

Product Specification Sheet



- For confirmation For estimate
 For meeting For reference

Spec sheet No. : OMB - G6D - 04002B (1/7)

Issued on : 09/11/2004

Prepared by SHAHARUDIN	Checked by <i>[Signature]</i>	Approved by <i>[Signature]</i>
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CUSTOMER : _____
 PRODUCT NAME : PCB POWER RELAY
 TYPE : G6D - 1A - ASI
 SPECIFICATION : DC STANDARD

Attached is a specification sheet for your perusal. Please examine it carefully, and upon confirmation, send one copy back to our company by _____

For receipt confirmation stamp

Specification sheet No. _____

Record of revisions (for use by Omron only)

Copies sent to	No. of copies	Code	Date of revision	Description of revision
Customer		△ A	24/03/2005	Add. TUV no. at safety standard approval
Marketing ()		△ B	12/04/2005	Correction weight

OMRON CORPORATION
OMRON MALAYSIA SDN BHD

The units and figures in brackets { } are for reference only.

(Optional items are indicated by a check mark)

Spec. Sheet No.: OMB - G6D - 04002B (2/7)

1.	CLASSIFICATION	PC BOARD USE RELAY		
2.	CONSTRUCTION			
2.1	Outline drawing	Drawing No.	<u>2483867 - 0</u>	
2.2	Structure drawing	Drawing No.	<u>-</u>	
2.3	Contact structure		<u>SPST - NO</u>	
2.4	Contact configuration		<u>SINGLE</u>	
2.5	Contact material	Surface material	<u>-</u>	Base material <u>AgSnIn</u>
2.6	Protective construction	<input checked="" type="checkbox"/> Plastic seal	<input type="checkbox"/> Flux protection	<input type="checkbox"/> <u>-</u>
3.	STANDARDS			
3.1	Approved by standard (s)	<u>UL</u>	<u>File No. : E41515</u>	
		<u>CSA</u>	<u>File No. : LR31928</u>	
		<u>TUV</u>	<u>File No. : R 50029064</u>	
		<u>A</u>		
4.	RATINGS			
4.1	Operating coil	<input checked="" type="checkbox"/> Refer to Table 1 (Initial values)		
(1)	Rated voltage and frequency	<u>-</u> V	<u>-</u> Hz)	
(2)	<input type="checkbox"/> Rated current	<input type="checkbox"/> Setting current	<u>-</u> mA ± <u>-</u> %	
			(at <u>-</u> V <u>-</u> Hz)	
		<input type="checkbox"/> Resetting current	<u>-</u> mA ± <u>-</u> %	
			(at <u>-</u> V <u>-</u> Hz)	
(3)	<input type="checkbox"/> Coil Resistance	<input type="checkbox"/> Setting resistance	<u>-</u> Ω ± <u>-</u> %	
		<input type="checkbox"/> Resetting resistance	<u>-</u> Ω ± <u>-</u> %	
(4)	Operate voltage	<u>-</u> ~ <u>-</u> % of rated voltage		
(5)	Rated power consumption	Approx. <u>-</u> W		
4.2	Contact ratings			
(1)	Rated load	Resistive load	AC <u>250</u> V	<u>5</u> A
			DC <u>30</u> V	<u>5</u> A
		Inductive load	AC <u>250</u> V	<u>2</u> A
			(P.f = <u>0.4</u>)	
			DC <u>30</u> V	<u>2</u> A
			(L/R = <u>7</u> ms)	
(2)	Rated carry current	<u>5</u> A		
(3)	Maximum rated voltage	AC <u>250</u> V	DC <u>30</u> V	
(4)	Maximum rated current	AC <u>5</u> A,	DC <u>5</u> A	
		AC <u>2</u> A,	(P.f = <u>0.4</u>)	
		DC <u>2</u> A,	(L/R = <u>7</u> ms)	

(5) Maximum switching capacity

Resistive load	AC	<u>1250</u> VA	DC	<u>150</u> W
Inductive load	AC	<u>500</u> VA		
			(P.f =	<u>0.4</u>)
	DC	<u>60</u> W	(L/R =	<u>7</u> ms)

(6) Minimum permissible load (Reference values)

P level ($\lambda_{60} = 0.1 \times 10^{-6}$ ops)

Condition : Resistive load DC 5 V 10 mA
 Operation Frequency 7200 ops/hr.

