



01

RF/COAX CONNECTORS

**E-TEC AG
SWITZERLAND**



**E-TEC INTERCONNECT
ASIA LTD**

The **E-tec** factory was founded in 1973 for the production of precision pins for the watch industry. As of the 1980's the company expanded it's business into manufacturing of precision pin connectors for the electronics industry (IC-Sockets, Board-to-Board Connectors, etc.)

In 1993 **E-tec** set-up it's own operations in Taiwan in order to enhance the product range with stamped pin products (PLCC, Pin headers, Female headers, D-Sub's, Switches, etc.). In 2001 **E-tec** transferred certain labor intensive productions to its new production plant in Mainland China.

With over 35 years experience in connector manufacturing, **E-tec** has set-up it's own sales network in Europe & Asia, as well as established distributors and representatives in most countries around the world.

E-tec offers flexibility for custom specific products and delivers standard and custom products starting from 0.30mm pitch upwards. We offer short delivery times from prototype to large volume productions. Thanks to our in-house product development department and production sites in Switzerland, Taiwan and Mainland China we aim to offer a solution to all your problems.

As a fully approved ISO 9001:2008 manufacturer, quality assurance is an essential part of our production process, since our main objective is to offer products which correspond to the highest quality standards.

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RF Connectors MCX Series



These MCX miniature snap-on connectors with 50Ω impedance operate in a frequency range up to 6 GHz. The MCX series is an ideal solution for GPS, wireless communications and test measurement applications.

PLUG

Dimension	Millimeters	
	Minimum	Maximum
A	0.48	0.53
B	2.00	2.07
C	3.66	3.76
D	0.00	0.30
E	2.81	3.20
F	4.16	--
G	2.81	3.20

JACK

Dimension	Millimeters	
	Minimum	Maximum
A	1.80	1.97
B	3.43	3.48
C	3.61	3.75
D	2.31	2.79
E	2.61	2.79
F	4.00	4.12
G	0.75	0.85

See NOTE

NOTE
In order to meet the VSWR and CR values as specified, the inner hole diameter needs to be mated with a 0.48/0.53mm dia. pin.

Electrical		
Impedance	50 Ω	
Frequency Range	0 - 6 GHz	
Working Voltage	335 V rms max.	
Dielectric Withstanding Voltage	1000 V rms min.	
VSWR	Straight	1.3 max.
	Right Angle	1.5 max.
Contact Resistance	Center Contact	5 mΩ max.
	Outer Contact	2.5 mΩ max.
Insulator Resistance	1000 MΩ min.	

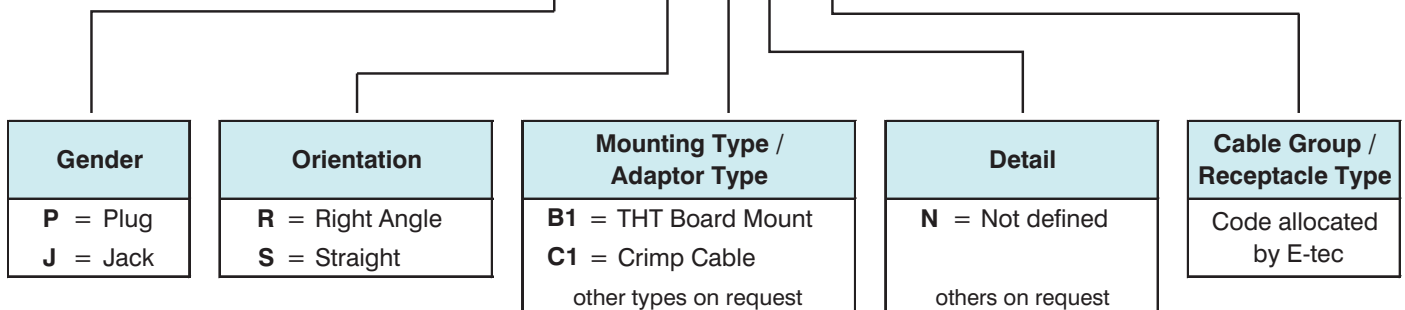
Material		
Parts Name	Material	Finish
Body, Metal Parts	Brass per QQ-B-626	Gold 0.07μm (3 μ")
Center Contacts	Male: Brass per QQ-B-626	Gold 0.75μm (30 μ")
	Female: Beryllium copper per QQ-C-530	Gold 0.75μm (30 μ")
Insulators	Teflon	None
Outer Contact of Plug	Beryllium copper per QQ-C-530	Gold 0.07μm (3 μ")
Crimp Ferrules	Annealed Brass	Gold 0.07μm (3 μ")

NOTE: Other materials and platings are available on request.

