

FASTIN-FASTON Product Line

Product Facts

- Used for single and multiple connections
- Receptacles and tabs available for 6.3, 4.8 and 2.8 mm size (.250 – .187 and .110 Series)
- Receptacles mate with 0.5 and 0.8 thick tabs
- IEC 60335-1, Glow Wire 750° No Flame housings available
- RoHS Compliant

Material and Finish

Contacts — Brass, and phosphor bronze base material. Tin and nickel plated products available

Housings — Polyamide UL 94 V2 and UL 94 V0

Technical Documents

Application Specifications

114-2025 FASTIN-FASTON Product Line



TE FASTIN-FASTON connectors offer the advantage of the FASTON receptacles technology in multiple applications. In wiring harnesses, they are mainly used as multiposition and coupling connectors. Up to 8 position connectors can be mated in one operation with a maximum of 20 leads terminated.

Locking Contacts

Receptacles and tabs in this version comply fully with the FASTON receptacles product technology. The only difference is the addition of a locking lance, which helps ensure firm retention of contacts when snapped into housings. Wiring harnesses prefabricated with male or female connectors can be easily connected to mating counterparts, even if manufacturing occurred at a different site. Any application of this technology leads to essential time savings in final assembly.

FASTIN-FASTON Product Line (Continued)

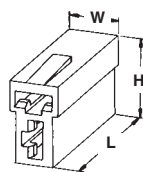
250 Series (6.3 mm)
Single Position Connectors
(Housings)



Style	Material	Color	UL 94	Note	Part Number	UL	SP
A	Nylon	Natural	V2	—	480054-3	X	X
		Black	V2	—	480054-4	X	X
		Red	V2	—	480054-5	X	X
B	Nylon	Natural	V0	—	521290-1	X	X
		Natural	V2	—	480053-3	X	X
		Black	V2	—	480053-4	X	X
	Nylon	Red	V2	—	480053-5	X	X
		Natural	V0	—	521289-1	X	X
C	Nylon	Natural	V2	—	521743-1	X	X
D	Nylon	Natural	V2	—	521744-1	X	X

¹ Flammability rating.

250 Series (6.3 mm)
2 Position Connectors



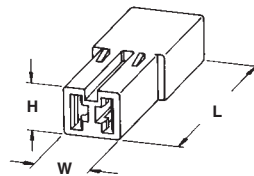
D — Receptacle Housing



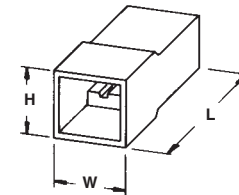
E — Tab Housing

Style	Material	Color	UL 94	Note	Dimensions (mm)			Part Number	UL	SP
					W	L	H			
D	Nylon	Natural	V2	—	.402	.902	.654	180907-0	—	—
		Black	V2	—	10.2	22.9	16.6	180907-5	—	—
		Natural	V0	GWT 750° No Flame				1-180907-0	—	—
E	Nylon	Natural	V2	—	.500	1.224	.791	180908-0	—	—
		Black	V2	—	12.7	31.1	20.1	180908-5	—	—
		Natural	V0	GWT 750° No Flame				880310-8	—	—

250 Series (6.3 mm)
2 Position Connectors



F — Receptacle Housing



G — Tab Housing

Style	Material	Color	UL 94	Note	Dimensions (mm)			Part Number	UL	SP
					W	L	H			
F	Nylon	Natural	V2	—	.492	.902	.394	180923-0	X	—
		Black	V2	—	12.50	22.9	10.0	180923-5	X	—
		Natural	V0	—				4-180923-0	X	—
G	Nylon	Natural	V2	—	.598	1.240	.520	180924-0	X	—
		Black	V2	—	15.2	31.5	13.2	180924-5	X	—
		Natural	V0	—				4-180924-0	X	—

Note: All part numbers are RoHS compliant.