5. CHARACTERISTIC (Initial values)

5.1 Contact resistance 100 mΩ MAX.

Measured by the voltage drop method with DC 5 V 1 A applied

Measured by -

5.2 Operating voltage Setting voltage - V MAX.

Refer to Table 1

5.3 Releasing voltage Resetting voltage - V MIN.

Refer to Table 1

5.4 Operating time Setting time 10 ms MAX. (when operated with the rated voltage)

5.5 Releasing time Resetting time 5 ms MAX. (when operated with the rated voltage)

5.6 Insulation resistance (500 VDC 250 VDC)

(1) Between coil terminals and contact terminals	<u>1000</u> MΩ	MIN.
(2) Between non - continuous current carrying terminals	<u>-</u> MΩ	MIN.
(3) Between contact terminals of same polarity.	<u>1000</u> MΩ	MIN.
(4) Between set coil and reset coil.	<u>-</u> MΩ	MIN.
(5) Between current carrying terminal and exposed non - current carrying metal part.	<u>-</u> MΩ	MIN.

5.7 Dielectric strength (Leakage current 3 mA 50/60Hz for 1 minute)

(1) Between coil terminals and contact terminals.	<u>3000</u> VAC
(2) Between non - continuous current carrying terminals.	<u>-</u> VAC
(3) Between contact terminals of the same polarity.	<u>750</u> VAC
(4) Between set coil and reset coil.	<u>-</u> VAC
(5) Between current carrying terminal and exposed non - current carrying metal part.	<u>-</u> VAC

5.8 Temperature rise

(1) Coil 50 °C MAX. (by the coil resistance method)

Apply voltage of coil : 100 % - Hz of the rated voltage

Carry current of contact : 5 A

(2) Contact 65 °C MAX. (by the thermometer method)

Apply voltage of coil : 100 % - Hz of the rated voltage

Carry current of contact : 5 A

5.9 Vibration

(1) Mechanical durability

Must be free from any abnormality in both the construction and characteristics after the relay is subjected to a variable vibration of 1.5 mm double amplitude at vibration, frequency of 10 to 55 Hz in each direction for 2 h.

(2) Malfunction durability
(When energized
or set status)

Contact must not open for 1.0 ms or longer after the relay is subjected to a variable vibration of 1.5 mm double amplitude at a vibration frequency of 10 to 55 Hz for 5 min.

(When no energized
or reset status)

Contacts must not open for - ms or longer after the relay is subjected to a variable vibration of - mm double amplitude at a vibration frequency of - to - Hz for - min.

5.10 Shock

(1) Mechanical durability

Must be free from any abnormality in both the construction and characteristics after the relay is subjected to a shock of 1000 m/s² in each direction 3 times.

(2) Malfunction durability
(When energized
or set status)

Contacts must not open for 1.0 ms or longer after the relay is subjected to a shock of 100 m/s² in each direction 3 times.

(When not energized
or reset status)

Contacts must not open for - ms or longer after the relay is subjected to a shock of - m/s² in each direction - times.

5.11 Terminal strength

Must be free from any abnormality after a tensile stress of 9.8N (1.0kgf) is applied to the terminal in any direction vertical to the terminal tip for 10 sec. Any deformation of the terminal by the load shall not be regarded as a mechanical damage.

5.12 Temperature resistance

(1) Heat resistance

Must be free from any abnormality in both the construction and characteristics after the relay left in a temperature of 85 ± 2°C for 16 h and then in room temperature and humidity for 2 h.

(2) Cold resistance

Must be free from any abnormality in both the construction and characteristics after the relay left in a temperature of -55 ± 3°C for 72 h and then in room temperature and humidity for 2 h.

5.13 Moisture resistance

Must be free from any abnormality in both the construction and characteristics after the relay left in a humidity of 90 to 95 % RH for 48 h at a temperature of 40 ± 2°C, and then room temperature and humidity for 2 h. Insulation resistance, however, must be 5 MΩ MIN.

