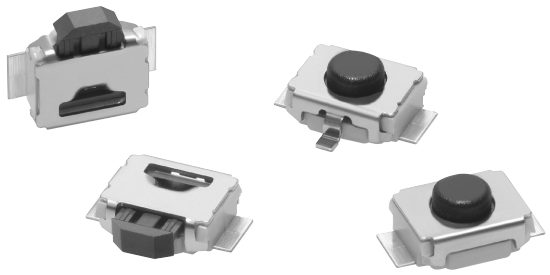
Ultra-small Tactile Switch
B3U

Ultra-small-sized Tactile Switch with High Contact Reliability: 1.2 x 3 x 2.5 mm (H x W x D)

- Industry's smallest switch* allows high-density mounting on PCBs for mobile equipment.
  *As of October 2006 (according to OMRON survey).
- Dust-proof construction provides high reliability in dusty environments.
- Surface mounted: Ideal for high-density mounting.
- Models with ground terminals are available for protection against static electricity.
- RoHS Compliant



NEW

Ordering Information

Type	Quantity per reel	Locating pin	Model	
			Without ground terminal	With ground terminal
Top-actuated	3,500 pieces	Without boss	**B3U-1000P**	**B3U-1100P**
		With boss	**B3U-1000P-B**	**B3U-1100P-B**
Side-actuated	4,000 pieces	Without boss	**B3U-3000P**	**B3U-3100P**
		With boss	**B3U-3000P-B**	**B3U-3100P-B**

Note: 1. Order in multiples of the quantities given for each package

2. Replace "P" in the part number with "PM" to order versions with 1,000 pieces per reel. Example: B3U-3100*PM*-B

Specifications

■ Characteristics

Item	Top-actuated (B3U-1000 Series)	Side-actuated (B3U-3000 Series)
Contact form	SPST-NO	
Switching capacity	1 to 50 mA, 5 to 12 VDC (resistive load)	
Contact resistance	100 mΩ max. (rated: 1 mA, 5 VDC)	
Insulation resistance	100 MΩ min. (at 100 VDC)	
Dielectric strength	250 VAC, 50/60 Hz for 1 min	
Bounce time	5 ms max.	
Vibration resistance	10 to 55 Hz, 1.5 mm double amplitude	
Shock resistance	1,000 m/s^2 max.	
Life expectancy	200,000 operations min.	100,000 operations min.
Ambient operating temperature	–25 to 70°C, (at 60% RH max.) with no icing or condensation	
Ambient operating humidity	35% to 85% (at 5 to 35°C)	
Weight	Approx. 0.022 g	

Note: Data shown are of initial value

■ Operating Characteristics

Characteristics	Top-actuated (B3U-1000 Series)	Side-actuated (B3U-3000 Series)
Operating force (OF)	153 ± 50 gf	162 ± 50 gf
Releasing force (RF) min.	20.3 gf	
Pretravel (PT)	$0.15^{+0.2}_{-0.1}$ mm	$0.2^{+0.2}_{-0.1}$ mm

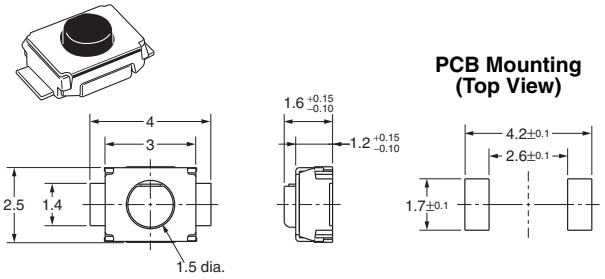
Dimensions

Note: All dimensions are in millimeters unless otherwise indicated. Unless otherwise specified, a tolerance of ±0.2 mm applies to all dimensions.