FASTIN-FASTON Product Line (Continued)

250 Series

Receptacles with Mating Dimple
(For use with single circuit connectors)

Fits Tab — .032 [0.81]
Stock Thickness — .016 [0.41]



Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part Number	UL	CS	Quick-Change Applicator No. ²
18-14	.100-.170 2.54-4.32	Brass	42281-1	X	X	687940-2
		Tin Plated Brass	42281-2	X	X	687940-2
		Brass	60634-1 ¹	X	X	687940-2
16-12 (2) 16	.160-.210 4.06-5.33 (2) .130 Max. 3.30	Brass	60249-1	X	X	466057-2
		Tin Plated Brass	60249-2	X	X	466057-2
11-10	.157-.205 3.99-5.21	Brass	160914-1	—	—	—
		Tin Plated Brass	160914-2	—	—	—

¹ No front slot.

² Quick-change applicator for AMP-O-LECTRIC machine 565435-5.
For AMPOMATOR machine and other machines not listed, contact TE.

FASTIN-FASTON Product Line

250 Series

Receptacles without Mating Dimple
(For use with multiple circuit connectors)

Fits Tab — .032 [0.81]
Stock Thickness — .012 [0.30]

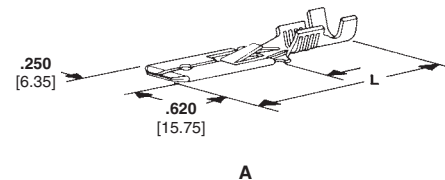


Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part Number	UL	CS	Quick-Change Applicator No. ¹
22-18	.085-.125 2.16-3.18 .060-.100 1.52-2.54	Tin Plated Brass	60295-2	X	X	687981-2
		Tin Plated Brass	60413-1	X	X	687979-3
18-14	.100-.170 2.54-4.32	Brass	42100-1	X	X	687932-2
		Tin Plated Brass	42100-2	X	X	687932-2
16-12 or (2) 16	.160-.210 or 4.06-5.33 or (2) .130 Max. 3.30	Tin Plated Brass	60253-2	X	X	466058-2
12-10	.134-.200 3.40-5.08	Brass	180351-1	—	—	—
		Pre-Tin Plated Brass	180351-2	—	—	—

¹ Quick-change applicator for AMP-O-LECTRIC machine 565435-5.
For AMPOMATOR machine and other machines not listed, contact TE.

250 Series

Tabs
(For use with single or multiple circuit connectors)
Stock Thickness — .015 [0.38]



Wire Range AWG	Style	Tab Thk.	Insulation Diameter	Dim. L	Material and Finish	Terminal Part No.	UL	CS	Quick-Change Applicator No. ²
22-18	A	.032 0.81	.085-.125 2.16-3.18	1.105 28.07	Brass	62553-1	X	X	687982-2
					Tin Plated Brass	62553-3	X	X	687982-2
18-14	A	.032 0.81	.100-.170 2.54-4.32	1.105 28.07	Brass	42460-1	X	X	687839-2
					Tin Plated Brass	42460-2	X	X	687839-2
14-10	B	.016 0.41	.120-.145 3.05-3.68	1.100 27.94	Tin Plated Brass	42580-2 ¹	X	X	687839-2
					A	.032 0.81	.120-.170 3.05-4.32	1.105 28.07	Tin Plated Brass

¹ Used for back-to-back with a combined thickness of .032 [0.81].

² Quick-change applicator for AMP-O-LECTRIC machine 565435-5.
For AMPOMATOR machine and other machines not listed, contact TE.

³ 9600 cma max.

Note: All part numbers are RoHS compliant.

FASTIN-FASTON Product Line (Continued)

250 Series (6.3 mm)
3 Position Connectors



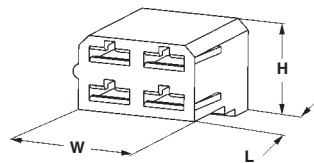
G — Receptacle Housing



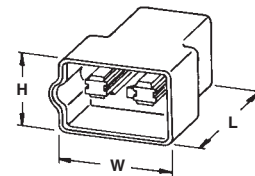
H — Tab Housing

Style	Material	Color	UL 94	Note	Dimensions (mm)			Part Number	UL	SP
					W	L	H			
G	Polyamide	Natural	V2	—	.598	.902	.705	180941-0	—	—
		Black	V2	—	15.2	22.9	17.9	180941-5	—	—
		Natural	V2	GWT 750° No Flame	—	—	—	2-180941-0	—	—
E	Polyamide	Natural	V2	—	.598	1.252	.783	180940-0	—	—
		Black	V2	—	15.2	31.8	19.9	180940-5	—	—
		Natural	V2	GWT 750° No Flame	—	—	—	2-180940-0	—	—

