

1	2	3	4	5	6	7	8																																																																																												
SEK 18 male low profile solder and press-in RoHS compliant				Recommended configuration of plated through holes for press-in termination In addition to the hot-air-level (HAL), other PCB surfaces are getting more important. Due to their different properties – such as mechanical strength and coefficient of friction – we recommend the following configuration of PCB through holes. drilled hole $\varnothing$ finished hole $\varnothing$ plating (e.g. Sn) Cu min. 25 μm <table><tr><td rowspan="3">Tin plated PCB (HAL) acc. to EN 60352-5</td><td>Drilled hole $\varnothing$</td><td>1,15-0,03 mm</td></tr><tr><td>Cu</td><td>min. 25 μm</td></tr><tr><td>Sn</td><td>max. 15 μm</td></tr><tr><td rowspan="3">Chemical tin plated PCB</td><td>plated hole $\varnothing$</td><td>0,94 – 1,09 mm</td></tr><tr><td>Drilled hole $\varnothing$</td><td>1,15-0,03 mm</td></tr><tr><td>Cu</td><td>min. 25 μm</td></tr><tr><td rowspan="4">Gold /Nickel plated PCB</td><td>Sn</td><td>min. 0,8μm</td></tr><tr><td>plated hole $\varnothing$</td><td>1,00 – 1,10 mm</td></tr><tr><td>Drilled hole $\varnothing$</td><td>1,15-0,03 mm</td></tr><tr><td>Cu</td><td>min. 25 μm</td></tr><tr><td rowspan="4">Silver plated PCB</td><td>Ni</td><td>3 – 7 μm</td></tr><tr><td>Au</td><td>0,05 – 0,12 μm</td></tr><tr><td>plated hole $\varnothing$</td><td>1,00 – 1,10 mm</td></tr><tr><td>Drilled hole $\varnothing$</td><td>1,15-0,03 mm</td></tr><tr><td rowspan="3">Copper plated PCB (OSP)</td><td>Cu</td><td>min. 25 μm</td></tr><tr><td>plated hole $\varnothing$</td><td>1,00 – 1,10 mm</td></tr></table>				Tin plated PCB (HAL) acc. to EN 60352-5	Drilled hole $\varnothing$	1,15-0,03 mm	Cu	min. 25 μ m	Sn	max. 15 μ m	Chemical tin plated PCB	plated hole $\varnothing$	0,94 – 1,09 mm	Drilled hole $\varnothing$	1,15-0,03 mm	Cu	min. 25 μ m	Gold /Nickel plated PCB	Sn	min. 0,8 μ m	plated hole $\varnothing$	1,00 – 1,10 mm	Drilled hole $\varnothing$	1,15-0,03 mm	Cu	min. 25 μ m	Silver plated PCB	Ni	3 – 7 μ m	Au	0,05 – 0,12 μ m	plated hole $\varnothing$	1,00 – 1,10 mm	Drilled hole $\varnothing$	1,15-0,03 mm	Copper plated PCB (OSP)	Cu	min. 25 μ m	plated hole $\varnothing$	1,00 – 1,10 mm																																																							
Tin plated PCB (HAL) acc. to EN 60352-5	Drilled hole $\varnothing$	1,15-0,03 mm																																																																																																	
	Cu	min. 25 μ m																																																																																																	
	Sn	max. 15 μ m																																																																																																	
Chemical tin plated PCB	plated hole $\varnothing$	0,94 – 1,09 mm																																																																																																	
	Drilled hole $\varnothing$	1,15-0,03 mm																																																																																																	
	Cu	min. 25 μ m																																																																																																	
Gold /Nickel plated PCB	Sn	min. 0,8 μ m																																																																																																	
	plated hole $\varnothing$	1,00 – 1,10 mm																																																																																																	
	Drilled hole $\varnothing$	1,15-0,03 mm																																																																																																	
	Cu	min. 25 μ m																																																																																																	
Silver plated PCB	Ni	3 – 7 μ m																																																																																																	
	Au	0,05 – 0,12 μ m																																																																																																	
	plated hole $\varnothing$	1,00 – 1,10 mm																																																																																																	
	Drilled hole $\varnothing$	1,15-0,03 mm																																																																																																	
Copper plated PCB (OSP)	Cu	min. 25 μ m																																																																																																	
	plated hole $\varnothing$	1,00 – 1,10 mm																																																																																																	
