

PCB COAXIAL CONNECTORS

# Edge card receptacles



ISO 9001 APPROVED





	PAGE
RADIALl company profile .....	4 - 5
Introduction .....	6
Finder guide .....	7
UMP series .....	8
MC-CARD series .....	9
MMCX series .....	10
MCX series .....	11
SMB series .....	12
1.0 / 2.3 series .....	13
SMA series .....	14
Commercial BMA series .....	15
BNC series .....	16
Receptacles packaging .....	17-18
Panel cut out .....	19
Mounting instructions .....	20-33
RADIALl Recommended SMT procedure .....	34
Index of Radiall part numbers with description .....	35



*Head Office - Rosny sous Bois*

Since 1952, **RADIALL** has specialized in the field of coaxial connectors and cables assemblies. **RADIALL's** experience and high technology focus, combined with our large worldwide production capability have made the company a major supplier of RF coaxial connectors in the world and the number one in Europe.

### RESEARCH & DEVELOPMENT

The ever increasing sophistication of microwave communication systems is continually requiring components to meet a higher level of performance. **RADIALL's** research and development groups understand these needs and are committed to searching for product solutions that will be needed in the future. They also are providing continued improvements to our already extensive lines of high performance products. All our engineer teams are equipped with state of the art equipment and facilities, in an effort to provide the best solutions to our customers.



*CAD workstation*



*Numerical control lathe*

### MANUFACTURING

**RADIALL** knows that the quality of the connectors components is directly related to the mechanical precision of the machining process, along with good quality procedures. In an effort to continually meet the highest quality standards, all our production plants are equipped with the latest state of the art production equipment. **RADIALL's** manufacturing process maintains strict control of all procedures and incorporates all tooling, machining, surface treatment and assembly operations into the manufacturing process of each production group.



Base station of cellular network

## HIGH RELIABILITY

Reliability of inter-connection systems is of the utmost importance in telecommunications applications. This industry need has led **RADIALL** to link high performance design, manufacturing and quality control. This has given the company the capability to produce connectors that will operate in the most stringent environments. The wide range of our product offering allows us to propose the best complete solution for your exact need.



Microwave test device

## QUALITY ASSURANCE

**RADIALL**, as a TQM company, continually searches for improvements to the quality process. We operate a Quality Assurance Program that has been developed in accordance with the national and **CECC** agencies (equivalent to **MIL-I-45208** and **MIL-C-45662** standards). This program has enabled us to achieve QPL approval on several of our connector series. **RADIALL's** Quality Assurance Program operates at all levels of manufacturing from the initial raw incoming material to the final testing procedures just prior to shipping. All test equipment is part of the quality process and is continually inspected on a regular scheduled basis. All production plants in Europe are **AQA P4-NATO** certified.



## ISO 9001 ACCREDITATION

This certificate is witness to **RADIALL's** achievement and commitment to the Total Quality Process. **RADIALL** has always been, since its inception, a company committed to being a Total Quality supplier. Quality is our way of life at **RADIALL**.



Radiall's new edge card receptacles range includes 2 types of PCB mounting :

- **SMT edge card receptacles**
- **pin edge card receptacles**

Edge card receptacles feature better electrical performance than straight or right angle ones since there is no discontinuity between the PCB and the connector lines.

**SMT edge card receptacle**



**Pin edge card receptacle**

### SMT EDGE CARD RECEPTACLES

**Fully automated mounting process**  
**Repeatability**

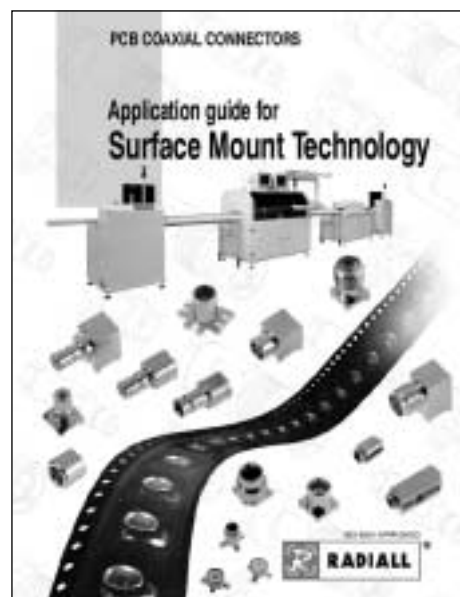
These receptacles are specially designed for Surface Mount Technology (SMT) : Automatic pick and place machines can be used since they feature a tape and reel packaging and a flat top surface for easy nozzle aspiration.

SMT edge card receptacles can be then soldered using reflow ovens.

Available interfaces are UMP, MC-CARD, MMCX, MCX, SMB, 1.0/2.3 and SMA. For others SMT edge card receptacles, please consult us.

SMT edge card receptacles are particularly adapted to medium / high volume production and to automated production line.

For more information about SMT technology, please ask for our Application guide for Surface Mount Technology: **P/N D1 013 DE**.



### PIN EDGE CARD RECEPTACLES

**No PCB cut out**  
**No special equipment**

These edge card receptacles feature a solder pin design. Component placement is achieved by sliding the receptacle on the edge of the PCB. No need to cut out the board.

Once the board lays between the receptacle solder pins, they can be soldered.

Already available pin edge card receptacles include MCX, SMB, SMA interfaces, that can fit either 1.1 or 1.27 or 1.6 mm PCBs, and whose rear contact is round.

For any other interface or PCB thickness or rear contact design, please consult us.

Pin edge card receptacles are particularly adapted to low volume applications such as PCB testing.



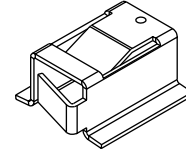
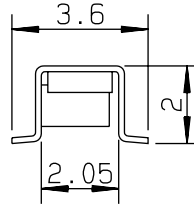
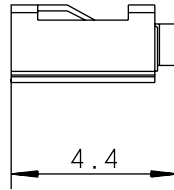
Series	Impedance (Ω)	Frequency range	Mating type	Number of matings	SMT edge card receptacles	Pin edge card receptacles	PCB surface dimensions (mm)	Unmating force	Catalog P/N
UMP	50	DC-6 GHz	Press on	100	R107 003 000 R107 003 010 R107 003 010W (page 8)		4.4 x 3.6	Lock	D1 107 CE
MC-CARD	50	DC-8 GHz	Snap on	5000	R199 005 800 R199 005 800W R199 005 801 R199 005 890 R199 005 890W (page 9)		6.7 x 3.8	8.8 N	D1 007 DE
MMCX	50	DC-6 GHz	Snap on	500	R110 422 100 R110 423 100 (page 10)		7.3 x 4.5	$6.2 \leq F \leq 15$ N	US 102 A
MCX	50	DC-6 GHz	Snap on	500	R113 423 000 R113 423 000W R113 423 810 R113 423 820 (page 11)	R113 423 120 (page 11)	6.9 x 6	$8 \leq F \leq 20$ N	D1 113 CE
SMB	50	DC-4 GHz	Snap on	500	R114 423 000 R114 423 000W R114 423 140 R114 423 800 R114 423 810 R114 423 820 R114 423 840 R114 444 800 (page 12)	R114 423 120 (page 12)	6.9 x 6	62 N	D1 114 CE
1.0/2.3	50	DC-10 GHz	Snap on	500	R120 423 000 (page 13)		6.9 x 6	10 N	D1 129 CE
SMA	50	DC-18 GHz	Screw on	500		R125 423 200 (page 14)		23 N.cm	D1 125 CE
Commercial SMA	50	DC-18 GHz	Screw on	100	R124 423 033 (page 14)	R124 423 103 R124 423 123 R124 423 223 R124 551 303 (page 14)	12 x 7.8	23 N.cm	D1 124 CE
Commercial BMA	50	DC-22 GHz	Slide on	500	R128 403 850 (page 15)	R128 405 161 (page 15)	10.5 x 5.5		D1 128 CE
BNC	50	DC - 4 GHz	Bayonet	500	R141 423 108 (page 16)	R141 684 130 (page 16)	12.8 x 12	13.6 N	D1 141 CE
	75	DC - 1 GHz	Bayonet	500	R142 567 028 (page 16)		12.8 x 12		

# EDGE CARD RECEPTACLES

## UMP series



### SMT EDGE CARD RECEPTACLES



part number	mounting	PCB	finish	packaging
R107 003 000	M02	P07	gold	4000 p / reel
R107 003 010		P07	gold	100 p / reel
R107 003 010 W		P07	gold	unit

For more information about **UMP series**, please ask for our catalog **D1 107 CE**.