250 Series (6.3 mm)
4 Position Connectors



L — Receptacle Housing



M — Tab Housing

Style	Material	Color	UL 94	Note	Dimensions (mm)			Part Number	UL	SP
					W	L	H			
L	Polyamide	Natural	V2	—	.909	.949	.606	180900-0	X	—
		Black	V2	—	23.1	24.1	15.4	180900-5	X	—
		Natural	V0	GWT 750° No Flame	—	—	—	2-880110-0	—	—
M	Polyamide	Natural	V2	—	1.031	1.240	.650	180901-0	X	—
		Black	V2	—	26.2	31.5	16.5	180901-5	X	—
		Natural	V0	GWT 750° No Flame	—	—	—	2-626541-0	—	—

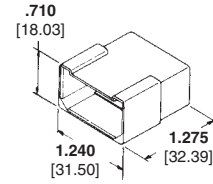
Note: All part numbers are RoHS compliant.

FASTIN-FASTON Product Line (Continued)

**250 Series
6 Circuit Connectors
(Housings)**



Receptacle Housing



Tab Housing

Material	UL 94 ¹	Color	Part Numbers		UL	SP
			Receptacle	Tab		
Nylon	V2	Natural	480003-5	480004-5	X	X
		Black	1-480281-0 ²	1-480282-0	X	X

¹ Flammability rating.

² No mounting ears.

FASTIN-FASTON Product Line

**250 Series (6.3 mm)
8 Position Connectors**



Q — Receptacle Housing



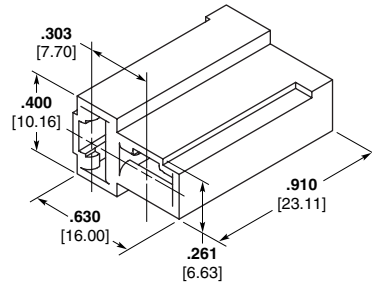
R — Tab Housing

Style	Material	Color	UL 94	Note	Dimensions (mm)			Part Number	UL	SP
					W	L	H			
Q	Polyamide	Natural	V2	—	1.484 37.7	.949 24.1	.654 16.6	163007-0	—	—
R	Polyamide	Natural	V2	—	1.579 40.1	1.283 32.6	.720 18.3	163008-0	—	—

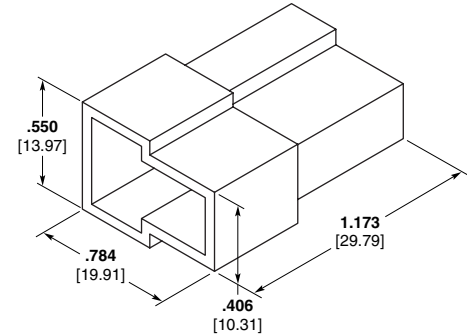
Note: All part numbers are RoHS compliant.

FASTIN-FASTON Product Line (Continued)

250 Series
2 Circuit "T" Housing



Receptacle Housing



Tab Housing

Material	UL 94 ¹	Color	Part Numbers		UL	CS®
			Receptacle	Tab		
Nylon	V2	Black	480115-3	—	—	—
			—	480116-3 ²	X	X

¹ Flammability rating.
² For use only with packard style tabs.

Packard Style Receptacles



Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part Number	UL	CS®	Applicator No.
20-16	.145 3.68 Max.	Brass	640841-1	—	—	466791-2
		Brass	640417-1	—	—	466704-2
18-14	.154 3.91 Max.	Pre-Tin Plated Brass	640417-2	—	—	466704-2
		Brass	640418-1 ¹	—	—	466704-2
		Pre-Tin Plated Brass	640418-2 ¹	—	—	466704-2

¹ No Dimple.

