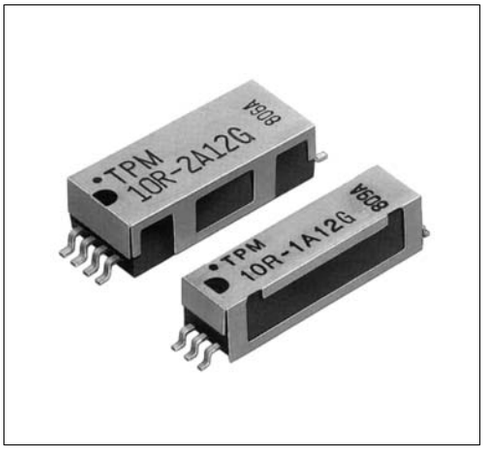
DB LECTRO
COMPOSANTS ÉLECTRONIQUES
ELECTRONIC COMPONENTS

# Surface Mount Reed Relays (2)




The 10 Series is the standard series for SMT 10 W contact rating. This product line comes in 1 Form A and 2 Form A arrangements. These relays provide the high-cycle support demanded by the ATE and communications.

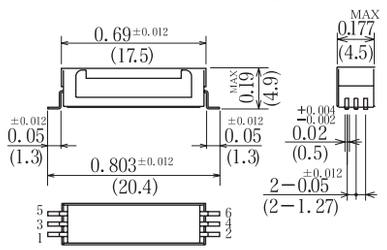
- Standard SMT relays
- Impedance 50Ω
- Electric magnetic shield available
- UL Certified

Detailed Terminal Figure
Angle
0～7.5°
Permissible Termina Deviation on the Side
0 ±0.004

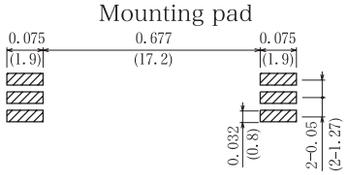
## Mechanical Dimensions

All dimensions are measured in inches (millimeters).

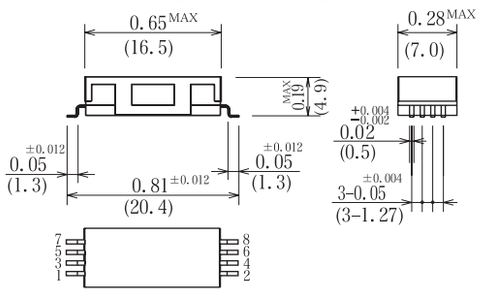
10□−1A□2G



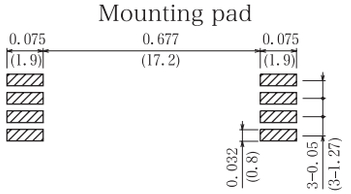

Mounting pad



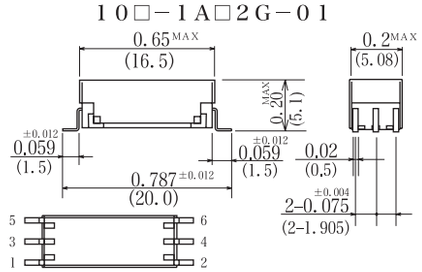

10□−2A□2G



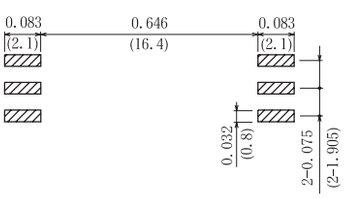

Mounting pad



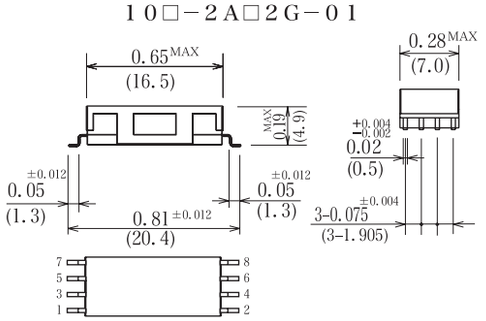

10□−1A□2G−01



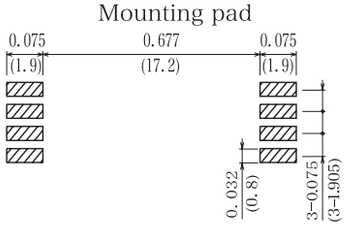

Mounting pad




10□−2A□2G−01



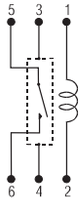
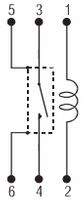
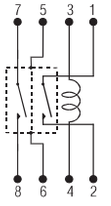
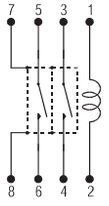

