Act of God or other circumstances or which OMRON is not responsible.

This warranty covers only the OMRON Product itself. It does not cover any other damages that may occur directly or indirectly as a result of a problem with the OMRON Product.

8.2. Limitations of Liability

OMRON shall not be responsible for special, indirect, or consequential damages originating in an OMRON Product.

8.3. Applicable Conditions

a) When using OMRON Products in combination with other products, it is the user's responsibility to confirm compliance with all applicable standards and regulations. It is also the user's responsibility to confirm the suitability of the OMRON Products for the system, devices, and equipment that are being used. OMRON accepts no responsibility for the suitability of OMRON Products used in combination with other products.

b) When using OMRON Products in any of the following applications,
consult an OMRON representative and check specifications
to allow sufficient leeway in ratings and performance,
and to implement suitable safety measures, such as safety circuits,
to minimize danger in the event of an accident.

Ⅰ) Outdoor applications, applications with potential for chemical
contamination or electrical interference, or application under
conditions or environments not described in catalogs.

Ⅱ) Nuclear control systems, railroad systems, aviation systems,
vehicles, combustion systems, medical equipment, amusement machines,
or equipment regulated by government or industrial standards.

Ⅲ) Other systems, machines, and equipment that may have a serious
influence on human life and property.

Ⅳ) Equipment requiring a high level of reliability, such as gas,
water, or electrical supply systems, and systems that operate
24 hours a day.

Ⅴ) Other applications requiring a high level of safety,
corresponding to points Ⅰ) to Ⅳ), above.

c) When OMRON Products are used in an application that could pose
significant risk to human life or property, the overall system must
be designed so that the required safety can be ensured by providing
notice of the danger and incorporating redundancy into the design.
Make sure that OMRON Products are appropriately wired and mounted to serve
their intended purpose in the overall system.

d) Application examples provided in catalogs are for reference only.
Confirm functionality and safety before actually using the devices
and equipment.

e) To prevent unexpected problems from arising due to the OMRON Product
being used incorrectly by the customer or any other party,
make sure that you understand and carefully observe all of the relevant
prohibitions and precautions.

f) Each rating and performance value given in catalogs etc. is the
value in an independent examination, and does not guarantee simultaneously
the compound conditions of each rating and performance value.

8.4. Changes to Specifications

Specifications and accessories to the products in catalogs may be changed as needed to improve the products or for any other reason. Check with your OMRON representative for the actual specifications for OMRON Products at the time of purchase.

8.5.Treatment of the specifications for reference

When these specifications are issued for reference, please consult with your OMRON representative before actually using the specifications and confirm the latest specifications for the OMRON Product.

8.6.Extent of Service

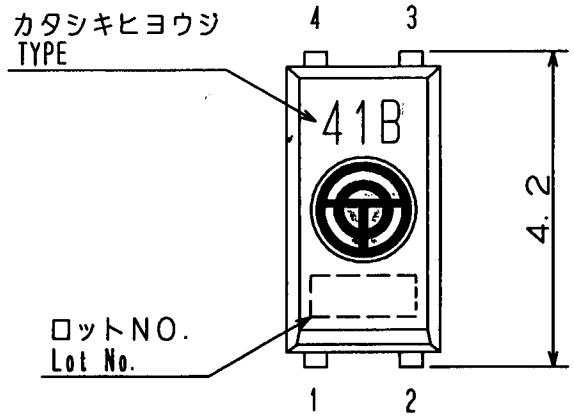
The price of an OMRON Product does not include service costs, such as dispatching technical staff. If you wish for service, please consult with your OMRON representative.

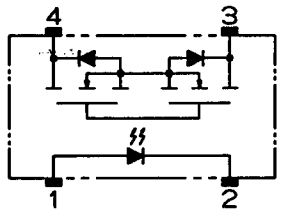
8.7. Applicability

The above information assumes that business and product application will be conducted in Japan. For business and application outside of Japan, consult with your OMRON representative.