Packard Style Tabs



A



B

Wire Range AWG	Style	Stock Thk.	Insulation Diameter	Material and Finish	Terminal Part Number	UL	CS®	Applicator No.
18-14	A	.032 0.81	.100-.142 2.54-3.61	Brass	640416-1	—	—	466707-4
		.032 0.81	.110-.142 2.79-3.61	Tin Plated Brass	640416-2	—	—	466707-4
16-14	B	.032 0.81	.090-.130 2.29-3.30	Tin Plated Brass	60794-2	—	—	687888-6
14-12	A	.032 0.81	.140-.175 3.56-4.45	Tin Plated Brass	1217148-1	—	—	680808-2

Note: All part numbers are RoHS compliant.

FASTIN-FASTON Product Line (Continued)

**187 Series
Modular Connector
Housings**



Receptacle Housing



Tab Housing

Material	UL 94 ¹	Color	Part Numbers		UL	SP
			Receptacle	Tab		
Nylon	V2	Natural	1-480252-0	1-480251-0	X	X

¹ Flammability rating.

² Special mounting mates with all receptacle housings listed above.

FASTIN-FASTON Product Line

**187 Series
Modular Connector
Receptacles**

Fits Tab — .016 [0.41]
Insulation Diameter —
.090-.130 [2.29-3.30] or
(2) .110 [2.79] Max.



Wire Range AWG	Stock Thickness	Material and Finish	Terminal Part No.	UL	SP	Quick-Change Applicator No. ¹
20-16 or (2) 20	.012 0.30	Pre-Tin Brass	60435-1	X	X	687993-2

¹ Quick-change applicator for AMP-O-LECTRIC machine 565435-5.

For AMPOMATOR machine and other machines not listed, contact TE.

**187 Series
Modular Connector Tabs**

Tab Thickness — .016 [0.41]
Insulation Diameter —
.090-.130 [2.29-3.30]
or (2) .110 [2.79] Max.



Wire Range AWG	Stock Thickness	Material and Finish	Terminal Part No.	UL	SP	Quick-Change Applicator No. ¹
20-16 or (2) 20	.016 0.41	Pre-Tin Brass	60434-1	X	X	687995-2

¹ Quick-change applicator for AMP-O-LECTRIC machine 565435-5.

For AMPOMATOR machine and other machines not listed, contact TE.

Note: All part numbers are RoHS compliant.

FASTIN-FASTON Product Line (Continued)

110 Series
Receptacle Housings



Type	Number of Positions	Material	Color	Dimensions			Part Number	UL	SP
				W	H	L			
A	1	Nylon	Natural	.236 5.99	.236 5.99	.710 18.01	626062-0	—	—
B	2	Nylon	Natural	.248 6.30	.442 11.23	.710 18.01	626064-0	—	—
				.551 14.00	.200 5.00	.710 18.03			
C	3	Nylon	Natural	.748 19.00	.200 5.00	.710 18.03	925015-0	—	—
				.945 24.00	.200 5.00	.710 18.03			
D	4	Nylon	Natural	.423 10.74	.344 8.74	.708 17.98	626056-0	—	—

¹ Not shown.

110 Series
Tab Housings



Type	Number of Positions	Material	Color	Dimensions			Part Number	UL	SP
				W	H	L			
A	1	Nylon	Natural	.327 8.31	.327 8.31	1.00 25.43	626063-0	—	—
B	2	Nylon	Natural	.264 6.71	.516 13.11	1.00 25.43	626065-0	—	—
				.629 15.98	.284 7.21	1.08 27.48			
C	3	Nylon	Natural	.629 15.98	.284 7.21	1.08 27.48	925475-1	—	—
				.629 15.98	.284 7.21	1.08 27.48			
D	4	Nylon	Natural	.512 13.00	.433 11.00	1.08 27.33	626057-0	—	—

Note: All part numbers are RoHS compliant.

FASTIN-FASTON Product Line (Continued)

**110 Series
Receptacles**



Wire Range AWG	Tab Fit	Insulation Diameter	Material and Finish	Terminal Part No.		
24-20	.032 0.81	.050-.080 1.27-2.03	Pre-Tin Brass	1217281-2	—	—
22-18	.020 0.51	.080-.120 2.03-3.05	Pre-Tin Brass	63241-3	—	—
20-16	.032 0.81	.080-.120 2.03-3.05	Pre-Tin Brass	62572-6	—	—
18-14	.032 0.81	.060-.110 1.52-2.79	Pre-Tin Brass	1217321-2	—	—

FASTIN-FASTON Product Line

**110 Series
Tabs**



Wire Range AWG	Style	Tab Thk.	Insulation Diameter	Material and Finish	Terminal Part No.		
20-16	A	.032 0.81	.090-.120 2.30-3.05	Tin Plated Brass	160743-4	X	X
	B	.032 0.81	.090-.120 2.30-3.05	Tin Plated Brass	160762-4	—	—

Note: All part numbers are RoHS compliant.