■ Top-actuated Models

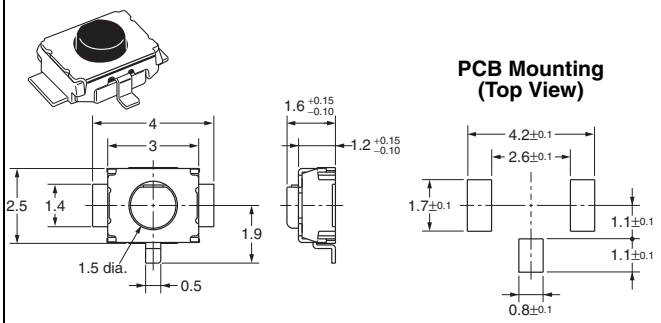
Without Ground Terminal, without Boss

B3U-1000P



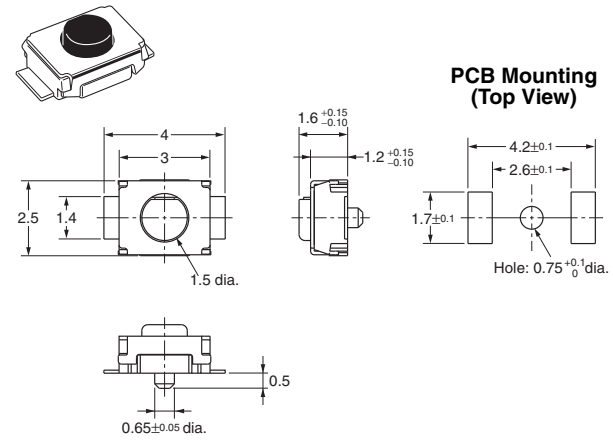
With Ground Terminal, without Boss

B3U-1100P



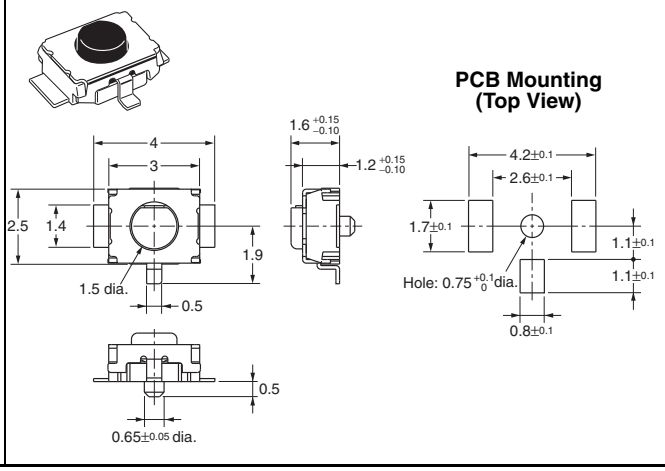
Without Ground Terminal, with Boss

B3U-1000P-B



With Ground Terminal, with Boss

B3U-1100P-B

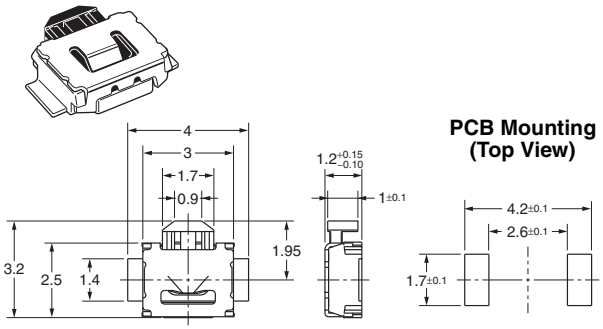


■ Side-actuated Models

Note: All dimensions are in millimeters unless otherwise indicated. Unless otherwise specified, a tolerance of ±0.2 mm applies to all dimensions.