### SMT EDGE CARD RECEPTACLES

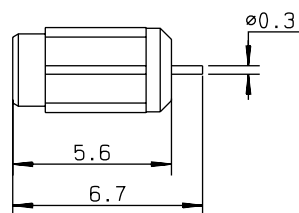
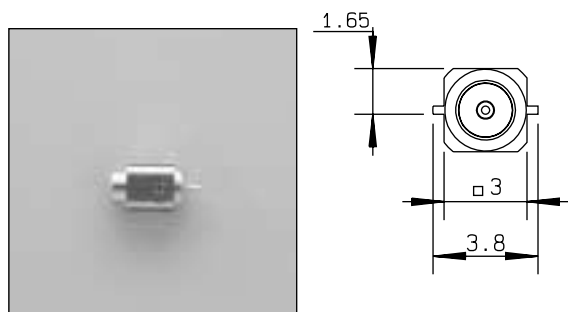


Fig. 1

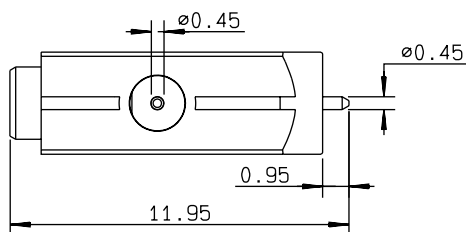
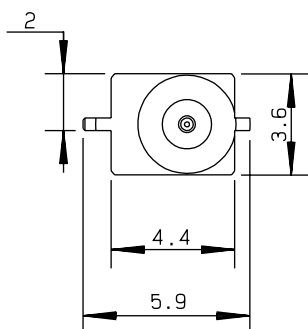
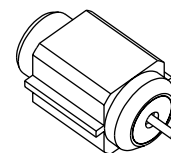
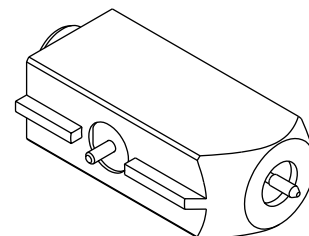


Fig. 2



part number	fig.	captive center contact	center contact	mounting	PCB	finish	packaging	note
R199 005 800	1	yes	female	M03	P16	gold	400 p / reel	
R199 005 800 W	1	yes			P16	gold	unit	
R199 005 801	1	yes			P16	gold	1800 p / reel	
R199 005 890	2	yes			P10	gold	500 p / reel	microswitch
R199 005 890 W	2	yes			P10	gold	unit	

For more information about **MC-CARD series**, please ask for our catalog **D1 199 CE**.

For any information regarding our microswitch range, please ask for our catalog **D1 008 DE**.





### SMT EDGE CARD RECEPTACLES

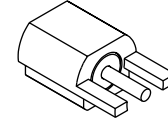
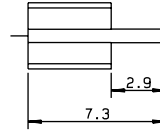
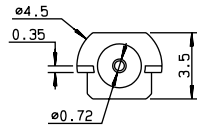


Fig. 1

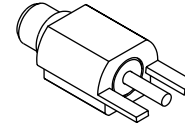
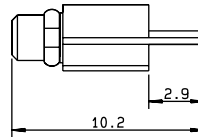
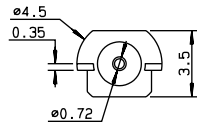


Fig. 2

part number	fig.	captive center contact	center contact	mounting	PCB	finish	packaging
R110 422 100 ●	1	yes	female	M04	P01	gold	unit
R110 423 100 ●	2	yes	male		P21	gold	unit

For more information regarding **MMCX series**, please consult us.

● upon request



### SMT EDGE CARD RECEPTACLES

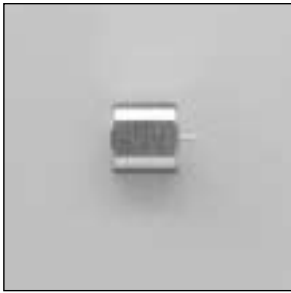


Fig. 1

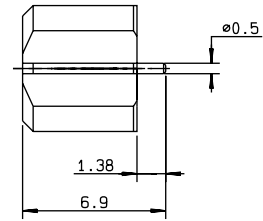
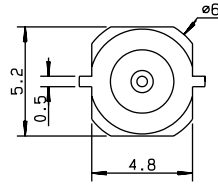
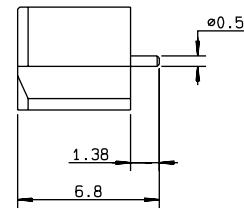
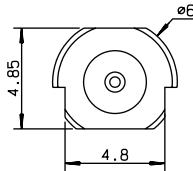
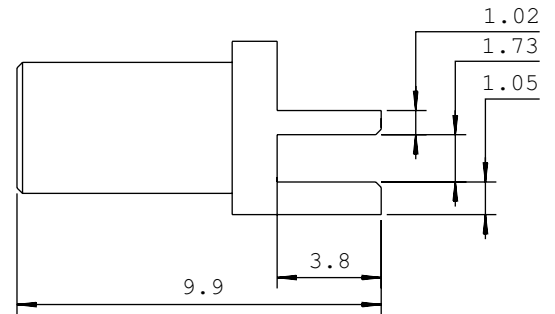
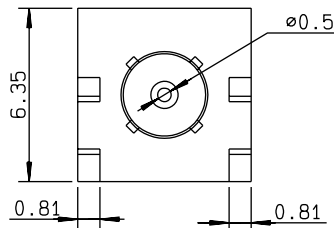


Fig. 2



part number	fig.	captive center contact	center contact	mounting	PCB	finish	packaging
R113 423 000	1	yes	female	M05	P02	gold	100 p / bulk
R113 423 000 W	1	yes			P02	gold	unit
R113 423 810 ●	1	yes			P02	gold	500 p / reel
R113 423 820 ●	2	yes			P02	gold	100 p / reel

### PIN EDGE CARD RECEPTACLES (round contact)



part number	captive center contact	center contact	mounting	PCB	PCB thickness	finish	packaging
R113 423 120	yes	female	M01	P08	1.6	gold	100 p / bulk

For more information about **MCX series**, please ask for our catalog **D1 113 CE**.

- upon request



### SMT EDGE CARD RECEPTACLES

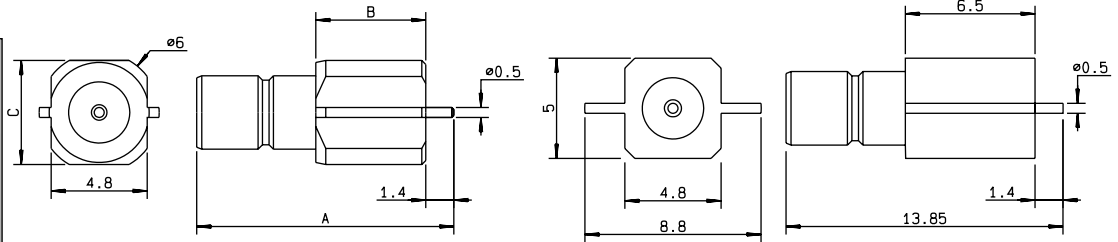


Fig. 1

Fig. 2

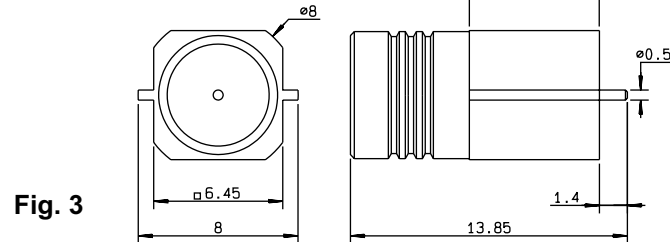
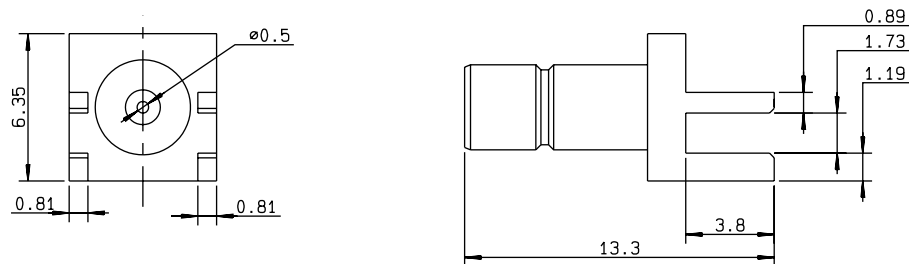


Fig. 3

part number	fig.	captive center contact	center contact	A (mm)	B (mm)	C (mm)	mounting	PCB	finish	packaging	note
R114 423 000	1	yes	male	12.85	5.5	5.2	M06	P02	gold	100 p / bulk	
R114 423 000W	1	yes		12.85	5.5	5.2		P02	gold	unit	
R114 423 800	1	yes		13.85	6.5	5		P14	gold	1000 p / reel	
R114 423 810	1	yes		12.85	5.5	5.2		P02	gold	500 p / reel	
R114 423 820	1	yes		12.85	5.5	5.2		P02	gold	100 p / reel	
R114 423 140 ●	2	yes	male					P03	gold	100 p / bulk	high retention to the PCB
R114 423 840 ●	2	yes		P03	gold	1000 p / reel		high retention to the PCB			
R114 444 800 ●	3	yes	female					P05	gold	800 p / reel	

### PIN EDGE CARD RECEPTACLES (round contact)



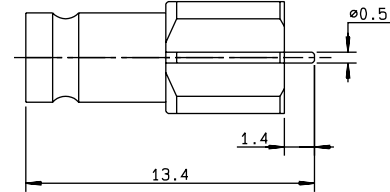
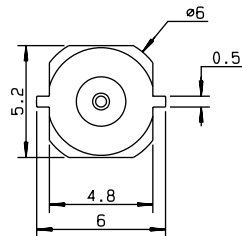
part number	captive center contact	center contact	mounting	PCB	PCB thickness	finish	packaging
R114 423 120	yes	male	M01	P08	1.6	gold	100 p / bulk

For more information about **SMB series**, please ask for our catalog **D1 114 CE**.

● upon request



### SMT EDGE CARD RECEPTACLE



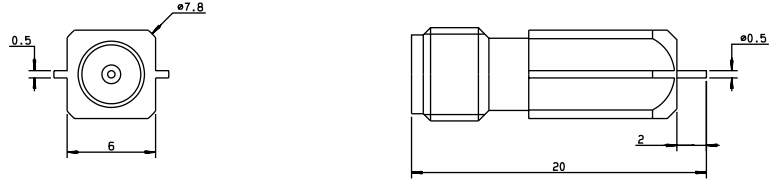
part number	captive center contact	center contact	mounting	PCB	finish	packaging
R120 423 000 ●	yes	female	M07	P02	gold	unit

For more information about **1.0 / 2.3 series**, please ask for our catalog **D1 129 CE**.