	General information <table><tr><td>Design</td><td colspan="3">IEC 60603-13</td></tr><tr><td>No. of contacts</td><td colspan="3">6,10,14,16,20,26,30,34,40,50,60,64</td></tr><tr><td>Contact spacing</td><td colspan="3">2,54 mm x 2,54 mm</td></tr><tr><td>Test voltage Ur.m.s</td><td colspan="3">1 kV</td></tr><tr><td>Working voltage</td><td colspan="3">500 V for pollution degree 1</td></tr><tr><td>Working current acc. to IEC 60512-2</td><td colspan="3">See derating diagram</td></tr><tr><td>Contact resistance</td><td colspan="3">max. 20mOhm</td></tr><tr><td>Insulation resistance</td><td colspan="3">min. 10⁹Ohm</td></tr><tr><td>Temperature range</td><td colspan="3">-55°C ... +125°C (solder) -55°C ... +105°C (press-in)</td></tr><tr><td>Termination technology</td><td colspan="3">solder, press-in</td></tr><tr><td>Clearance & creepage distance</td><td colspan="3">min. 0,5 mm clearance min. 0,56 creepage</td></tr><tr><td rowspan="6">Insertion and withdrawal forces</td><td>6-pole max. 12N for PL1-2 / 18N for PL3</td><td colspan="2">; 30-pole max. 60N for PL1-2 / 90N for PL3</td></tr><tr><td>10-pole max. 20N for PL1-2 / 30N for PL3</td><td colspan="2">; 34-poles max. 68N for PL1-2 / 102N for PL3</td></tr><tr><td>14-pole max. 28N for PL1-2 / 42 for PL3</td><td colspan="2">; 40-poles max. 80N for PL1-2 / 120N for PL3</td></tr><tr><td>16-pole max. 32N for PL1-2 / 48N for PL3</td><td colspan="2">; 50-poles max. 100N for PL1-2 / 150N for PL3</td></tr><tr><td>20-pole max. 40N for PL1-2 / 60N for PL3</td><td colspan="2">; 60-poles max. 120N for PL1-2 / 180N for PL3</td></tr><tr><td>26-pole max. 52N for PL1-2 / 78N for PL3</td><td colspan="2">; 64-poles max. 128N for PL1-2 / 192N for PL3</td></tr><tr><td rowspan="4">Mating cycles</td><td>S4 surface treatment</td><td colspan="2">Au over PdNi (min. 0,76 μm)</td></tr><tr><td>PL 1 acc. to IEC 60603-13</td><td>500 mating cycles</td><td>10 days gas test</td></tr><tr><td>PL 2 acc. to IEC 60603-13</td><td>250 mating cycles</td><td>4 days gas test</td></tr><tr><td>PL 3 acc. to IEC 60603-13</td><td>50 mating cycles</td><td>No gas test</td></tr><tr><td>UL file</td><td colspan="3">E 102079</td></tr><tr><td>RoHS – compliant</td><td colspan="3">Yes</td></tr><tr><td>Leadfree</td><td colspan="3">Yes</td></tr><tr><td>Hot plugging</td><td colspan="3">No</td></tr></table>				Design	IEC 60603-13			No. of contacts	6,10,14,16,20,26,30,34,40,50,60,64			Contact spacing	2,54 mm x 2,54 mm			Test voltage Ur.m.s	1 kV			Working voltage	500 V for pollution degree 1			Working current acc. to IEC 60512-2	See derating diagram			Contact resistance	max. 20mOhm			Insulation resistance	min. 10 ⁹ Ohm			Temperature range	-55°C ... +125°C (solder) -55°C ... +105°C (press-in)			Termination technology	solder, press-in			Clearance & creepage distance	min. 0,5 mm clearance min. 0,56 creepage			Insertion and withdrawal forces	6-pole max. 12N for PL1-2 / 18N for PL3	; 30-pole max. 60N for PL1-2 / 90N for PL3		10-pole max. 20N for PL1-2 / 30N for PL3	; 34-poles max. 68N for PL1-2 / 102N for PL3		14-pole max. 28N for PL1-2 / 42 for PL3	; 40-poles max. 80N for PL1-2 / 120N for PL3		16-pole max. 32N for PL1-2 / 48N for PL3	; 50-poles max. 100N for PL1-2 / 150N for PL3		20-pole max. 40N for PL1-2 / 60N for PL3	; 60-poles max. 120N for PL1-2 / 180N for PL3		26-pole max. 52N for PL1-2 / 78N for PL3	; 64-poles max. 128N for PL1-2 / 192N for PL3		Mating cycles	S4 surface treatment	Au over PdNi (min. 0,76 μ m)		PL 1 acc. to IEC 60603-13	500 mating cycles	10 days gas test	PL 2 acc. to IEC 60603-13	250 mating cycles	4 days gas test	PL 3 acc. to IEC 60603-13	50 mating cycles	No gas test	UL file	E 102079			RoHS – compliant	Yes			Leadfree	Yes			Hot plugging	No			Assembly instructions It is highly recommended to use HARTING press-in tools to ensure a reliable press-in process. Please refer to the catalogue for tools, machines and further information about the press-in process. Soldering instructions The connectors should be protected when being soldered in a dip, flow or film soldering baths. Otherwise, they might become contaminated as a result of soldering operations or deformed as a result of overheating. (1) For prototypes and short runs protect the connectors with an industrial adhesive tape, e.g. Tesaband 4331 (www.tesa.de). Cover the underside of the connector moulding and the adjacent parts of the pcb as well as the open sides of the connector. This will prevent heat and gases of the soldering apparatus from damaging the connector. About 140 + 5 mm of the tape should suffice. (2) For large series a jig is recommended. Its protective cover with a fast action mechanical locking device shields the connectors from gas and heat generated by the soldering apparatus. As an additional protection a foil can be used for covering the parts that should not be soldered.		