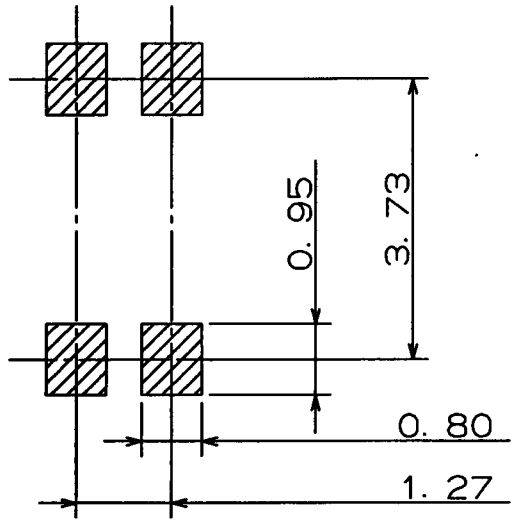
8.8. Effective term

These specifications will be invalid when there is not return or an order for one year from the date of issue.

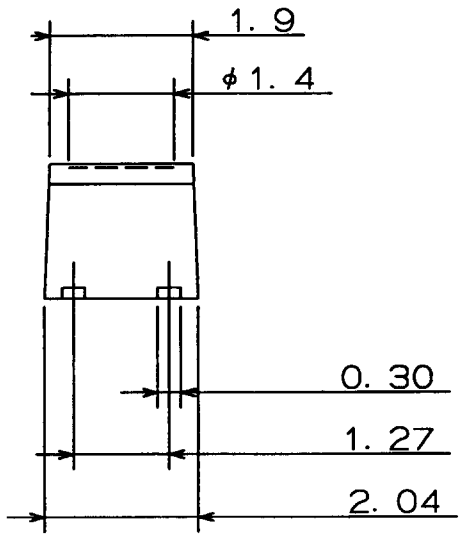


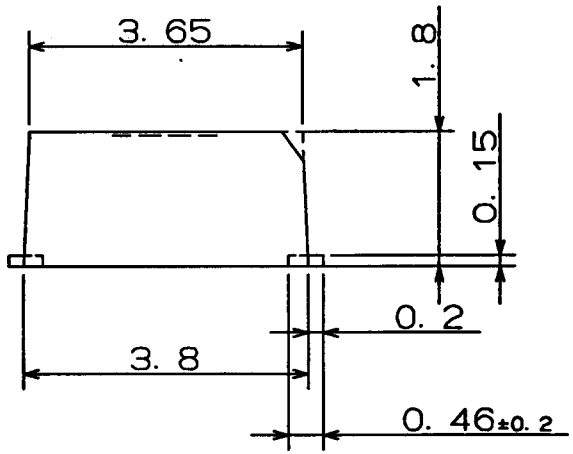


タンシハイチノ ナイブトウカカイロ
TERMINAL ARRANGEMENT/
EQUIVALENT CIRCUIT
(TOP VIEW)



プリントキバン カコウズ
MOUNTING PADS
(TOP VIEW)





出 図
DRAWING
オムロン リレー アンド デバイス 株式会社
OMRON Relay & Devices Corporation

指定ナキ寸法公差ハ、±0.1mmトスル.
Tolerance : ±0.1mm

SYM	DATE	E/C CONTENTS	E/C NO.	SIGN

MATERIAL ——
FINISH ——

TOLERANCES UNLESS SPECIFIED	DESIGNED	CHECKED	APPROVED
——	05/10/20 SGマーケ商技部 アソウ		承認 SGマーケ商技部 05.10.20 主査 下田

SCALE 5:1
3RD ANGLE
SHEET 1/1

MOS FET リレー MOS FET RELAY
ガイケイズ OUTL. DRWG.

DRWG NO. 9423379-2 A
DESIGNED FOR G3VM-41LR11

OMRON