Mechanical & Environmental	
Engagement torque	15 N max.
Disengagement torque	20 N max.
Contact Retention	18 N min.
Durability(Mating)	500 cycles min. (for Beryllium copper female contact only)
Temperature Range	-65°C to +155°C
Vibration	3 cycles, 3 opposite directions, 10-150 Hz, 10-60 Hz:0.75mm/.03", 60-150 Hz 10G
Temperature Shock	MIL-STD-202 Method 107
Humidity	MIL-STD-202 Method 103, Condition. B.
Mechanical Shock	MIL-STD-202 Method 213, Condition. B.

How to order

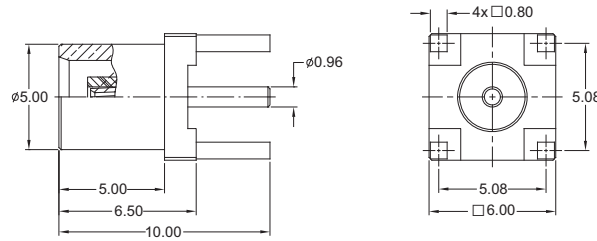
RF X - MC X - XX X 5 xx - 58



RF Connectors MCX Series

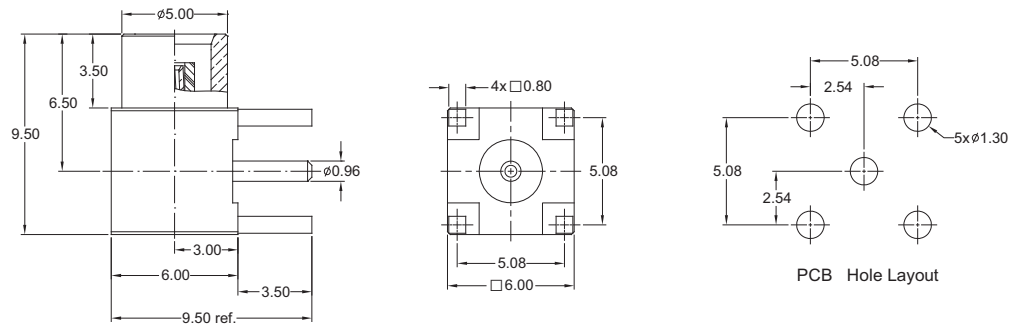


STRAIGHT THT JACK



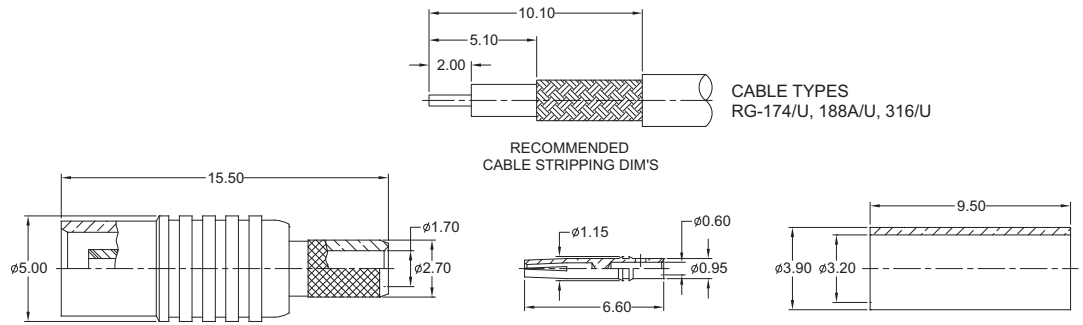
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R/A THT JACK



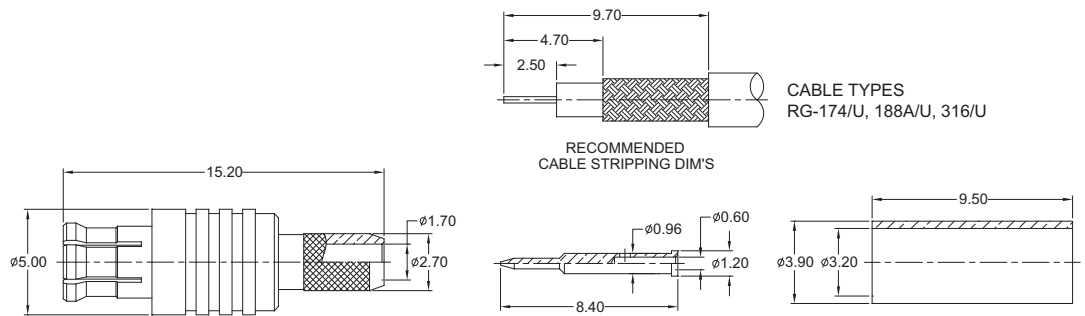
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CRIMP JACK