● upon request



### SMT EDGE CARD RECEPTACLE



part number	captive center contact	center contact	mounting	PCB	material	finish	packaging
R124 423 033 ●	yes	female	M08	P04	brass	gold	unit

### PIN EDGE CARD RECEPTACLES (round contact)

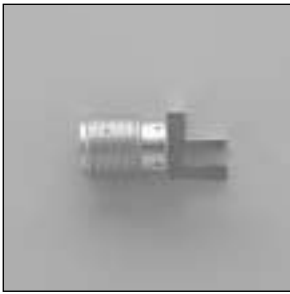


Fig. 1

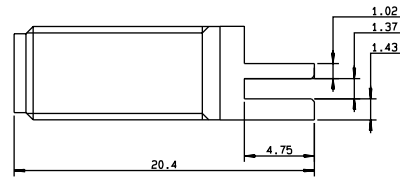
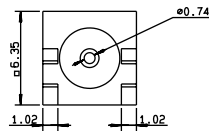


Fig. 2

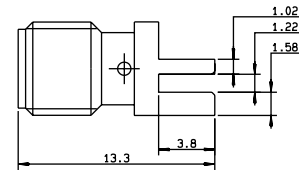
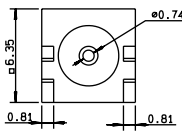
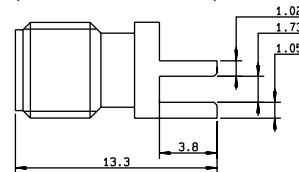
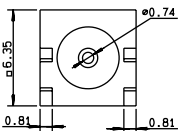


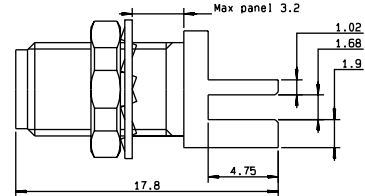
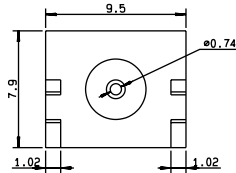
Fig. 3



R124 : Commercial SMA

R125 : Standard SMA

Fig. 4



part number	fig.	captive center contact	center contact	mounting	PCB	PCB thickness	panel cut out	material	finish	packaging
R124 423 103 ●	1	yes	female	M01	P15	1.27		brass	gold	100 p / bulk
R124 423 123 ●	2	yes		M01	P11	1.1		brass	gold	100 p / bulk
R124 423 223	3	yes		M01	P08	1.6		brass	gold	100 p / bulk
R124 551 303 ●	4	yes		M01	P12	1.6	P20	brass	gold	100 p / bulk
R125 423 200 ●	2	yes	female	M01	P11	1.1		stainless steel	gold	unit

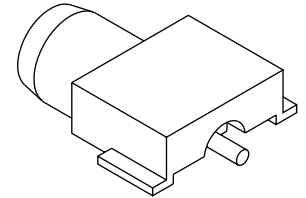
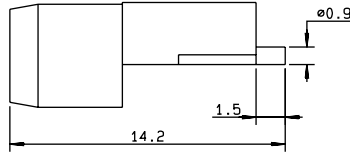
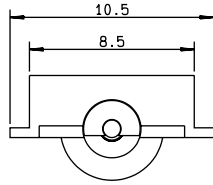
For more information about these series, please ask for our catalogs **D1 125 CE** (SMA series)

**D1 124 CE** (Commercial SMA series)

● upon request

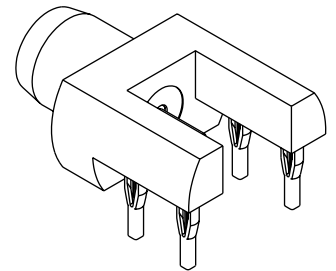
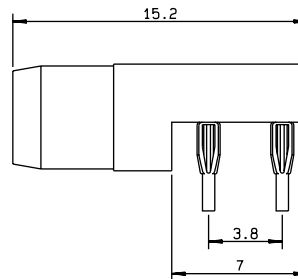
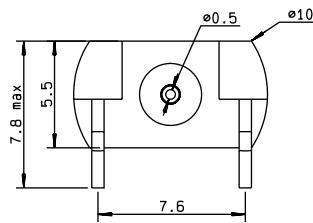


### SMT EDGE CARD RECEPTACLE



part number	captive center contact	center contact	mounting	PCB	finish	packaging
R128 403 850 ●	yes	male	M09	P18	gold	unit

### PRESS FIT PIN EDGE CARD RECEPTACLE



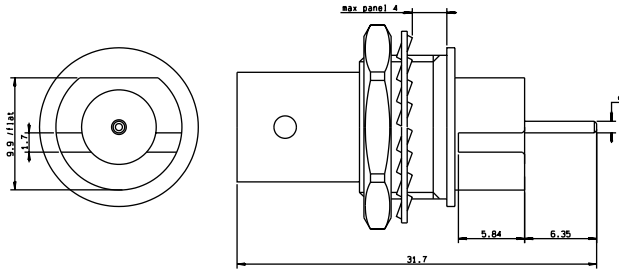
part number	captive center contact	center contact	mounting	PCB	finish	packaging
R128 405 161 ●	yes	male	M11	P19	gold	100 p / bulk

For more information about **Commercial BMA series**, please ask for our catalog **D1 128 CE**.

● upon request

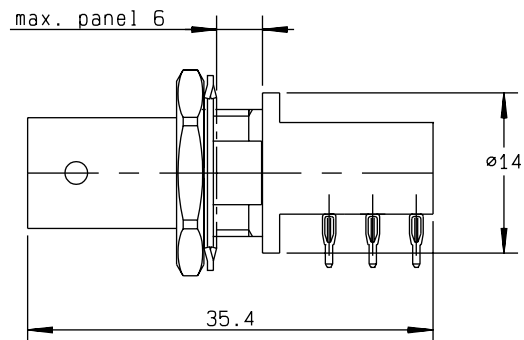


### SMT EDGE CARD RECEPTACLE



part number	impedance	captive center contact	center contact	mounting	PCB	panel cut out	finish	packaging
R141 423 108 ●	50	yes	female	M10	P17	P09	tin lead	unit
R142 567 028 ●	75	yes	female		P17	P09	tin lead	50 p / bulk

### PRESS FIT PIN EDGE CARD RECEPTACLE



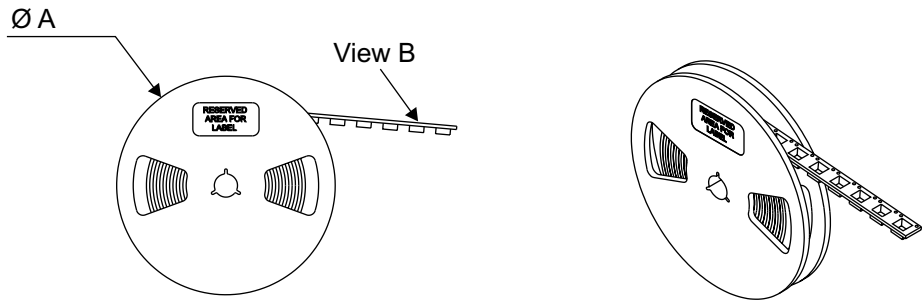
part number	impedance	captive center contact	center contact	mounting	PCB	panel cut out	finish	packaging
R141 684 130 ●	50	yes	female	M11	P22	P21	nickel	10 p / bulk

For more information about **BNC series**, please ask for our catalog **D1 141 CE**.

● upon request



### RECEPTACLE PACKAGING



### Reel diameter A

part number	reel diameter A (mm)
R107 003 000	330
R107 003 010	180
R113 423 810	330
R113 823 820	330
R114 423 800	330
R114 423 810	330
R114 423 840	330
R114 444 800	330
R114 823 820	330
R199 005 800	330
R199 005 801	330
R199 005 820	180
R199 005 821	180
R199 005 890	330

### ACCORDING TO IEC 286-3 STANDARD

#### MATERIALS

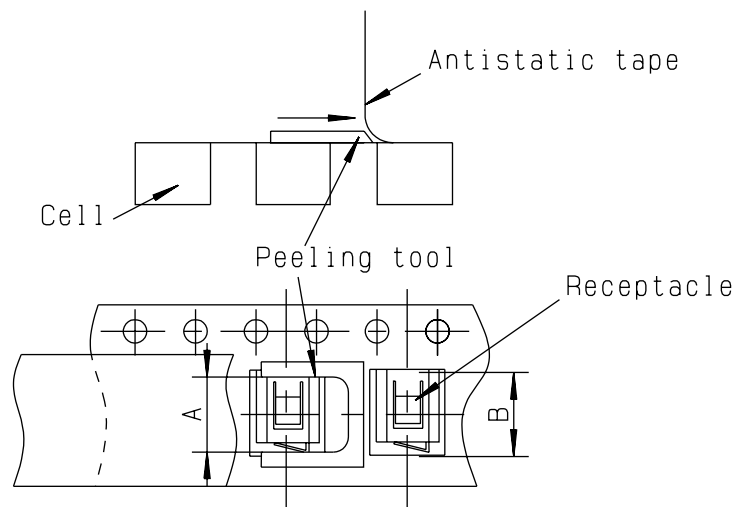
Reel : polyester

Carrier tape : antistatic PETG (polyester)

Cover tape : polyester

#### PRECAUTION FOR USE

Automated pick and place machines use standard tooling to peel the antistatic film off. Sometimes the "A" dimension of this tool is shorter than the overall "B" width between the two legs of the receptacle. There is thus a risk for the two legs being deformed while they pass through the tool during the suction operation. The user must then widen the "A" dimension of the peeling tool.