Mounting pad




As for 10D-1A and 10R-1A type relays, the tape-and-reel packing is also available, Refer to page 44, 45

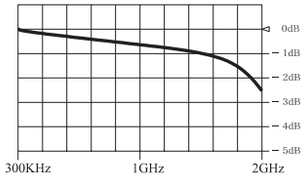
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## 10D, 10R Series

| Parameters | Test Condition | Units | 50Ω Coaxial Model Number 10D-1A□2□-□□ 1 Form A | 50Ω Coaxial Model Number 10R-1A□2□-□□ 1 Form A | 50Ω Coaxial Model Number 10D-2A□2□-□□ 2 Form A | 50Ω Coaxial Model Number 10R-2A□2□-□□ 2 Form A |
|---|---|---|---|---|---|---|
| **Coil Specifications** | | | | | | |
| Nominal coil voltage | | VDC | 5 | 12 | 5 | 12 |
| Coil resistance | ±10%at20°C | Ω | 160 | 600 | 140 | 600 |
| Operating voltage | 15°C～35°C | VDC Max | 3.6 | 9.6 | 3.6 | 9.6 |
| Release voltage | 15°C～35°C | VDC Min | 0.8 | 1.2 | 0.8 | 1.2 |
| **Contact Ratings** | | | | | | |
| Switching voltage | Max. DC/Peak AC resistance | Volts | 100 | 200 | 100 | 200 |
| Switching current | Max. DC/Peak AC resistance | Amps | 0.5 | 0.5 | 0.5 | 0.5 |
| Carry current | Max. DC/Peak AC resistance | Amps | 1.0 | 1.0 | 1.0 | 1.0 |
| Contact rating | Max. DC/Peak AC resistance | Watts | 10 | 10 | 10 | 10 |
| Life expectancy | 1V. 10mA | $\times 10^6$cycles | 1000 | 1500 | 1000 | 1500 |
| Contact resistance | Maximum initial | mΩ | 150 | 150 | 150 | 150 |
| Contact resistance stability | Maximum initial | mΩ | 5.0 | 5.0 | 5.0 | 5.0 |
| **Relay Specifications** | | | | | | |
| Insulation resistance | Between all isolated pins at 100V 20°C 40%RH | Ω | $10^{11}$ | | $10^{11}$ | |
| Capacitance | | pF-Max | | | | |
| Across open contacts | Shield guarding | | 0.2 | | 0.2 | |
| Contact to Shield | Contacts open, Shield floating | | 1.7 | | 1.8 | |
| Open contact to coil | Shield guarding | | 0.8 | | 0.8 | |
| Dielectric strength | Between contacts | VDC | 250 | | 250 | |
| | Contacts to shield | | 250 | | 250 | |
| Operating time (Including. bounce) | At nominal coil voltage, 100Hz Square wave | msec | 0.5 | | 0.5 | |
| Release time | Diode suppression | msec | 0.5 | | 0.5 | |
| Environmental Ratings<br>Mesurement reference conditons<br>Temp. : 15°C～35°C Humidity : 25%～85%RH<br>Atmospheric pressure : 860～1060hPa<br>Storage temp. : −40°C～+80°C<br>Operating temp : −20°C～+60°C<br>The operating and Release Voltage and the coil resistance are specified at 20°C. These values change approximately 0.4%/°C change in the ambient temperature.<br>Vibration : 20Gs to 2000Hz<br>Shock : 50Gs | | Schematics Top view | 10□-1A□2□  | 10□-1A□2□-01  | 10□-2A□2□  | 10□-2A□2□-01  |

10R Series

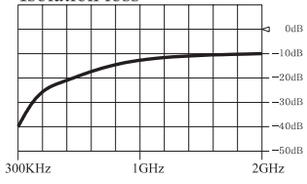
Insertion loss



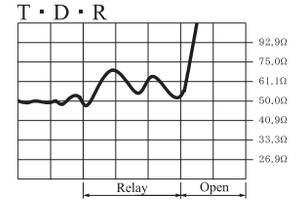

Return loss



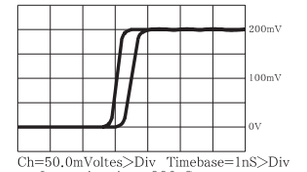

Isolation loss




T・D・R




Rise time




Ch=50.0mVoltes>Div Timebase=1nS>Div
Input rise time=330pS
Output rise time=388pS

## Notes :

(1) Values are specified with a resistive load being applied. A contact protective circuit is required for C and L type loads.