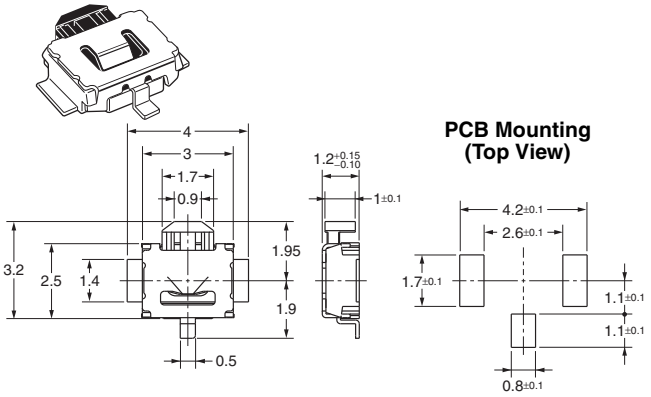
Without Ground Terminal, without Boss

B3U-3000P



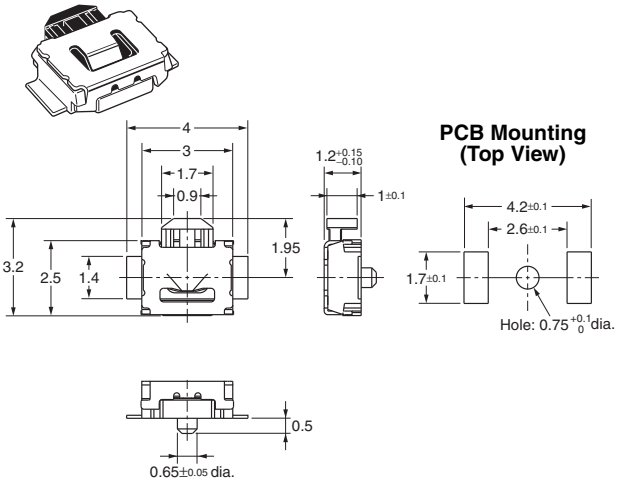
With Ground Terminal, without Boss

B3U-3100P



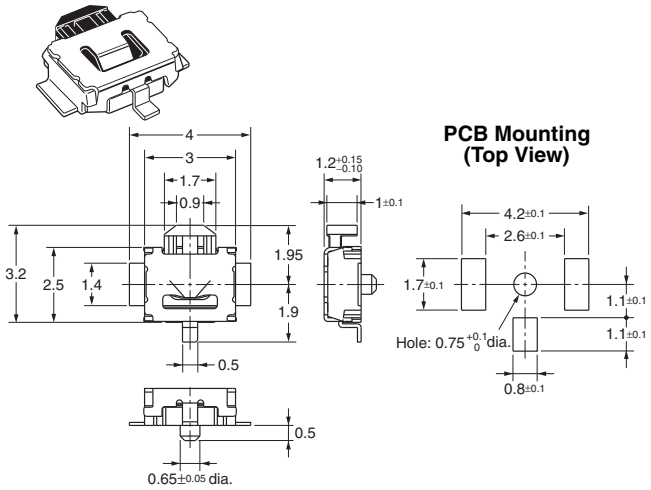
Without Ground Terminal, with Boss

B3U-3000P-B



With Ground Terminal, with Boss

B3U-3100P-B



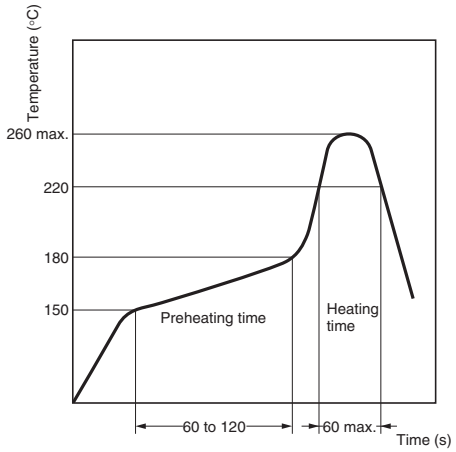
Precautions

Be sure to read the precautions common to all Tactile Switches, contained in the Technical User's Guide, "Tactile Switches, Technical Information" for correct use.

■ Precautions for Correct Use

Soldering

Perform reflow soldering within the ranges shown in the terminal temperature profile in the following diagram.



Washing

B3U Switches cannot be washed. Doing so will cause the washing agent, together with flux or dust particles on the PCB, to enter the Switch, resulting in malfunction.