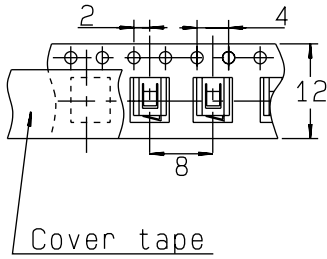




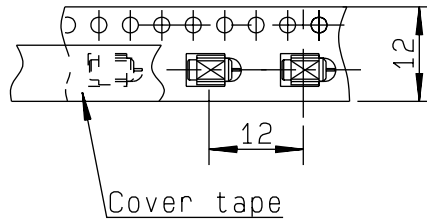


### VIEW B

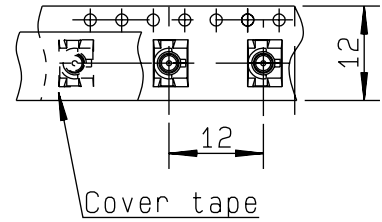
<b>P/N</b>	<b>R107 003 000</b> <b>R107 003 010</b>
------------	--



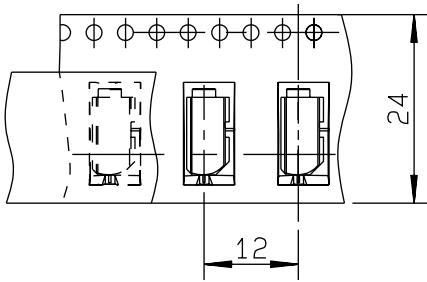
<b>P/N</b>	<b>R199 005 800</b> <b>R199 005 801</b>
------------	--



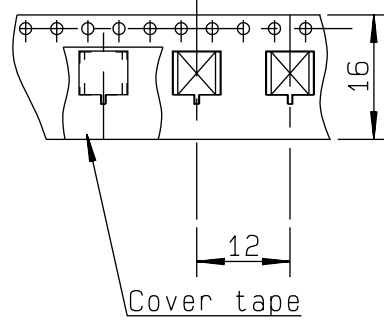
<b>P/N</b>	<b>R199 005 820</b> <b>R199 005 821</b>
------------	--



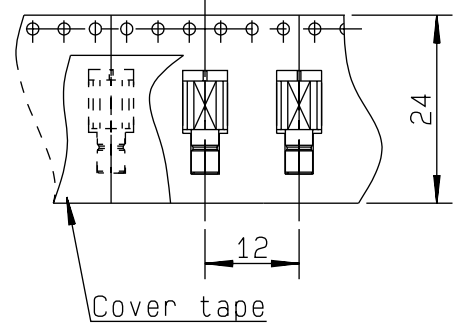
<b>P/N</b>	<b>R199 005 890</b>
------------	---------------------



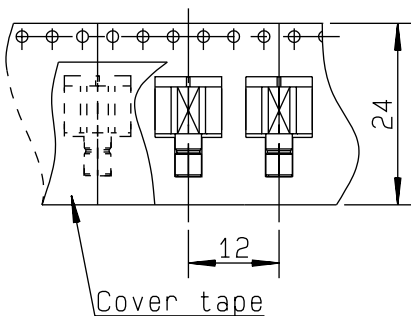
<b>P/N</b>	<b>R113 423 810</b> <b>R113 423 820</b>
------------	--



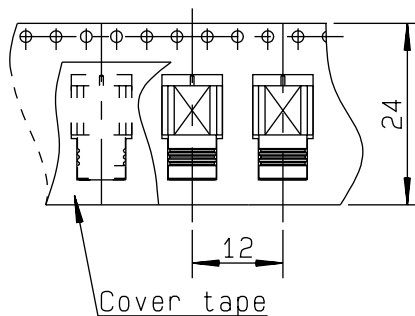
<b>P/N</b>	<b>R114 423 800</b> <b>R114 423 810</b> <b>R124 423 820</b>
------------	---



<b>P/N</b>	<b>R114 423 840</b>
------------	---------------------

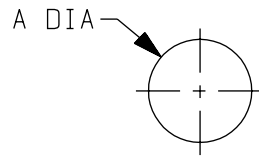


<b>P/N</b>	<b>R114 444 800</b>
------------	---------------------



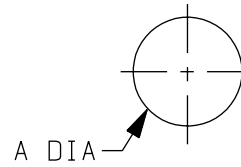


**P09**



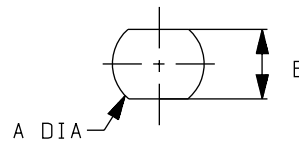
MM		
	maxi	mini
A	12.8	12.7

**P20**



MM		
	maxi	mini
A	6.5	6.4

**P21**



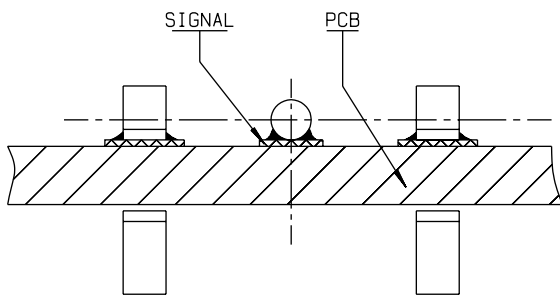
MM		
	maxi	mini
A	12.8	12.7
B	10.9	10.8



### M 01 Pin edge card receptacles

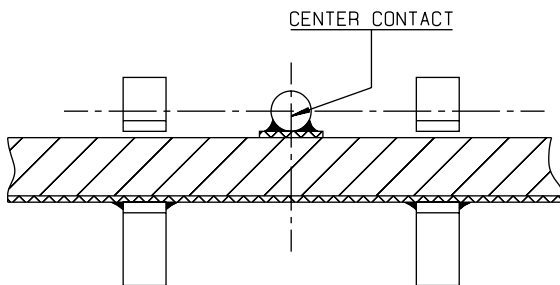
P/N	
	R113 423 120
	R114 423 120
	R124 423 103
	R124 423 123
	R124 423 133
	R124 551 303
	R125 423 200

This type of connector is adapted to one specific PCB thickness.  
It can be used with different ways of transmission.



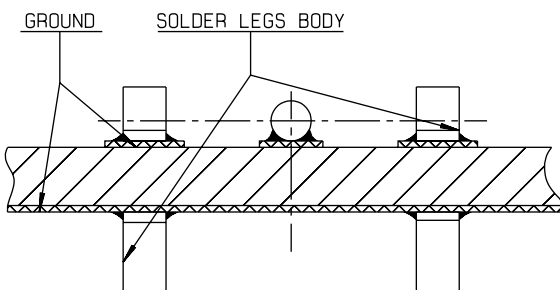
#### 1. COPLANAR LINE

Signal and ground are coplanar.



#### 2. MICROSTRIP LINE

Signal and ground are opposite.



#### 3. Coplanar and opposite grounds.

Solution 3. features a stronger mechanical retention on the PCB because the 4 leads are soldered.

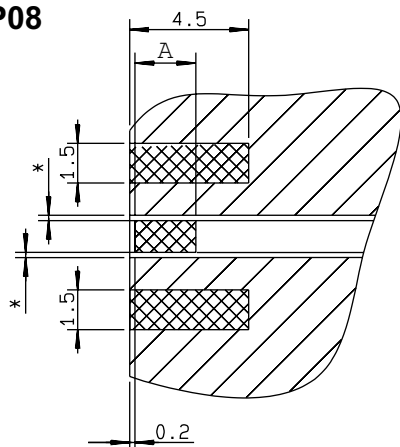


### M 01 Pin edge card receptacles (flg)

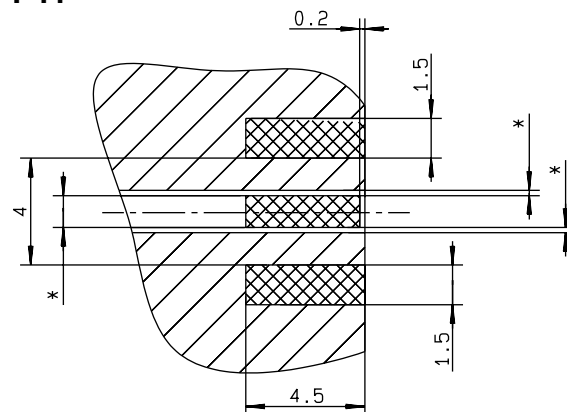
P/N	A
R113 423 120	2.5
R114 423 120	1.5
R124 423 223	1.5



P/N	R124 423 123 R125 423 200
-----	------------------------------

P08



P11

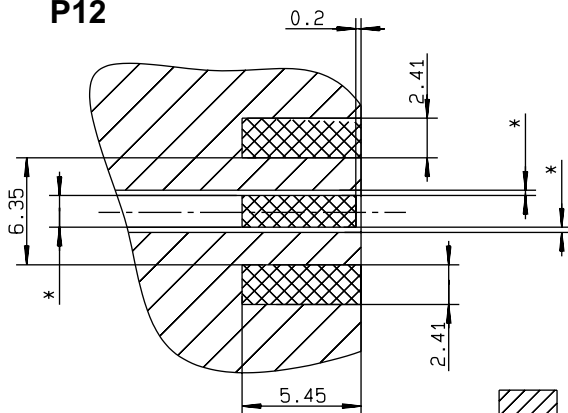


 Pattern  
 Land for solder paste

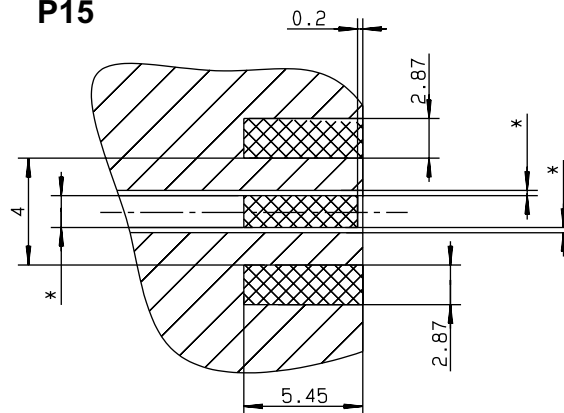
P/N	R124 551 303
-----	--------------



P/N	R124 423 103
-----	--------------

P12

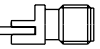


P15



 Pattern  
 Land for solder paste

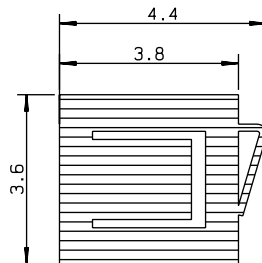
\* Parameters flaged by a star must be defined dimensionally regarding the transmission way these parameters could be measured by RADIAL if it requested.