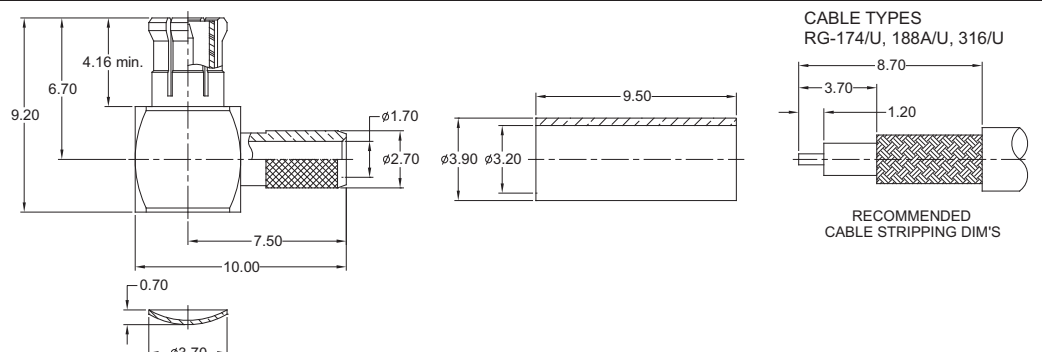
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CRIMP PLUG



Order Code
RFP-MCS-C1N502-58

R/A CRIMP PLUG



Order Code
RFP-MCR-C1N502-58

Other MCX types available on request

RF Connectors MMCX Series



MMCX series with 50Ω impedance offer the smallest dimensions for high density applications. The MMCX connectors work a frequency range up to 6 GHz and they can be offered in thru-hole and surface mount technology for flexible and semi-rigid coaxial cable interconnection systems.

REFERENCE PLANE

PLUG

Dimension	Millimeters	
	Minimum	Maximum
A	--	2.40
B	2.70	--
C	0.00	0.25
D	--	3.15
E	1.58	1.62
F	1.45	--
G	0.38	0.42
H	--	0.20

See NOTE

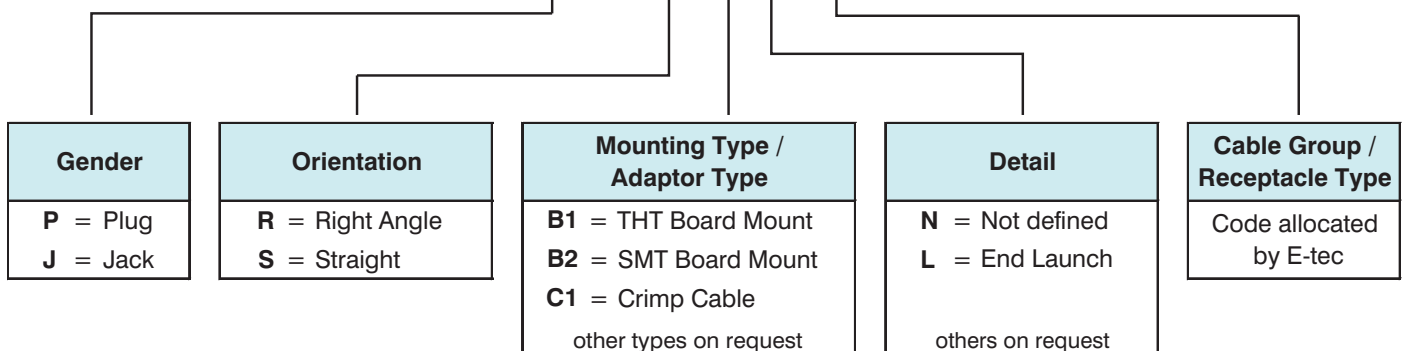
REFERENCE PLANE

JACK

Dimension	Millimeters	
	Minimum	Maximum
A	2.41	--
B	2.60	--
C	0.90	1.20
D	0.68	0.72
E	1.40	--
F	3.00	3.04
G	2.87	2.90
H	1.57	1.63
I	2.30	2.34
J	--	0.23