(2) The values for the operating time and release time however, are when the rated coil voltage is applied and a clamp diode is attached.

(3) Surface mount component processing temperature:446ºF (230ºC) max. for 10 seconds dwell time. Temperature is measured at leads where they exit the package.

※1 Please contact sales department the availabilities of terminal style J-Lead.

※2 Please pay attention to the difference of Circuit between "10□-□A□2□" and "10□-□A□2□-01"

## ORDERING CODE

1 0 □ − □ A □ 2 □ − □ □
(1) (2) (3) (4) (5)

Example 10R-1A12G Represents Series 10R with 1Form A, Dry Reed (Ruthenium), Coil Voltage 5V, Electrostatic Shield and Terminal Style Gull-Wing.

(1) Reed Switch Type
D-Dry Reed (Rhodium)
R-Dry Reed (Ruthenium)

2) Number of capsule
1-1capsule
2-2capsules

3) Coil Voltage
1-5VDC
2-12VDC

(4) Terminal Style
G-Gull- Wing
J-J-Lead ※1

(5) Special Code
Example
01-0.075 inch(1.905mm)pitches ※2

DB LECTRO Inc. 3600 boul. Matte suite i Brossard Qc J4Y-2Z2 tel:(450)-444-1424 fax:(450)-444-4714 www.dblectro.com

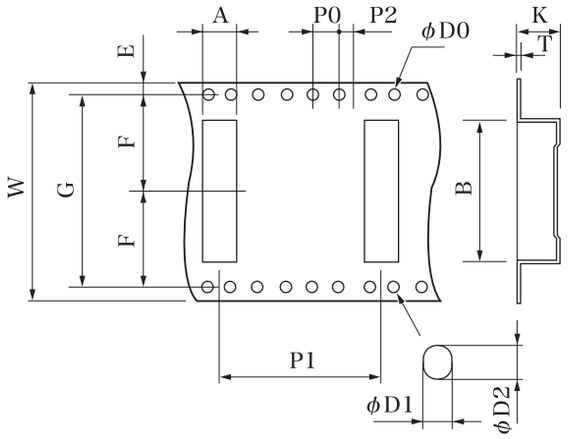
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ELECTRONIC COMPONENTS

# Packing Specification

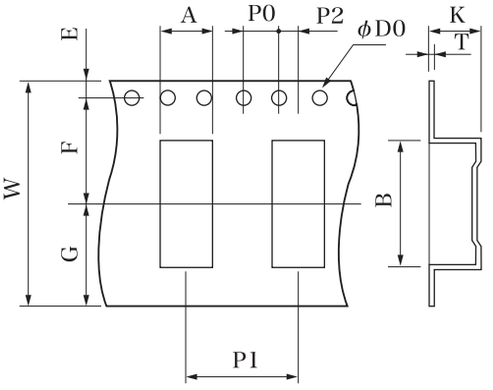
**All dimensions are measured in inches (millimeters)**

## Tape shape & dimensions

10 □ -1A TYPE




1D-14 □, 1D-12 □ TYPE

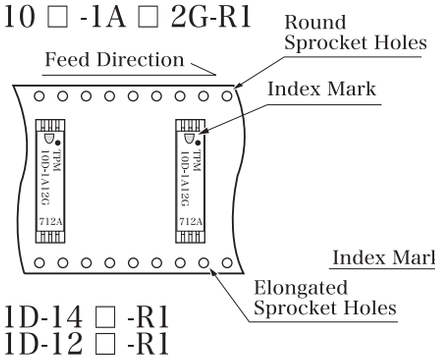



| PKG Type | W | A | B | E | F | G | $P_0$ |
|---|---|---|---|---|---|---|---|
| 10□-1A Type | $1.26^{\pm0.012}$ (32.0) | $0.2^{\pm0.004}$ (5.0) | $0.82^{\pm0.006}$ (20.9) | $0.07^{\pm0.004}$ (1.8) | $0.56^{\pm0.004}$ (14.2) | $1.118^{\pm0.012}$ (28.4) | $0.157^{\pm0.004}$ (4.0) |
| 1D-14J Type | $0.94^{\pm0.012}$ (24.0) | $0.2^{\pm0.004}$ (5.0) | $0.43^{\pm0.005}$ (10.8) | $0.069^{\pm0.004}$ (1.75) | $0.45^{\pm0.004}$ (11.5) | 0.42 (10.75) | $0.157^{\pm0.004}$ (4.0) |
| 1D-14G 1D-12G Type | $0.94^{\pm0.012}$ (24.0) | $0.2^{\pm0.004}$ (5.0) | $0.52^{\pm0.006}$ (13.2) | $0.069^{\pm0.004}$ (1.75) | $0.45^{\pm0.004}$ (11.5) | 0.42 (10.75) | $0.157^{\pm0.004}$ (4.0) |