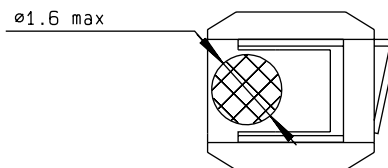
### M 02 UMP series

P/N	R107 003 000
	R107 003 010
	R107 003 010W

#### Video shadow of receptacle

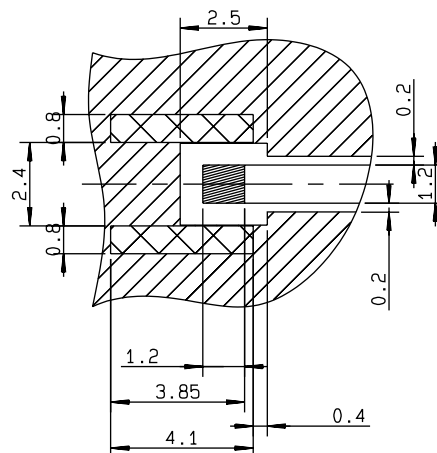





#### Aspiration area



#### Receptacle soldering pattern PCB thickness : 1 mm

P07



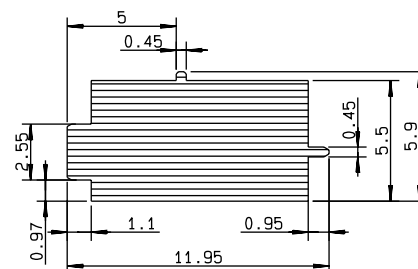
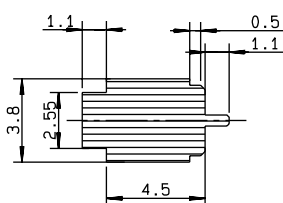
-  Gold over Nickel for solder paste
-  Gold over Nickel contact area free of any surface contaminant
-  Ground + varnish

## M 03 MC-CARD series

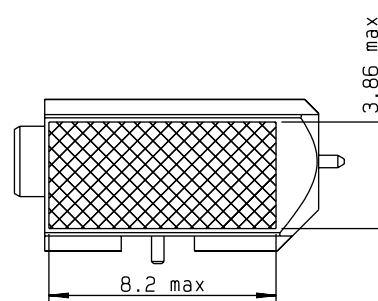
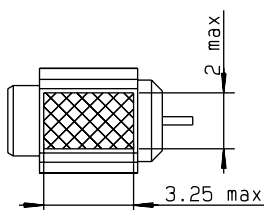
P/N	R199 005 504 R199 005 800 R199 005 801
-----	--

P/N	R199 005 890 R199 005 890W
-----	-------------------------------

### Video shadow of receptacle

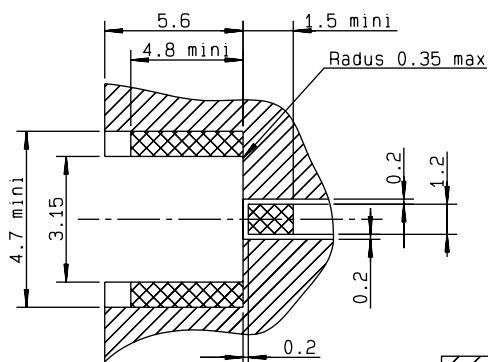


### Aspiration area



### Receptacle soldering pattern PCB thickness : 1 mm

P16

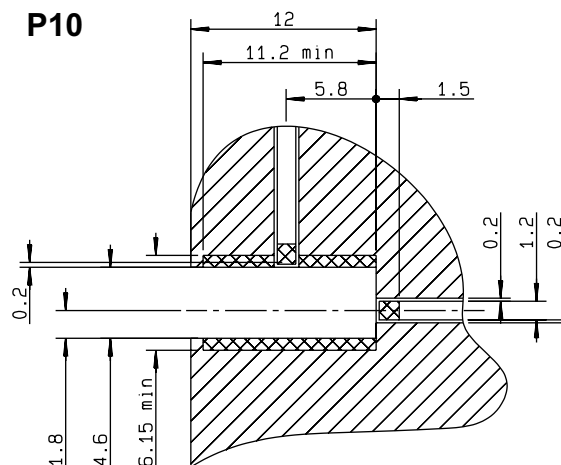


Pattern



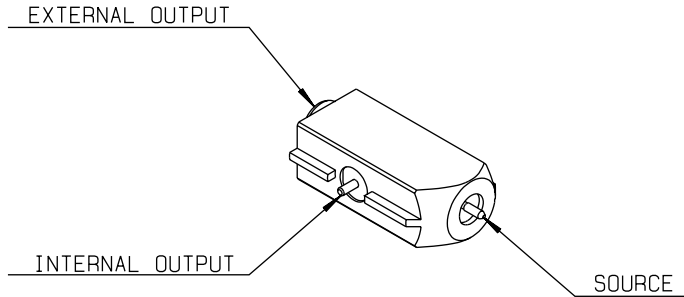
Land for solder paste

P10

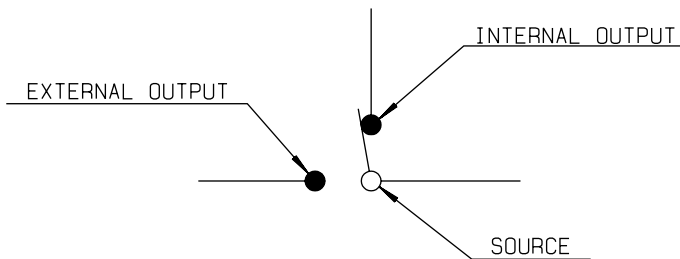




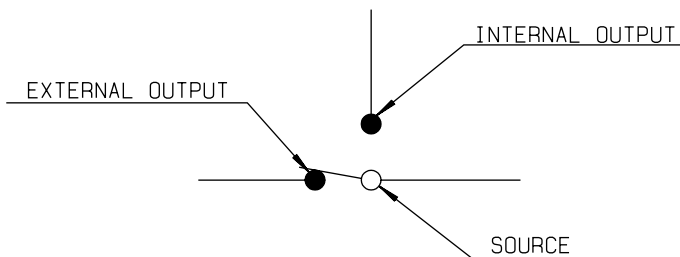
## M 03 MC-CARD series (flg)



<b>P/N</b>	<b>R199 005 890</b> <b>R199 005 890W</b>
------------	---



**1. Unmated connector**



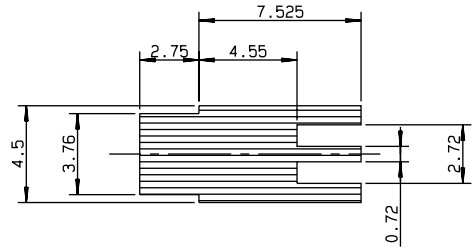
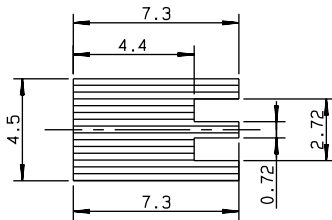
**2. Mated with MC card plug**

## M 04 MMCX series

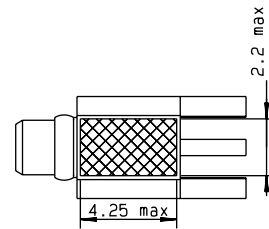
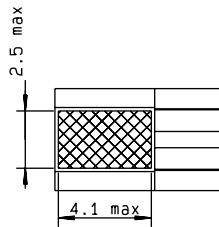
P/N	R110 422 100
-----	--------------