5.14 Soldering heat resistance Must be free from any abnormality in both the construction and characteristics after the terminals are dipped into molten solder at 260 ± 10°C for 5 sec. and then left in room temperature and humidity for 2 h.

5.15 Service life

(1) Mechanical Life 20 000 000 operations MIN.
(under no load at operating frequency of 18 000 ops/hr)

(2) Electrical Life 70 000 operations MIN.
(under rated load at operating frequency of 1 800 ops/hr)

5.16 Impulse withstand voltage Between coil ~ contact : 1.2 X 50 μ sec 10 KV MIN.
The surge voltage is the standard impulse voltage wave of ± (1.2 X 50) μ sec that is in accordance with JEC - 212 - 198.

6. STANDARD TEST CONDITION Unless otherwise specified, the values described in this specification obtained under the following conditions as standard.

6.1 Temperature 23°C

6.2 Humidity 65% RH

7. STORAGE CONDITIONS Use the product under the following conditions.

7.1 Temperature -25°C to 55°C -25°C to 70°C
(without freezing or condensation)

7.2 Humidity 35% to 85% RH - to - % RH

7.3 Environments

(1) Use in locations where the product or container is not exposed to corrosive gas such as hydrogen sulfide gas or salty air.

(2) Use in locations where no visible dust exists.

(3) Use in locations not subject to direct sunlight.

Do not apply a load to the product which may result in the deformation of the product.

8. OPERATING CONDITION Use the product under the following conditions.

8.1 Temperature -25°C to 70°C
(without freezing or condensation)

8.2 Humidity 5% to 85% RH

8.3 Mounting direction _____

8.4 Environment

(1) Use in locations where the product is not exposed to corrosive gas such as hydrogen sulfide gas or salty air

(2) Use in locations where no visible dust exists.

(3) Use in locations not subject to direct sunlight.

Do not apply a load to the product which may result in the deformation or deterioration of the product.

9. CHANGES OF INDICATIONS

Specification other than the ratings, performance, structure and external dimensions and mounting dimensions are subject to change.

10. VALIDITY OF SPECIFICATION SHEET

10.1 When no confirmation is received within one year of the issuing date of this specification sheet, this specification sheet will be invalidated.

10.2 This specification sheet is valid for 3 years after the date of receiving confirmation.

11. WARRANTY PERIOD

11.1 Warranty period

1 year from the date on which the products are delivered to the location designated by the customer.

11.2 Scope of warranty

The warranty is limited only to repairs or replacement of defective parts, when Omron is responsible for the malfunctioning or defect that occurs during the warranty period.

The warranty applies only to individual products delivered by Omron. Therefore, the warranty does not cover any other damages induced by the malfunctioning of Omron products.

12. OTHERS

Coil Rating

TABLE 1 -

Item Rated Voltage	Rated Current (mA)	Coil Resistance (Ω)	Must Operate voltage	Must Dropout voltage	Maximum voltage	Power Consumption (mW)
			% OF RATED VOLTAGE			
5 VDC	40	125	70 MAX	10 MIN	90~110%	200
6 VDC	33.3	180				
9 VDC	22.2	405				
12 VDC	16.7	720				
18 VDC	11.1	1620				
21 VDC	9.5	2205				
24 VDC	8.3	2880				

Note :

- 1) The rated current and coil resistance value indicated are those at a temperature 23°C the tolerance is $\pm 10\%$ for DC rated and $\pm 10\%$ for rated coil resistance.
- 2) Operating characteristics are the value at 23°C coil temperature.
- 3) Operate voltage when the terminal is installed top of the relay is less than 75% of rated voltage.

12.1 When you take DC inductive load switching with micro load (about 10 to 100mA), please use diode for surge killer.
(Possibility for low down of contact reliability because of sticking of carbon.

12.2 Case Marking
Eg:



13. HANDLING CAUTIONS

- 13.1 Do not use ultrasonic cleaning, since it causes resonance inside the relay and can result in coil disconnection and contact sticking.
- 13.2 Do not drop products to avoid deterioration of the initial performance.
- 13.3 All terminal are not allowed to be bend more than 45°.