Design	IEC 60603-13																																																																																																		
No. of contacts	6,10,14,16,20,26,30,34,40,50,60,64																																																																																																		
Contact spacing	2,54 mm x 2,54 mm																																																																																																		
Test voltage Ur.m.s	1 kV																																																																																																		
Working voltage	500 V for pollution degree 1																																																																																																		
Working current acc. to IEC 60512-2	See derating diagram																																																																																																		
Contact resistance	max. 20mOhm																																																																																																		
Insulation resistance	min. 10 ⁹ Ohm																																																																																																		
Temperature range	-55°C ... +125°C (solder) -55°C ... +105°C (press-in)																																																																																																		
Termination technology	solder, press-in																																																																																																		
Clearance & creepage distance	min. 0,5 mm clearance min. 0,56 creepage																																																																																																		
Insertion and withdrawal forces	6-pole max. 12N for PL1-2 / 18N for PL3	; 30-pole max. 60N for PL1-2 / 90N for PL3																																																																																																	
	10-pole max. 20N for PL1-2 / 30N for PL3	; 34-poles max. 68N for PL1-2 / 102N for PL3																																																																																																	
	14-pole max. 28N for PL1-2 / 42 for PL3	; 40-poles max. 80N for PL1-2 / 120N for PL3																																																																																																	
	16-pole max. 32N for PL1-2 / 48N for PL3	; 50-poles max. 100N for PL1-2 / 150N for PL3																																																																																																	
	20-pole max. 40N for PL1-2 / 60N for PL3	; 60-poles max. 120N for PL1-2 / 180N for PL3																																																																																																	
	26-pole max. 52N for PL1-2 / 78N for PL3	; 64-poles max. 128N for PL1-2 / 192N for PL3																																																																																																	
Mating cycles	S4 surface treatment	Au over PdNi (min. 0,76 μ m)																																																																																																	
	PL 1 acc. to IEC 60603-13	500 mating cycles	10 days gas test																																																																																																
	PL 2 acc. to IEC 60603-13	250 mating cycles	4 days gas test																																																																																																
	PL 3 acc. to IEC 60603-13	50 mating cycles	No gas test																																																																																																
UL file	E 102079																																																																																																		
RoHS – compliant	Yes																																																																																																		
Leadfree	Yes																																																																																																		
Hot plugging	No																																																																																																		
Insulator material <table><tr><td>Material</td><td colspan="3">PBT (thermoplastics, glass fiber reinforcement 30%)</td></tr><tr><td>Color</td><td colspan="3">black (RAL 7001) or grey (RAL 7032) for solder grey (RAL 7053) for press-in</td></tr><tr><td>UL classification</td><td colspan="3">UL94-V0</td></tr><tr><td>Material group acc. IEC 60664-1</td><td colspan="3">IIIa (175 < CTI < 400)</td></tr><tr><td>NF F 16-101 classification</td><td colspan="3">I3,F3</td></tr></table>				Material	PBT (thermoplastics, glass fiber reinforcement 30%)			Color	black (RAL 7001) or grey (RAL 7032) for solder grey (RAL 7053) for press-in			UL classification	UL94-V0			Material group acc. IEC 60664-1	IIIa (175 < CTI < 400)			NF F 16-101 classification	I3,F3			Packaging material (only for plastic tray) <table><tr><td>Material</td><td colspan="3">Polystyrol</td></tr><tr><td>Color</td><td colspan="3">Yellow</td></tr><tr><td>Standardization</td><td colspan="3">acc. to DIN EN / IEC 61340-5-1 and ANSI / ESD S541-2003</td></tr><tr><td colspan="4">- Safe protection for electronic components against electrostatic charges</td></tr></table>				Material	Polystyrol			Color	Yellow			Standardization	acc. to DIN EN / IEC 61340-5-1 and ANSI / ESD S541-2003			- Safe protection for electronic components against electrostatic charges																																																											