P/N	R110 423 100
-----	--------------

### Video shadow of receptacle

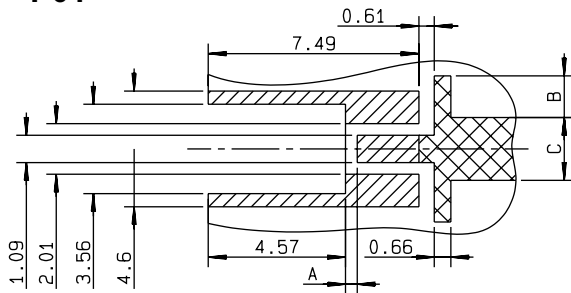


### Aspiration area



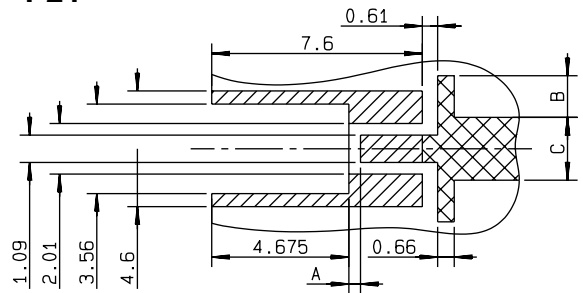
### Receptacle soldering pattern

P01



PCB THICKNESS	A	B	C
0.79	0.99	-	1.4
0.99	0.89	0.3	1.8
1.6	0.41	1.6	2.79

P21



PCB THICKNESS	A	B	C
0.79	0.99	-	1.4
0.99	0.89	0.3	1.8
1.6	0.41	1.6	2.79



Pattern



Land for solder paste

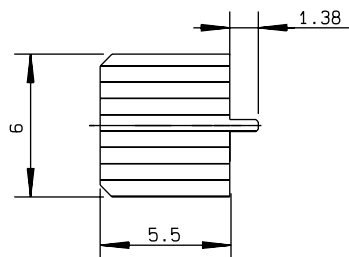




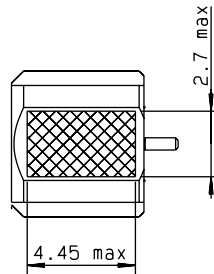
### M 05 MCX series

<b>P/N</b>	<b>R113 423 000</b>
	<b>R113 423 000W</b>
	<b>R113 423 810</b>
	<b>R113 423 820</b>

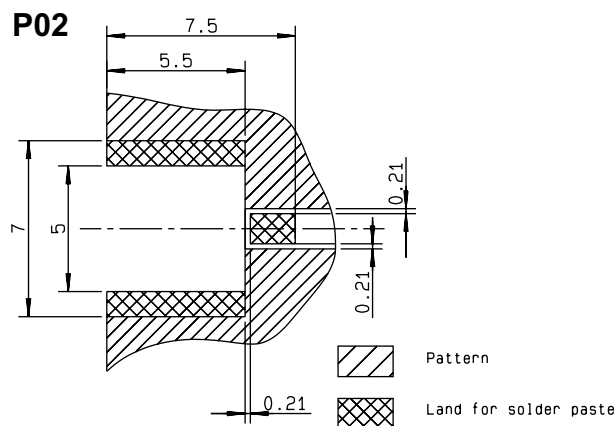
#### Video shadow of receptacle



#### Aspiration area



#### Receptacle soldering pattern PCB thickness: 1.6 mm



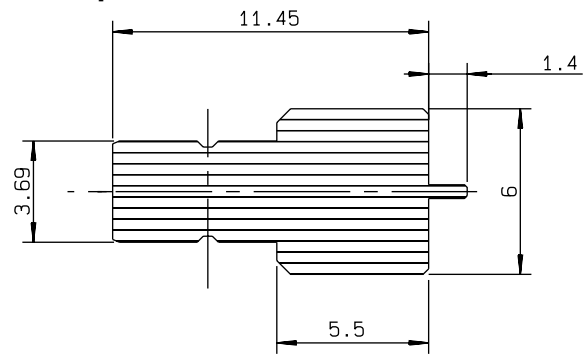
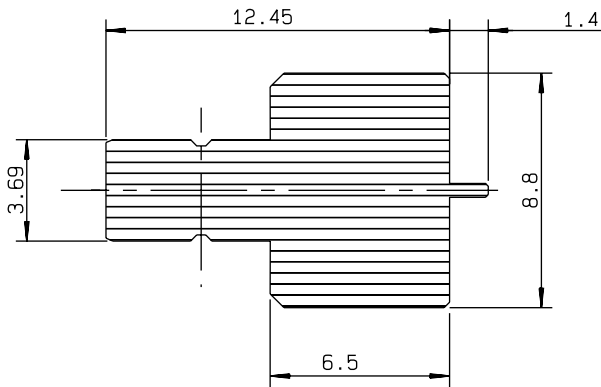


## M 06 SMB series

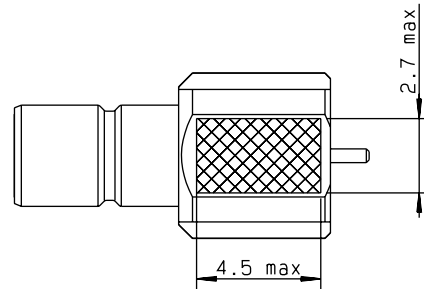
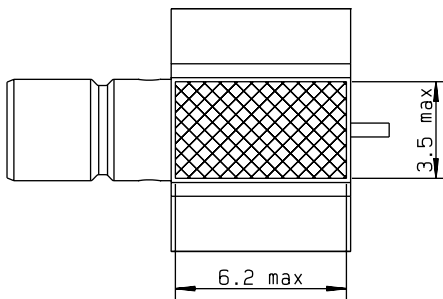
P/N	R114 423 140 R114 423 840
-----	------------------------------

P/N	R114 423 000 R114 423 000W R114 423 810 R114 423 820
-----	---

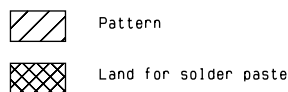
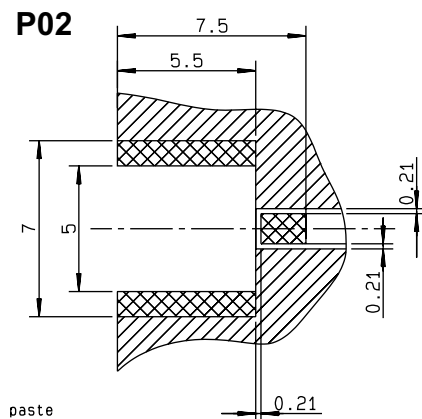
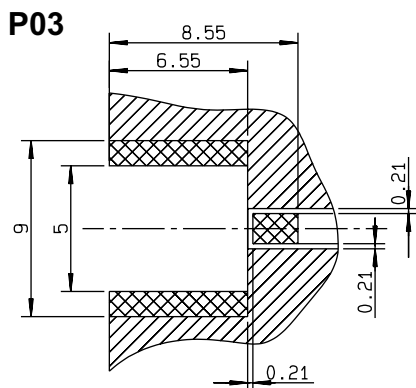
### Video shadow of receptacle



### Aspiration area



### Receptacle soldering pattern PCB thickness : 1.6 mm

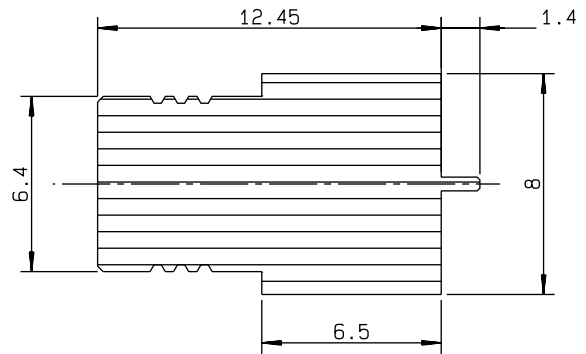
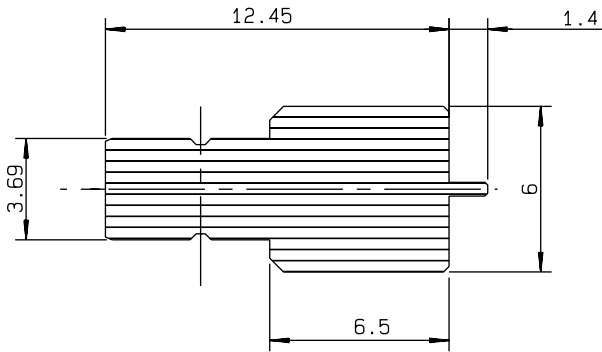


## M 06 (flg) SMB series

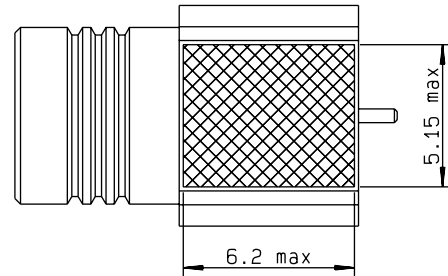
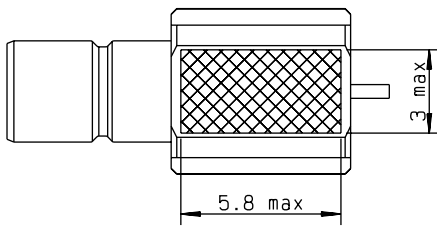
P/N	R114 423 800
-----	--------------

P/N	R114 444 800
-----	--------------

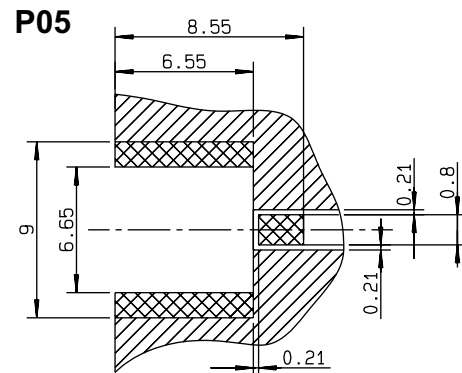
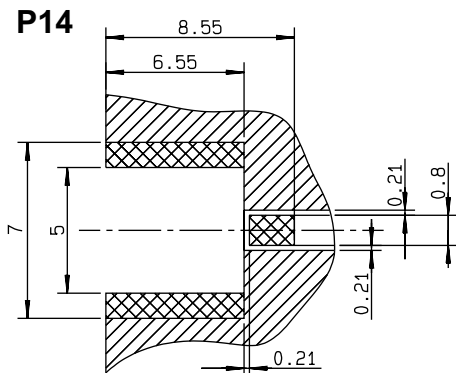
### Video shadow of receptacle