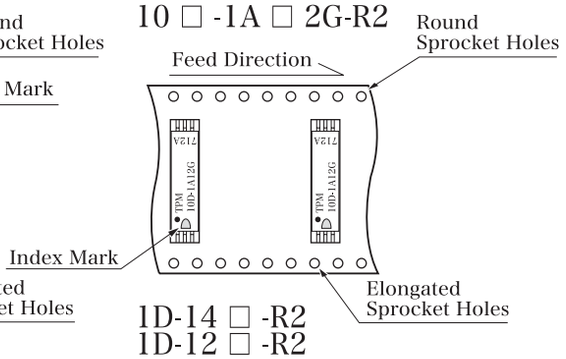
| PKG Type | $P_1$ | $P_2$ | $D_0$ | $D_1$ | $D_2$ | K | T |
|---|---|---|---|---|---|---|---|
| 10□-1A Type | $0.94^{\pm0.004}$ (24.0) | $0.08^{\pm0.004}$ (2.0) | $0.059^{+0.004}_{-0}$ (1.5) | 0.06 (1.5) | 0.07 (1.7) | $0.22^{\pm0.012}$ (5.6) | 0.016 (0.4) |
| 1D-14J Type | $0.47^{\pm0.004}$ (12.0) | $0.08^{\pm0.004}$ (2.0) | $0.059^{+0.004}_{-0}$ (1.5) | —— | —— | $0.216^{\pm0.012}$ (5.5) | 0.016 (0.4) |
| 1D-14G 1D-12G Type | $0.47^{\pm0.004}$ (12.0) | $0.08^{\pm0.004}$ (2.0) | $0.059^{+0.004}_{-0}$ (1.5) | —— | —— | $0.21^{\pm0.012}$ (5.35) | 0.016 (0.4) |