Material	PBT (thermoplastics, glass fiber reinforcement 30%)																																																																																																		
Color	black (RAL 7001) or grey (RAL 7032) for solder grey (RAL 7053) for press-in																																																																																																		
UL classification	UL94-V0																																																																																																		
Material group acc. IEC 60664-1	IIIa (175 < CTI < 400)																																																																																																		
NF F 16-101 classification	I3,F3																																																																																																		
Material	Polystyrol																																																																																																		
Color	Yellow																																																																																																		
Standardization	acc. to DIN EN / IEC 61340-5-1 and ANSI / ESD S541-2003																																																																																																		
- Safe protection for electronic components against electrostatic charges																																																																																																			
Contact material <table><tr><td>Contact material</td><td colspan="3">Copper alloy</td></tr><tr><td>Plating termination zone</td><td colspan="3">Sn over Ni for solder, Ni for press-in</td></tr><tr><td>Plating contact sliding side</td><td colspan="3">Au or Au over PdNi (according to performance level)</td></tr></table>				Contact material	Copper alloy			Plating termination zone	Sn over Ni for solder, Ni for press-in			Plating contact sliding side	Au or Au over PdNi (according to performance level)			Cross section of solder terminations 0,525±0,025 0,315 x 0,358 mm² 0,64±0,01																																																																																			
Contact material	Copper alloy																																																																																																		
Plating termination zone	Sn over Ni for solder, Ni for press-in																																																																																																		
Plating contact sliding side	Au or Au over PdNi (according to performance level)																																																																																																		
Derating diagram acc to IEC 60512-2 (Current carrying capacity) The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given without exceeding the maximum temperature. Control and test procedures according to DIN IEC 60512. 1) Temperature rise 2) Derating 3) Derating curve at I max x 0.8(IEC 60512-2) Working current [A] Ambient temperature [°C]				All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All Dimensions in mm Original Size DIN A3 Scale 1:1 Free size tol. All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH D-32339 Espelkamp All rights reserved Department EC PD – DE HARTING Electronics GmbH</																																																																																															

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

HARTING:

[09185106321](#) [09185607321](#) [09185645919](#) [09185065322](#) [09185067323](#) [09185067324](#) [09185105322](#)
[09185105324](#) [09185106322](#) [09185106323](#) [09185106329](#) [09185106803](#) [09185107324](#) [09185145323](#) [09185146322](#)
[09185146324](#) [09185146803](#) [09185147324](#) [09185147329](#) [09185165322](#) [09185165323](#) [09185165329](#)
[09185166322](#) [09185166803](#) [09185166813](#) [09185167322](#) [09185167323](#) [09185167324](#) [09185205323](#) [09185206322](#)
[09185206323](#) [09185206329](#) [09185207322](#) [09185207323](#) [09185207324](#) [09185207329](#) [09185265323](#)
[09185265324](#) [09185265329](#) [09185266322](#) [09185266323](#) [09185266329](#) [09185267324](#) [09185345322](#) [09185345324](#)
[09185346322](#) [09185346323](#) [09185347324](#) [09185347329](#) [09185405329](#) [09185406322](#) [09185407322](#)
[09185407329](#) [09185505322](#) [09185506323](#) [09185506324](#) [09185507322](#) [09185507329](#) [09185507803](#) [09185509002](#)
[09185605323](#) [09185605324](#) [09185605329](#) [09185606322](#) [09185606324](#) [09185606329](#) [09185645323](#)
[09185646329](#) [09185647322](#) [09185647323](#) [09185647324](#) [09185066324](#) [09185106324](#) [09185266324](#) [09185067321](#)
[09185105321](#) [09185107321](#) [09185206321](#) [09185266321](#) [09185406321](#) [09185407321](#) [09185505321](#)
[09185506321](#) [09185507324](#) [09185407323](#) [09185146329](#) [09185065324](#) [09185107323](#) [09185166329](#) [09185146323](#)
[09185646323](#) [09185066323](#) [09185607324](#) [09185346329](#) [09185069002](#) [09185349002](#) [09185065329](#)
[09185105323](#) [09185147323](#) [09185166323](#)

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).



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