### Aspiration area



### Receptacle soldering pattern PCB thickness : 1.6 mm



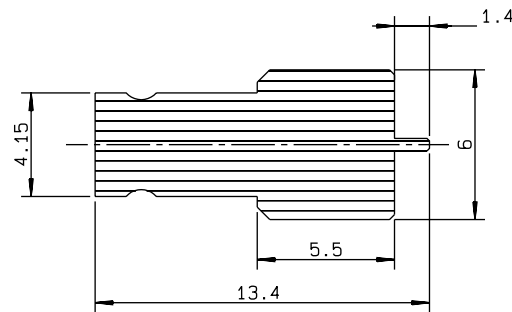
-  Pattern
-  Land for solder paste



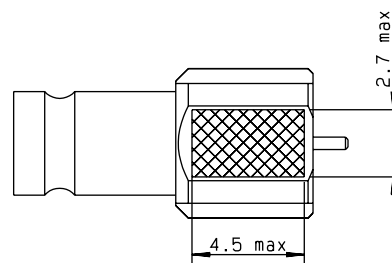
### M 07 1.0 / 2.3 series

P/N	R120 423 000
-----	--------------

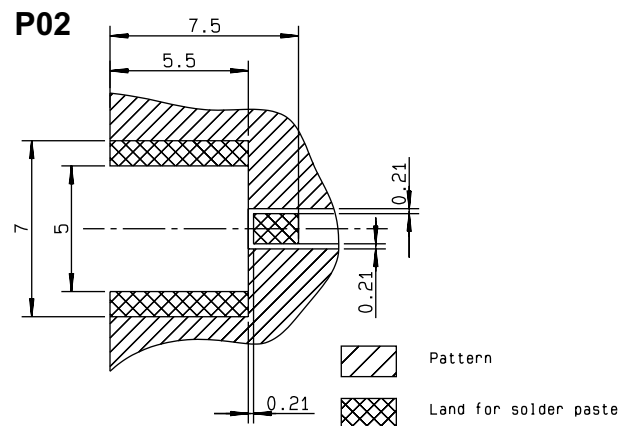
#### Video shadow of receptacle



#### Aspiration area



#### Receptacle soldering pattern PCB thickness : 1.6 mm

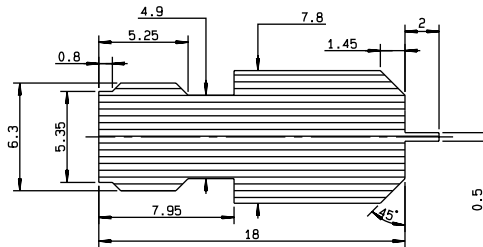




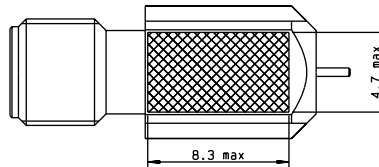
### M 08 SMA series

P/N	R124 423 033
-----	--------------

#### Video shadow of receptacle

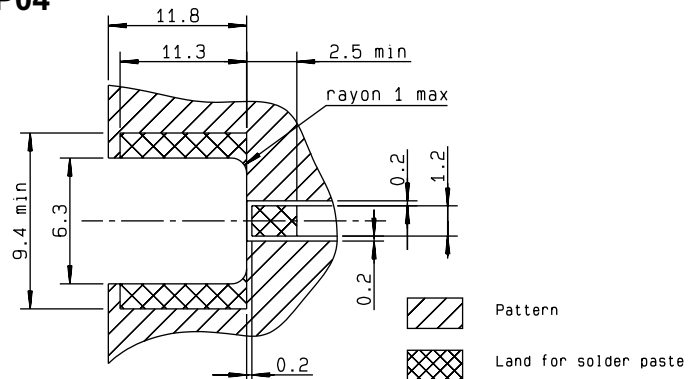


#### Aspiration area



#### Receptacle soldering pattern PCB thickness : 1.6 mm

##### P04

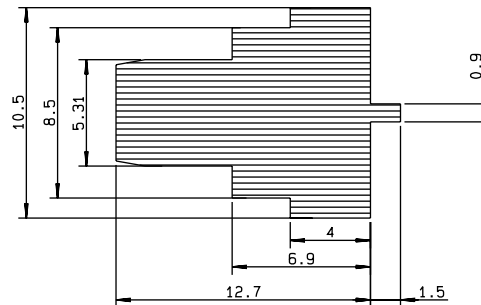




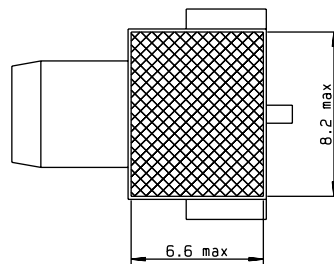
### M 09 Commercial BMA series

P/N	R128 403 850
-----	--------------

#### Video shadow of receptacle

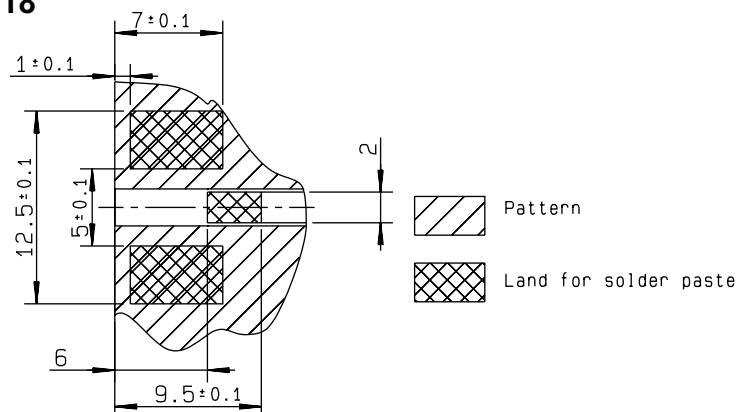


#### Aspiration area



#### Receptacle soldering pattern PCB thickness : 1.6 mm

##### P18

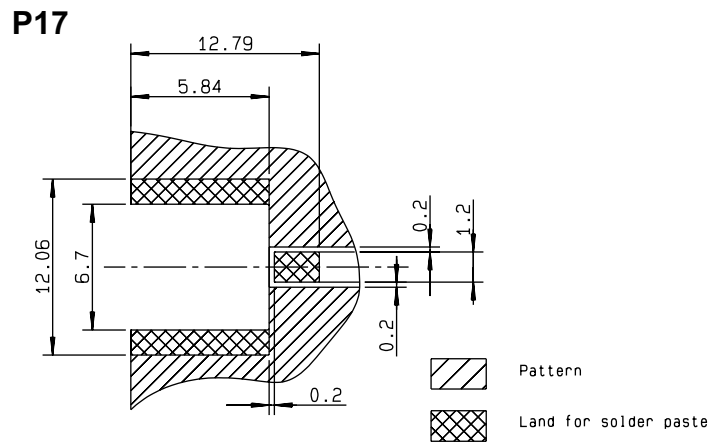




### M 10 BNC series

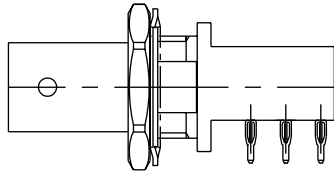
P/N	R141 423 108 R142 567 028
-----	------------------------------

Receptacle soldering pattern PCB thickness : 1.6 mm



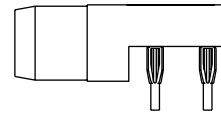
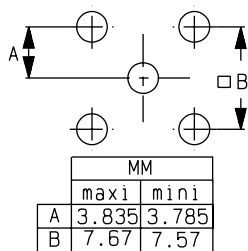


## M 11 Press fit pins

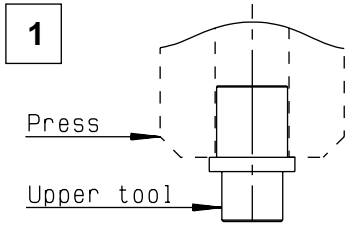
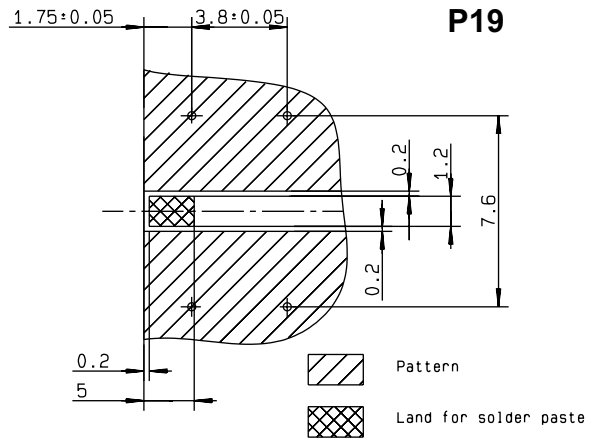


P/N	R141 684 130
-----	--------------

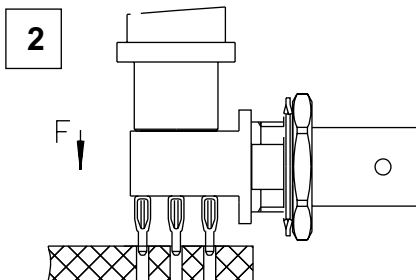
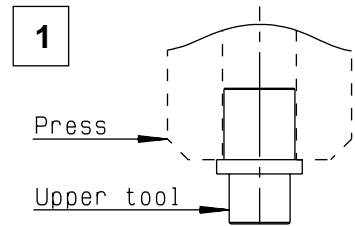
P22