How to order

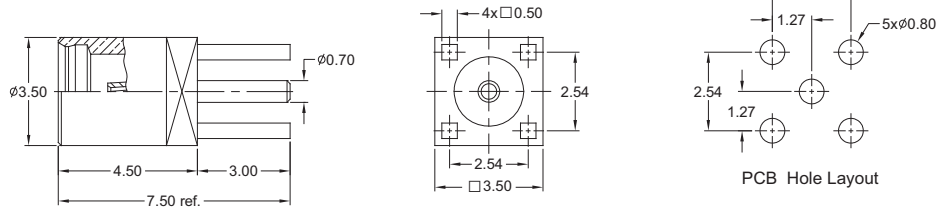
RF X - MM X - XX X 5 xx - 58



RF Connectors MMCX Series

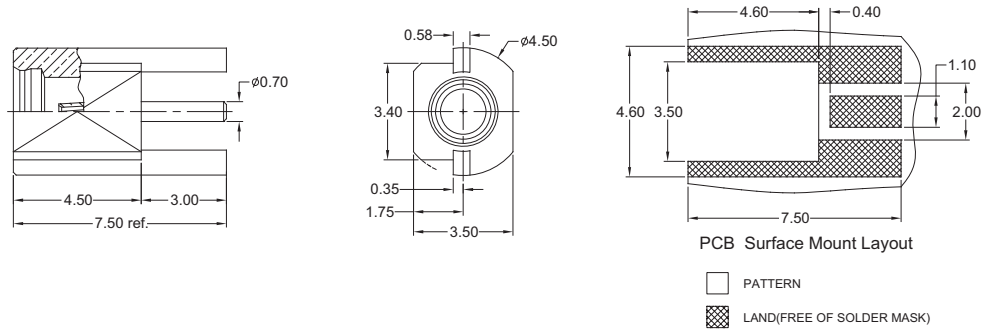


STRAIGHT THT JACK



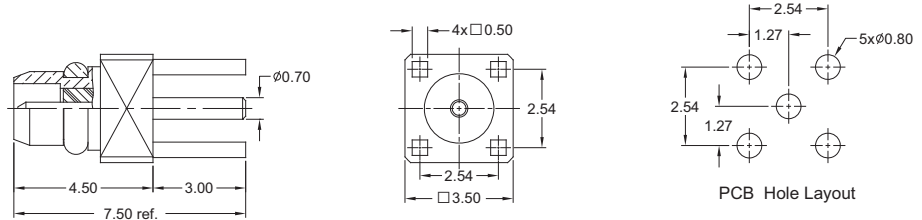
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STRAIGHT SMT JACK



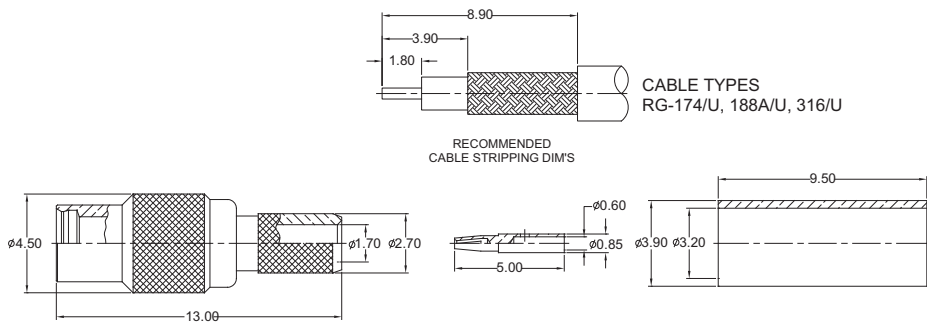
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STRAIGHT THT PLUG



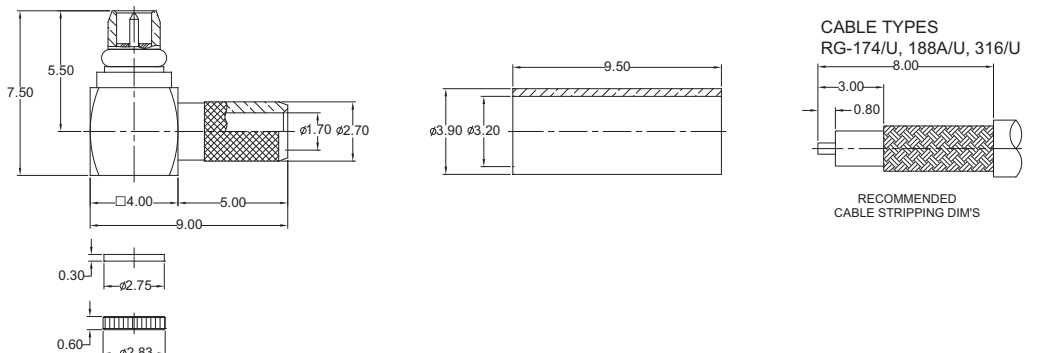
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CRIMP JACK