## Device mounting directions

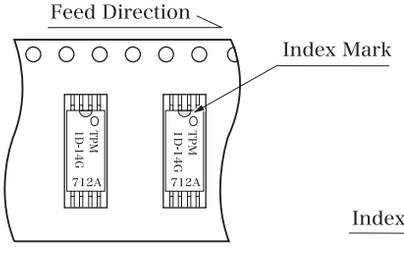
10 □ -1A □ 2G-R1



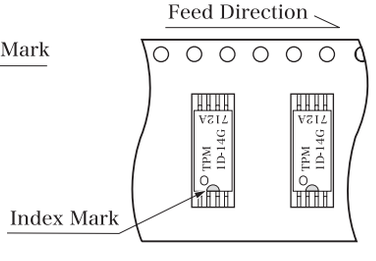

10 □ -1A □ 2G-R2




1D-14 □ -R1
1D-12 □ -R1




1D-14 □ -R2
1D-12 □ -R2

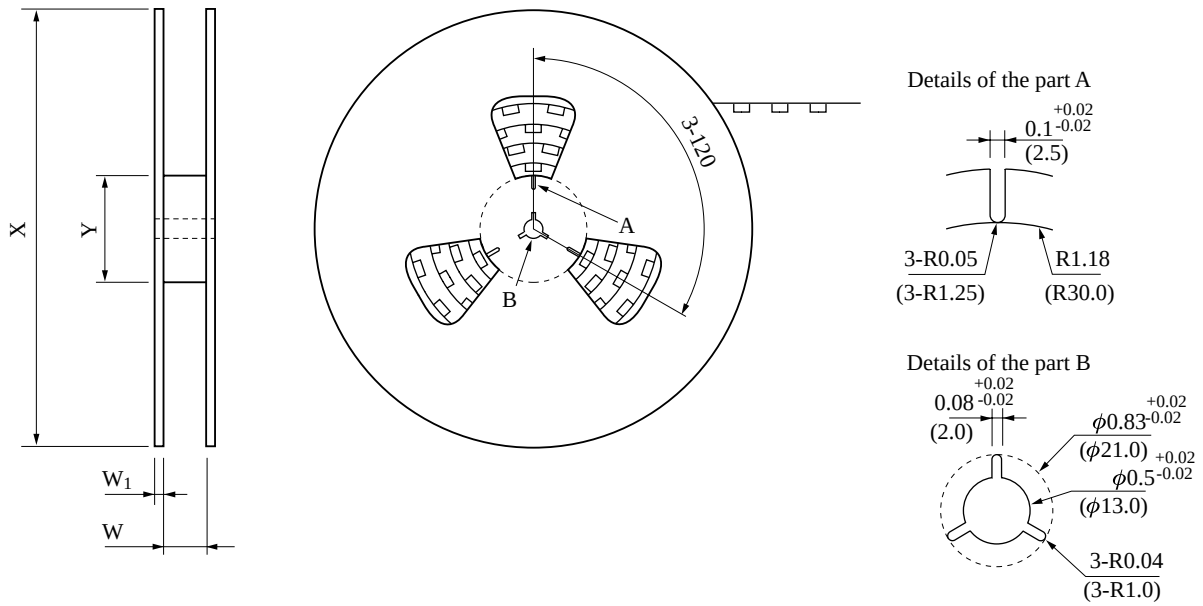



Two types of packaging (R1 & R2) are available. At the time of order, please specify the type you choose (R1 or R2), following the mention of the relay type. The packaging type (R1 or R2) is not to be imprinted on the product. Please be careful about the difference in arrangement direction between them.

DB LECTRO Inc. 3600 boul. Matte suite i Brossard Qc J4Y-2Z2 tel:(450)-444-1424 fax:(450)-444-4714 www.dblectro.com

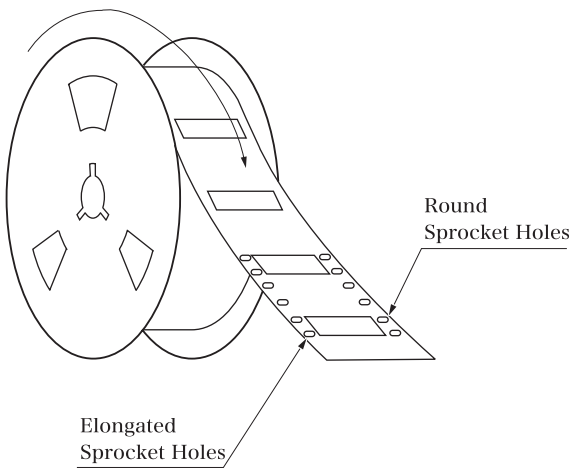
**All dimensions are measured in inches (millimeters)**

# Reel shape & dimensions

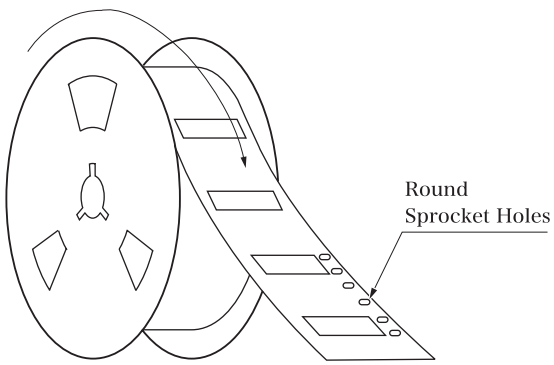



| PKG Type | X | Y | W | $W_1$ | Quantity |
|---|---|---|---|---|---|
| 10□-1A Type | $12.6^{\pm 0.079}$ (320) | $3.15^{\pm 0.02}$ (80) | $1.28^{+0.079}_{0}$ (32.5) | 0.11 (2.8) | 500 |
| 1D-14□ Type 1D-12□ Type | $12.6^{\pm 0.079}$ (320) | $3.15^{\pm 0.02}$ (80) | $1.0^{+0.035}_{-0.043}$ (25.4) | 0.12 (3.0) | 1000 |

(for 10 □ -1A type)




(for 1D -14 □, 1D-12 □ type)




Packaging conforms to EIA standard EIA-481-2 or EIA-481-3.
Please let our Sales Department know when the packing with tape-and-reel for 3D type and 17□ type will be needed.

# OCEAN CHIPS
## Океан Электроники
## Поставка электронных компонентов

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

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».

AVIC JONHON

**«JONHON»** (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

**«FORSTAR»** (основан в 1998 г.)

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(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).

FORSTAR®

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Факс: 8 (812) 320-03-32
Электронная почта: ocean@oceanchips.ru
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Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А