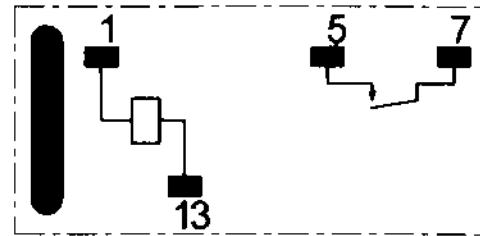
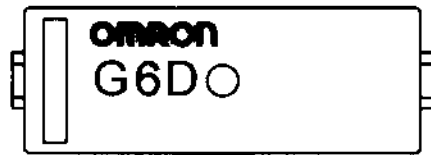
14. WEIGHT

14.1 Approximately 3 gram.

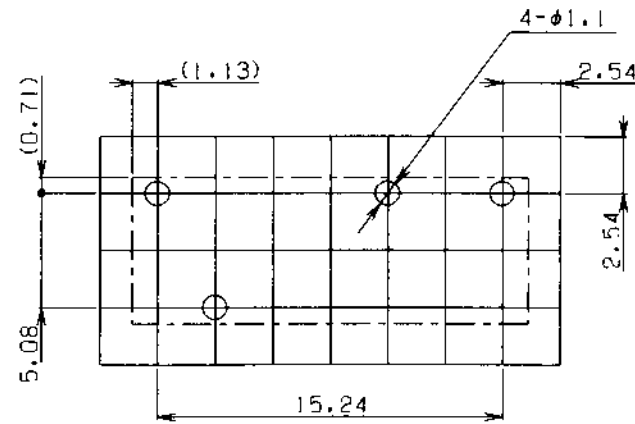
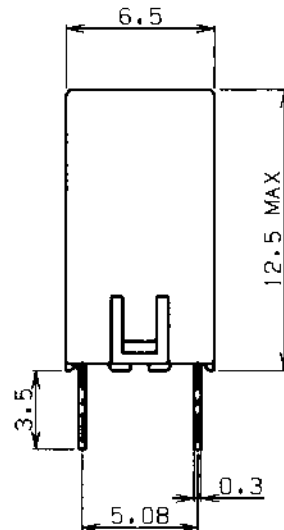
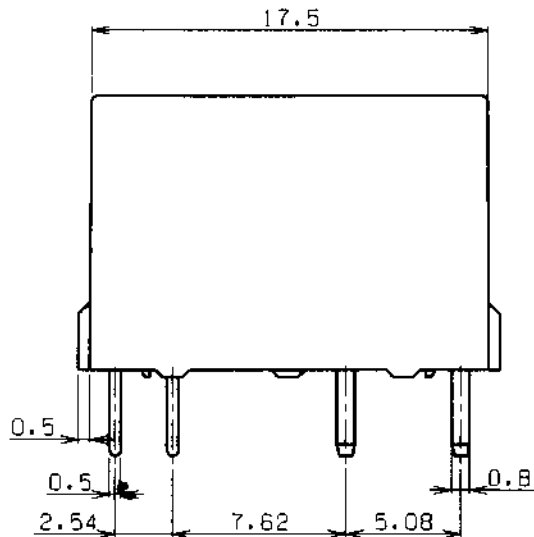


15. SEAL ABILITY

15.1 A70 (For 1 minute).



TERMINAL ARRANGEMENT/ INTERNAL CONNECTION
(BOTTOM VIEW)



MOUNTING HOLES (BOTTOM VIEW)
TOLERANCE ±0.1

					MATERIAL		SCALE		TYPE : G6D	
					FINISH		3RD ANGLE		OUTLINE DRWG	
					TOLERANCE UNLESS SPECIFIED	DRAWN BY	DESIGNED	CHECKED	APPROVED	DRWG NO.
					IT14	11/11/02	11/11/02	06/01/2003	08/01/03	2483867-0 D2
					SHAHA	OMB	OMB	OMB	OMB	DESIGNED FOR
					SHAHA	SHAHA	SHAHA	SHAHA	SHAHA	M-G6D-4001
SYM	DATE	E/C CONTENT	E/C NO.	SIGN						
Δ	11/11/02	CONVERT TO ENGLISH DRAWING	MI-G6D-02001	SHAHA						



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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