Order Code
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R/A CRIMP PLUG



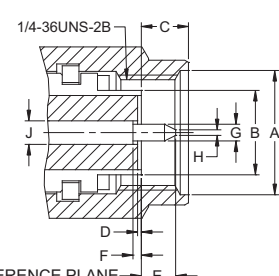
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Other MMCX types available on request

RF Connectors SMA Series



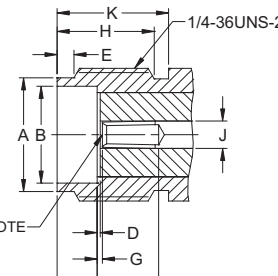
SMA connectors with 50Ω impedance are high precision subminiature devices designed for microwave applications up to 18 GHz. These connectors are produced with brass or high quality stainless steel, which offer excellent durability and mechanical strength.



1/4-36UNS-2B

REFERENCE PLANE → E

Dimension	PLUG Millimeters	
	Minimum	Maximum
A	6.35	6.73
B	4.53	4.59
C	2.54	3.43
D	0.00	0.25
E	1.91	2.54
F	0.00	0.25
G	0.90	0.94
H	0.00	0.38
J	1.24	1.30



1/4-36UNS-2A

See NOTE

REFERENCE PLANE → C

Dimension	JACK Millimeters	
	Minimum	Maximum
A	5.28	5.49
B	4.60	4.67
C	1.88	1.98
D	0.00	0.25
E	0.38	1.14
F	2.92	--
G	0.00	0.25
H	4.32	--
J	1.24	1.30
K	5.54	--

NOTE
In order to meet the VSWR and CR values as specified, the inner hole diameter needs to be mated with a 0.9/0.94mm dia. pin.

Electrical	
Impedance	50 Ω
Frequency Range	0 - 12.4 GHz on Flexible cable 0 - 18 GHz on Semi-rigid cable
Working Voltage	RG-178: 170 V rms max. RG-316, .085": 250 V rms max. RG-142, .141": 335 V rms max. RG-178: 500 V rms min. RG-316, .085": 750 V rms min. RG-142, .141": 1000 V rms min.
Dielectric Withstanding Voltage	
VSWR	Straight: 1.3 max. Right Angle: 1.5 max.
Contact Resistance	Center Contact: 6 mΩ max. Outer Contact: 2 mΩ max.
Insulator Resistance	5000 MΩ min.

Material		
Parts Name	Material	Finish
Body, Metal Parts	Brass per QQ-B-626	Gold 0.07μm (3 μ")
Center Contacts	Male: Brass per QQ-B-626 Female: Beryllium copper per QQ-C-530	Gold 0.75μm (30 μ")
Insulators	Teflon	None
Crimp Ferrules	Annealed Brass	Gold 0.07μm (3 μ")
Crimp Gaskets	Silicone rubber	None

NOTE: Other materials and platings are available on request.

Mechanical & Environmental	
Engagement Force	22 cNm max.
Disengagement Force	22 cNm max.
Coupling Nut Retention	267 N min.
Coupling Proof Torque	170 cNm min.
Contact Retention	27 N min.
Durability(Mating)	500 cycles min. (for Beryllium copper female contact only)
Temperature Range	-65°C to +155°C
Vibration	MIL-STD-202 Method 204 Test Cond. B.
Salt Spray	MIL-STD-202 Method 101 Test Cond. B.
Thermal Shock	MIL-STD-202 Method 107 Test Cond. B.

How to order

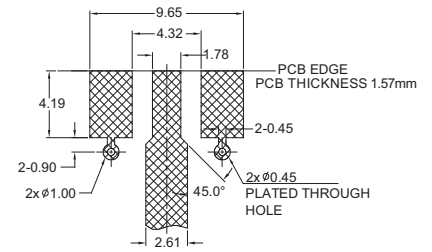
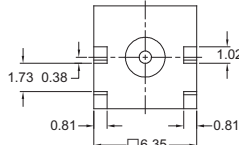
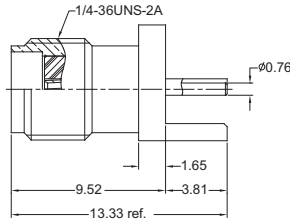
RF X - SA X - XX X 5 xx - 58

Gender	Orientation	Mounting Type / Adaptor Type	Detail	Cable Group / Receptacle Type
P = Plug J = Jack	R = Right Angle S = Straight	B1 = THT Board Mount B3 = END Launch Board Mount C1 = Crimp Cable P1 = Panel Board Mount other types on request	N = Not defined L = End Launch A = Bulkhead, Front Mount others on request	Code allocated by E-tec