FASTIN-FASTON Product Line — Tab Housings RAST 5

Product Facts

- Meets IEC 60335-1, Glow Wire 750° No Flame
- Accepts TE FASTIN-FASTON tabs 6.3 x 0.8 mm size
- Mating TE connector families include AMP MONO-SHAPE, AMP multifitting, AMP standard timer and Positive Lock RAST 5 connector system
- Available in different keying and locking versions, from 2 to 10 positions
- Available for panel and motor mounting
- Provided with secondary locking
- RoHS compliant



Technical Documents

Product Specifications

108-20256 Panel Mount Housings

108-20247 Panel Mount Housings

The RAST 5 Standard defines and standardizes the connector mating interface. FASTIN-FASTON product line 6.3 mm size tabs are placed into 5 mm centerline cavities and the housings are provided with keying, polarization, and locking features that help prevent mismatching of the corresponding RAST 5 interfaces.

The FASTIN-FASTON RAST 5 system is designed to accept the most common TE RAST 5 connector families including AMP MONO-SHAPE, AMP multifitting, AMP standard timer and Positive Lock RAST 5 connector system. The Positive Lock RAST 5 connector system requires the use of a FASTIN-FASTON tab with a special detent hole location to engage the positive locking feature.

The most common application for this product is for household appliance components (motors for washing machines, dishwashers, dryers, refrigerators...) where OEM's want to minimize the possibility of crossed wires.

FASTIN-FASTON Product Line — Tab Housings RAST 5 (Continued)

Technical Features

- ① Locking tongue locks with the keying rib of the counter part (see table)
- ② Locking window locks with locking latches of the counter part (see table)
- ③ Keying groove
- ④ Polarization groove
- ⑤ Cover (secondary locking)
- ⑥ Panel locking
 - Ⓐ For panel thickness from 0.8 up to 1.0 mm
 - Ⓑ For panel thickness from 1.0 up to 2.2 mm
- ⑦ Tabs 6.3 x 0.8 mm (see table)



Panel Cut-Outs



FASTIN-FASTON Product Line — Tab Housings RAST 5 (Continued)

Panel Mount Housings

Material — Polyamide
Color — Natural



C — with Secondary Locking



D — without Secondary Locking

Positions	RAST 5 Polarizations	Panel Cut-Out	Style	UL 94	Note	Part Number
2		A	C	V2	GWT 750° No Flame	9-927742-2
				V0	—	927742-2
			V2	—	5-927742-2	
		B	C	V2	—	5-293035-2
				V0	—	964492-2
			V0	—	5-964492-2	
3		A	C	V2	GWT 750° No Flame	293008-1
				V0	—	928230-3
		A	C	V2	GWT 750° No Flame	9-927742-3
				V0	—	927742-3
4		A	C	V2	GWT 750° No Flame	293009-1
				V0	—	293009-2
		A	C	V2	GWT 750° No Flame	9-927742-4
				V0	—	927742-4
		A	C	V2	GWT 750° No Flame	293011-1
				V0	—	927742-5
5		B	C	V2	GWT 750° No Flame	5-964492-5
				V0	—	964492-5
		A	C	V2	GWT 750° No Flame	293010-1
				V0	—	293010-2
B	C	V2	—	1241857-5		
		V0	—	293161-1		

FASTIN-FASTON Product Line

FASTIN-FASTON Product Line — Tab Housings RAST 5 (Continued)

Panel Mount Housings

(Continued)