Compliance with RoHS Directive

The "RoHS Compliant" designation indicates that the product does not contain the following six hazardous substances covered by the RoHS Directive.

Reference: The following standards are used to determine compliance for the six substances.

Lead:1,000 ppm max.
Mercury:1,000 ppm max.
Cadmium:100 ppm max.
Hexavalent chromium:1,000 ppm max.
PBB:1,000 ppm max.
PBDE:1,000 ppm max.

Storage and Operating Environment

Do not store the product under the following conditions to prevent discoloration and other deterioration of the terminals.

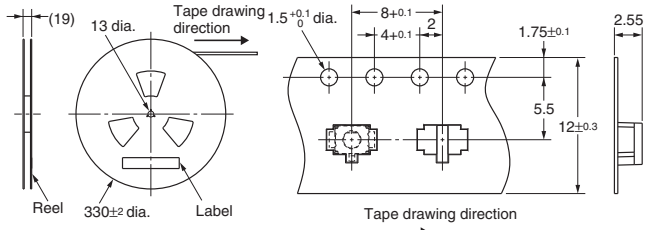
1. Locations subject to high temperatures or humidity
2. Locations containing corrosive gases
3. Locations subject to direct sunlight

The Switch is not provided with a watertight or drip-proof construction. Do not install or operate the product in locations subject to water spray or splashes.

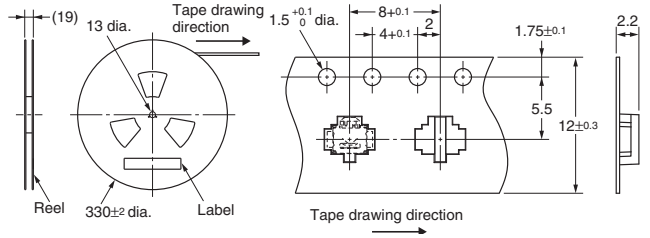
Packaging Specifications

The specifications for B3U Switches packaged on embossed tape are as follows:

B3U-1000 Series



B3U-3000 Series

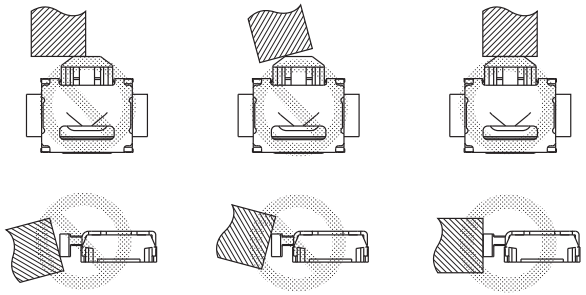


Standards	Conforms to JEITA.
Package	3,500 Switches (B3U-1000 Series)
	4,000 Switches (B3U-3000 Series)
Heat resistance	50°C for 24 hours (without deformation)

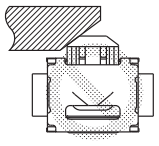
Operation

Do not repeatedly operate the Switch with excessive force. Applying excessive pressure or applying additional force after the plunger has stopped may deform the disc spring of the Switch, resulting in malfunction. (Maximum force = 30N)