RF Connectors SMA Series



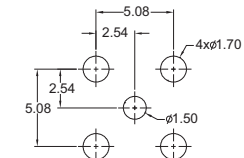
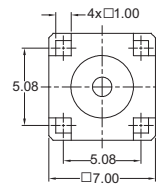
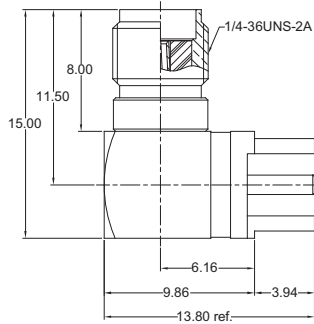
STRAIGHT END LAUNCH JACK



PCB surface Mount Layout

Order Code
RFJ-SAS-B3L592-58

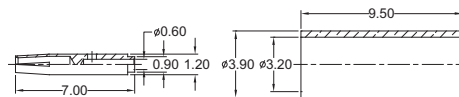
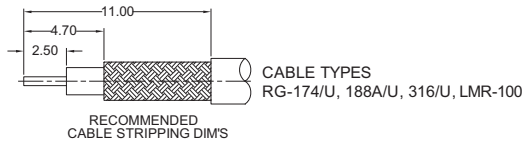
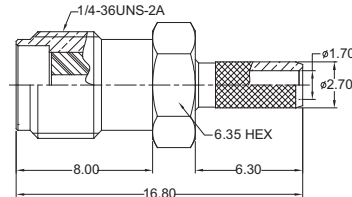
R/A THT JACK



PCB Hole Layout

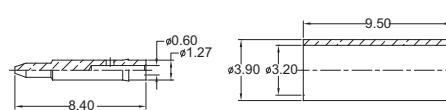
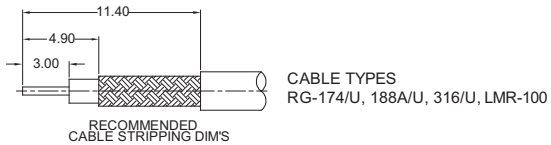
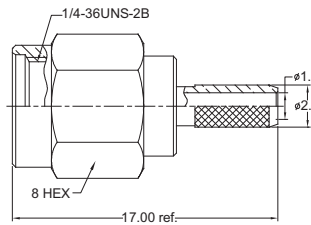
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CRIMP JACK



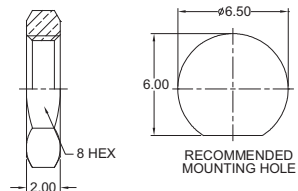
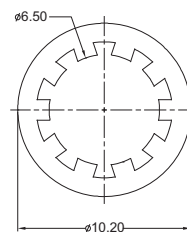
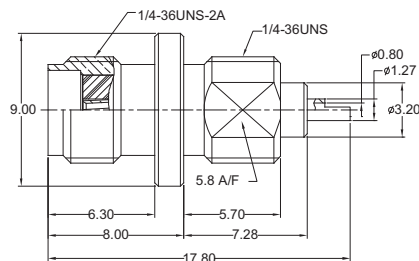
Order Code
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CRIMP PLUG



Order Code
RFP-SAS-C1N502-58

PANEL JACK



RECOMMENDED MOUNTING HOLE

Order Code
RFJ-SAS-P1A591-58

Other SMA types available on request

RF Connectors

SMA Reverse Series



SMA Reverse connectors with 50Ω impedance are designed for using in spread spectrum wireless applications which a non-standard interface is needed.

PLUG

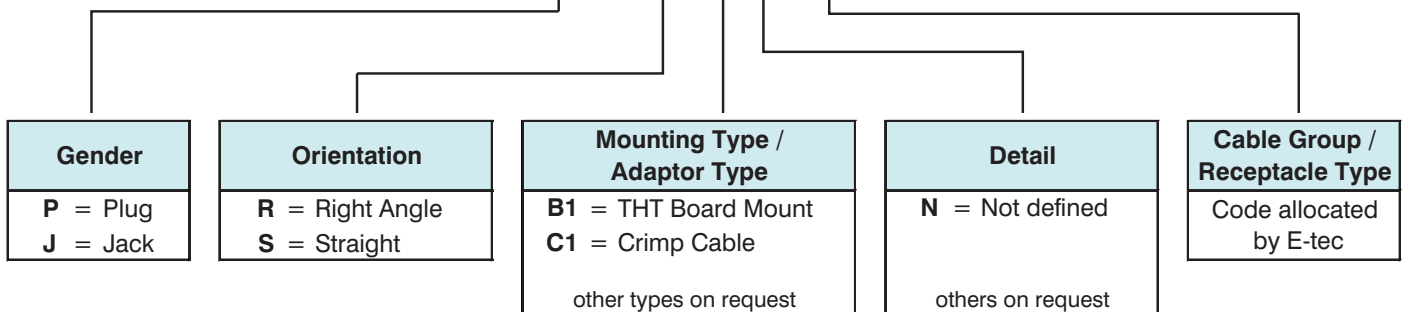
Dimension	Millimeters	
	Minimum	Maximum
A	2.54	3.43
B	1.24	1.30
C	4.53	4.59
D	6.35	6.73
E	0.00	0.25
F	0.00	0.25
G	2.92	--