Material — Polyamide

Color — Natural



C — with Secondary Locking



D — without Secondary Locking

Positions	RAST 5 Polarizations	Panel Cut-Out	Style	UL 94	Note	Part Number													
6		A	C	V2	—	927742-6													
				V0	—	5-927742-6													
		B	D	V2	GWT 750° No Flame	5-1241967-6													
7		A	C	V2	GWT 750° No Flame	293034-1													
							A	C	V2	GWT 750° No Flame	293044-1								
											A	C	V2	—	927742-7				
															A	C	V2	GWT 750° No Flame	284985-1
																			928309-7
8		A	C	V2	GWT 750° No Flame	284986-1													
						A	C	V2	—	928309-8									
										B	C	V2	GWT 750° No Flame	293043-1					
														B	D	V2	GWT 750° No Flame	5-1241967-8	
A	D	V2	—	1241967-8															
				A	D	V2	GWT 750° No Flame	5-1241969-8											
1241969-8																			
9		B	D	V2	GWT 750° No Flame	293033-1													
10		A	D	V2	GWT 750° No Flame	1-1241968-5													
						—	1-1241968-0												

FASTIN-FASTON Product Line

FASTIN-FASTON Product Line — Tab Housings RAST 5 (Continued)

Motor Mount Housings

Material — Polyamide

Color — Natural



E

Positions	RAST 5 Polarizations	Panel Cut-Out	Style	UL 94	Note	Part Number
7		—	E	V2	GWT 750° No Flame	293014-1
		—	E	V2	GWT 750° No Flame	293015-1
		—	E	V2	GWT 750° No Flame	1-293015-1
8		—	E	V2	GWT 750° No Flame	284861-1
				V0	—	284861-3

FASTIN-FASTON Product Line

FASTON Uninsulated Terminals — Loose Piece

FASTON Terminals Strip/Loose Piece Cross Reference

FASTON terminals have been designed for speed of application using selected terminating machines; however, hand tools are also available for those terminals listed.

RECEPTACLES 250 Series

Wire Range AWG	Strip Part No.	Loose Piece Part No.	Description	Hand Tool Part No.
22-18	41772	60878-2	Premier Receptacle	91514-1
	61988-2	62274-1	Receptacle/Tab Combination	91514-1
18-14	41274	41729	Premier Receptacle	90165-1
	41774	42025-1	Hermetic Receptacle	90165-1
	42219-1	60705-1	Premier Receptacle	90165-1
	61944-1	60279-1	Piggyback Receptacle	189508-1
	61944-2	60279-2	Piggyback Receptacle	189508-1
	42100-1	42238-1	FASTIN-FASTON	720725-1 or 91557-1
	42100-2	42238-2	FASTIN-FASTON	—
	42281-1	42282-1	FASTIN-FASTON	90165-1
	42281-2	42282-2	FASTIN-FASTON	—
	60290-2	60419-2	"F" Crimp Flag	90045
	18-12	41532	41898	Tab-Lok Flag
42742-1		60102-1	Tab-Lok Flag	47417
16-12	41728	42021	Premier Receptacle	47094
14-10	41450	61227-1	Premier Receptacle	90120
	62049-2	62090-1	Piggyback	—
12-10	60851-1	60851-3	Hermetic Flag	—

Receptacles 187 Series

Wire Range AWG	Strip Part No.	Loose Piece Part No.	Description	Hand Tool Part No.
20-16	42452-1	42566-1	Premier Receptacle	91509-1
	42452-2	42566-2	Premier Receptacle	91509-1
	42373-2	42638-2	Premier (No Insulation)	—
	60435-1	60520-1	FASTIN-FASTON	90088
	62026-1	62228-1	Piggyback Receptacle	—

Receptacles 110 Series

Wire Range AWG	Strip Part No.	Loose Piece Part No.	Description	Hand Tool Part No.
22-18	42068-1	42470-1	Receptacle	91511-1
	62003-2	62112-2	Receptacle/Tab Combination	—
	60900-1	61454-1	Tab Receptacle	—

250 Series Tabs

Wire Range AWG	Strip Part No.	Loose Piece Part No.	Description	Hand Tool Part No.
22-18	60294-1	61316-1	FASTIN-FASTON	91514-1
18-14	41412	41778	Crimp Type	—
	42460-2	42565-2	FASTIN-FASTON	90165-1

Note: All part numbers are RoHS compliant.

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».



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).



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