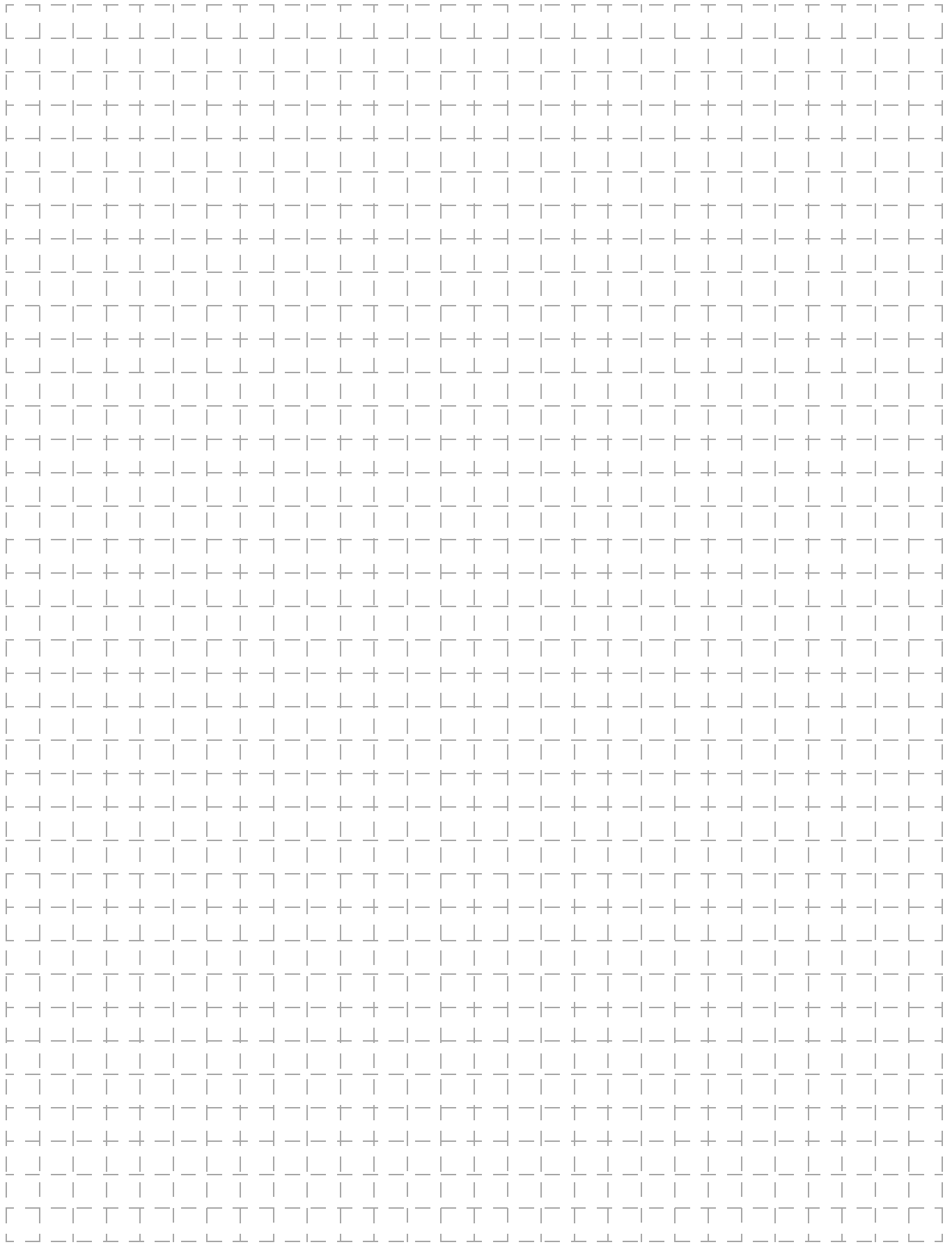
Be sure to set up the Switch so that the plunger will be pressed straight in. The life of the Switch may be reduced if the plunger is pressed off-center or from an angle. Do not apply pressure from above or below the plunger. Doing so may deform or damage parts or cause faulty operation.



Do not operate the plunger from the side. Doing so may deform or damage the Switch.



MEMO



OMRON

All sales are subject to Omron Electronic Components LLC standard terms and conditions of sale, which can be found at http://www.components.omron.com/components/web/webfiles.nsf/sales_terms.html

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

OMRON

OMRON ELECTRONIC COMPONENTS LLC
55 E. Commerce Drive, Suite B
Schaumburg, IL 60173
847-882-2288

OMRON ON-LINE
Global - http://www.omron.com
USA - http://www.components.omron.com

Cat. No. X303-E-1 11/10 Specifications subject to change without notice Printed in USA

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.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

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

FORSTAR®

Телефон: 8 (812) 309-75-97 (многоканальный)
Факс: 8 (812) 320-03-32
Электронная почта: ocean@oceanchips.ru
Web: http://oceanchips.ru/
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А