JACK

Dimension	Millimeters	
	Minimum	Maximum
A	5.54	--
B	4.32	--
C	0.38	1.14
D	5.28	5.49
E	4.60	4.67
F	0.90	0.94
G	0.00	0.38
H	1.24	1.30
J	0.00	0.25
K	0.00	0.25
L	1.88	1.98

How to order

RF X - SR X - XX X 5 xx - 58



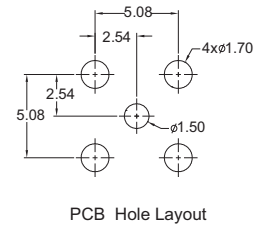
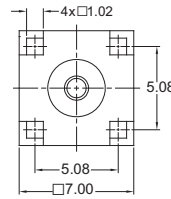
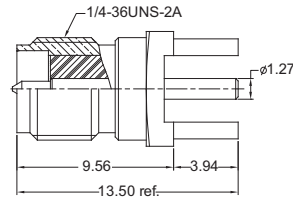
RF Connectors SMA Reverse Series



STRAIGHT THT JACK



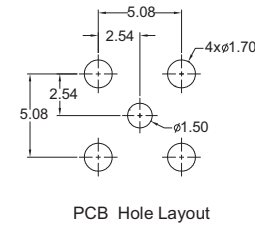
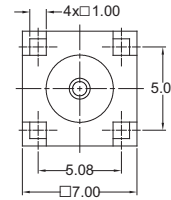
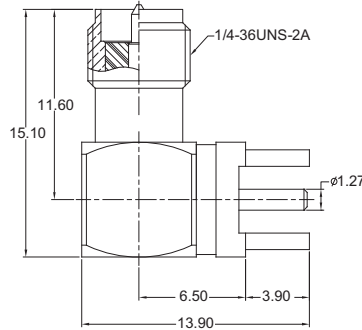
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R/A THT JACK



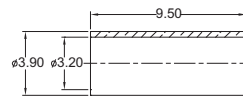
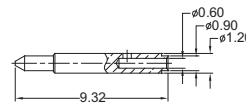
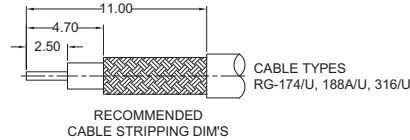
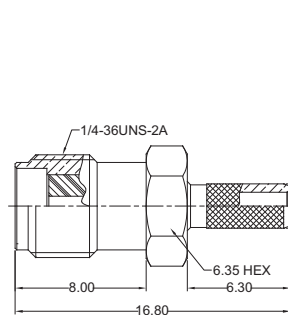
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CRIMP JACK



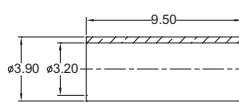
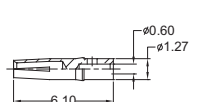
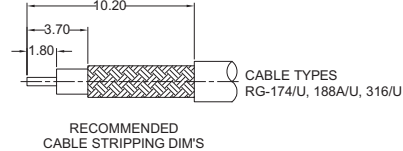
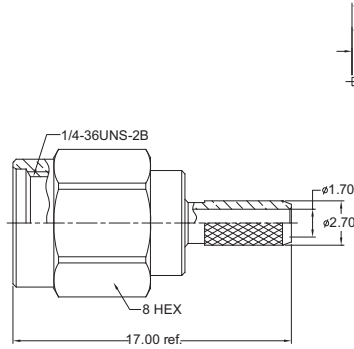
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CRIMP PLUG