P/N	R128 405 161
-----	--------------

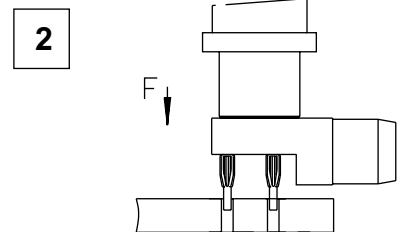


**1.1** Slide the flat tool into the machine (press).

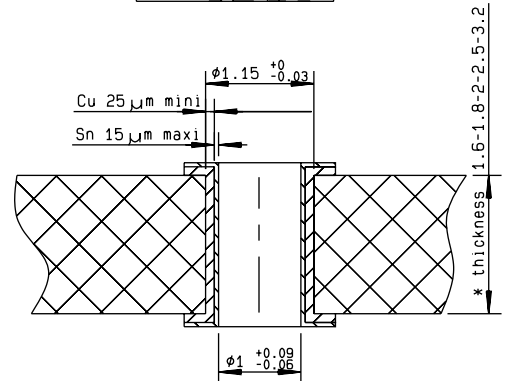


**2.1** Push on the top (about 500 N) until total insertion (in direction F). (Push connector body until it bottoms against PCB).

**2.2** Remove the connector and the PCB assembly.



PC BOARD MATERIAL	GLASS FIBRE EPOXYD NEMA: G10, G11, FR4, FR5 DIN 40802: EP-GC 01, EP-GC 02
HOLE	FOR 1 mm COMPLIANT PIN







To ensure the correct adhesion of the receptacle to the PCB, the following procedures are recommended.

### A - Soldering procedure using automatic pick and place equipment

#### 1) Solder paste:

- RADIALL recommends using a solder paste **Sn62-RP11AGS90 type "no clean - low residue"** (5% solid residue of flux quantity) that will permit the **elimination of the cleaning operation step** after soldering.
- When using a conventional solder paste with high level (50%) of flux solid residue, it is important to incorporate a good cleaning operation step, similar to what is described below in paragraph 5.
- Note: when choosing a solder paste for gold-plated PCB pattern, it is important to use a paste made with silver. This will help in avoiding formation of intermetallics as part of the solder joint.

#### 2) Solder paste deposition:

- The solder paste should be deposited on the designated zone areas (see pattern pages 22 to 32) by a screen printing process. RADIALL advises a thickness of .006" (0.15 mm).
- If using a thickness of less than .006" (0.15 mm) the zone area must be specifically designed for this thickness (please consult RADIALL).
- Please optically verify that the edges of the zone are clean and without contaminates.

#### 3) Placement of the component:

- Place the receptacle onto the PCB with automatic pick and place equipment. Please verify that the PCB zone areas have not oxydated.
- RADIALL does not recommend using adhesive agents on the receptacle or on the PCB.
- The use of a video camera is preferred for checking the positioning of the components (see video shadow, pages 22 to 32).

#### •4) Soldering: infra-red reflow process:

- Please follow RADIALL's recommended profile as illustrated.
- When using a "no clean - low residue" type of solder paste, RADIALL recommends a linear pre-heat profile not to exceed 160°C with a 1 to 2°C/s. Rise.

#### 5) Cleaning of the PCB:

- Receptacle meets standard requirements like MIL STD 202 F and IEC 68-2-45 concerning receptacle resistance to solvents. Indeed, the material of receptacle-beryllium copper-withstands all current solvents such as azeotropic solutions, alcohols, alkaline saponifiers, halogenated hydrocarbons, high temperature water cleaner, CFC substitutes ...
- When using a conventional solder paste with high level of residue, please clean the PCB with a substitute product, similar to CFC, that complies to the International Environmental Agency rules.

- RADIALL recommends using a vapor phase process (ultrasonic waves are allowable).

#### •6) Quality check:

- Verify by visual inspection that contact area of the receptacle has not been contaminated by solder or flux.
- Solder joints: verify by visual inspection that the formation of meniscus on the sides of the receptacle leads are proper.

#### 1) Solder paste:

- (Refer to procedure A - 1)

#### 2) Flux deposition:

- Deposit a thin layer of flux on mounting zone.
- Allow the flux to evaporate a few seconds before applying the solder paste (in order to avoid dilution of the paste).

#### 3) Solder paste deposition:

- Deposit a small quantity of solder paste on mounting zone area by syringe.
- Be careful, do not apply solder paste outside of the zone area.

#### 4) Placement of the component:

- Lift the receptacle with tweezers.
- Place the component on the mounting zone by pressing lightly on the top of the receptacle with tweezers. The receptacle leads will stick into the solder paste.

#### 5) Soldering:

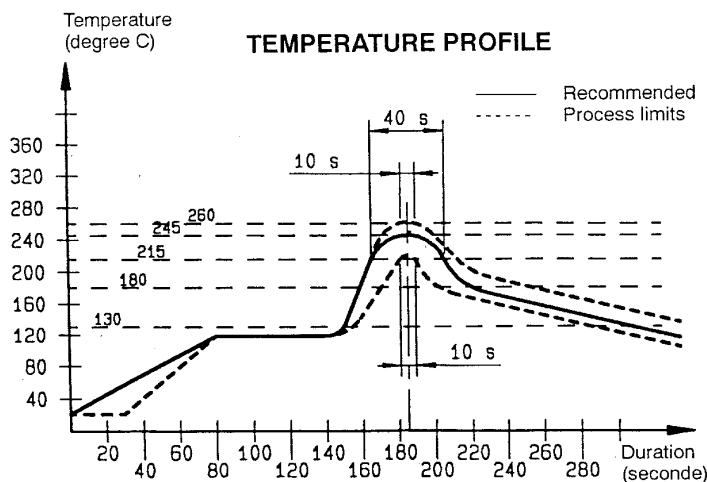
- Pre-heat stage: use a heat gun (soldering iron is not recommended) at a distance of .800" (20 mm) from the receptacle, applying the jet of air in a continuous circular motion, until the solder paste starts to look dull. This stage avoids any thermal shock since both areas to be soldered are brought up to the same temperature.
- Final re-melting step is carried out by moving the heat gun to a closer distance of .200" (5 mm) from the receptacle legs while guiding the jet of air onto each receptacle lead, at a 45° angle.

#### 6) Cleaning of the PCB:

- (Refer to procedure A - 5)

#### 7) Quality check:

- (Refer to procedure A - 6)





Part numbers	Description	Page
R107 003 000	UMP series - SMT edge card receptacle (4000 p / reel)	8
R107 003 010	UMP series - SMT edge card receptacle (100 p / reel)	8
R107 003 010W	UMP series - SMT edge card receptacle (unit)	8
R199 005 800W	MC CARD series - SMT edge card receptacle (unit)	9
R199 005 800	MC CARD series - SMT edge card receptacle (400 p / reel)	9
R199 005 801	MC CARD series - SMT edge card receptacle (1800 p / reel)	9
R199 005 890	MC CARD series - SMT microswitch (500 p / reel)	9
R199 005 890W	MC CARD series - SMT microswitch (unit)	9
R110 422 100	MMCX series - SMT edge card receptacle (female center contact) (unit)	10
R110 423 100	MMCX series - SMT edge card receptacle (male center contact) (unit)	10
R113 423 000	MCX series - SMT edge card receptacle (100 p / bulk)	11
R113 423 000W	MCX series - SMT edge card receptacle (unit)	11
R113 423 810	MCX series - SMT edge card receptacle (500 p / reel)	11
R113 423 820	MCX series - SMT edge card receptacle (100 p / reel)	11
R113 423 120	MCX series - pin edge card receptacle (100 p / bulk)	11
R114 423 000	SMB series - SMT edge card receptacle (male center contact) (100 p / bulk)	12
R114 423 000W	SMB series - SMT edge card receptacle (male center contact) (unit)	12
R114 423 800	SMB series - SMT edge card receptacle (male center contact) (1000 p / reel)	12
R114 423 810	SMB series - SMT edge card receptacle (male center contact) (500 p / reel)	12
R114 423 820	SMB series - SMT edge card receptacle (male center contact) (100 p / reel)	12
R114 423 140	SMB series - SMT edge card receptacle (male center contact) (100 p / bulk)	12
R114 423 840	SMB series - SMT edge card receptacle (male center contact) (1000 p / reel)	12
R114 444 800	SMB series - SMT edge card receptacle (female center contact) (800 p / reel)	12
R114 423 120	SMB series - pin edge card receptacle (male center contact) (100 p / bulk)	12
R120 423 000	1.0 / 2.3 series - SMT edge card receptacle (unit)	13
R124 423 033	SMA series - SMT edge card receptacle (unit)	14
R124 423 103	SMA series - pin edge card receptacle (100 p / bulk)	14
R124 423 123	SMA series - pin edge card receptacle (100 p / bulk)	14
R124 423 223	SMA series - pin edge card receptacle (100 p / bulk)	14
R125 423 200	SMA series - pin edge card receptacle (unit)	14
R128 403 850	BMA series - SMT edge card receptacle (unit)	15
R128 405 161	BMA series - press fit pin edge card receptacle (100 p / bulk)	15
R141 423 108	BNC series - SMT edge card receptacle (unit)	16
R142 567 028	BNC series - SMT edge card receptacle (50 p / bulk)	16
R141 684 130	BNC series - press fit pin edge card receptacle (10 p / bulk)	16