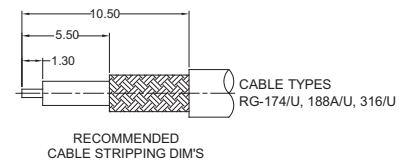
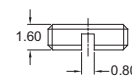
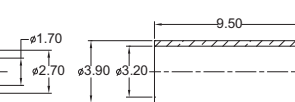
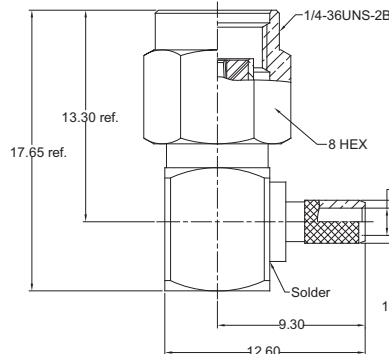
Order Code
RFP-SRS-C1N502-58



R/A CRIMP PLUG



Order Code
RFP-SRR-C1N502-58



Other SMA Reverse types available on request

RF Connectors SMB Series



SMB connectors with 50Ω impedance are subminiature devices designed for repeatable electrical performance up to 4 GHz. These SMB connectors offer a simple open/close snap-on coupling feature and which have become very popular in telecommunications, test equipments and instrumentation.

Dimension	Millimeters	
	Minimum	Maximum
A	2.00	2.06
B	--	1.62
C	0.18	--
D	0.18	0.94
E	2.97	--
F	3.58	--
G	3.58	--

Must meet the force to engage and disengage when mated with mating part.

NOTE
In order to meet the VSWR and CR values as specified, the inner hole diameter needs to be mated with a 0.48/0.53mm dia. pin.

Dimension	Millimeters	
	Minimum	Maximum
A	--	0.25
B	2.08	2.16
C	3.66	3.71
D	0.48	0.53
E	0.00	--
F	1.32	--
G	3.33	3.58
H	2.03	--
I	--	2.97
J	--	0.18
K	--	0.18
L	0.69	0.94

Electrical		
Impedance	50 Ω	
Frequency Range	0 - 4 GHz	
Working Voltage	RG-178: 250 V rms max. RG-316, .085": 335 V rms max.	
Dielectric Withstanding Voltage	RG-178: 500 V rms min. RG-316, .085": 1000 V rms min.	
VSWR	Straight	1.3 max.
	Right Angle	1.5 max.
Contact Resistance	Center Contact	6 mΩ max.
	Outer Contact	2.5 mΩ max.
Insulator Resistance	1000 MΩ min.	

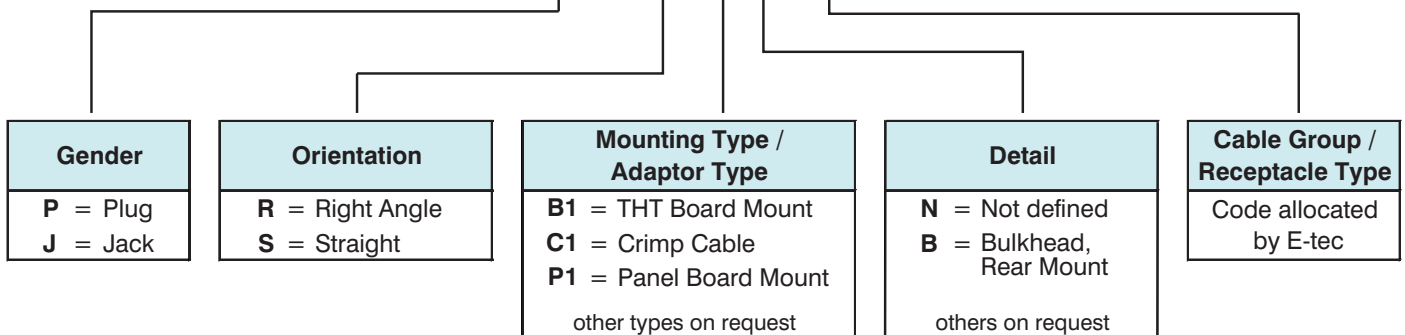
Material		
Parts Name	Material	Finish
Body, Metal Parts	Brass per QQ-B-626	Gold 0.07μm (3 μ")
Center Contacts	Male: Brass per QQ-B-626	Gold 0.75μm (30 μ")
	Female: Beryllium copper per QQ-C-530	Gold 0.75μm (30 μ")
Insulators	Teflon	None
Crimp Ferrules	Annealed Brass	Gold 0.07μm (3 μ")

NOTE: Other materials and platings are available on request.

Mechanical & Environmental	
Engagement / Disengagement Force	62 N max.
Contact Retention	18 N min.
Durability(Mating)	500 cycles min.
Temperature Range	-65°C to +155°C
Vibration	MIL-STD-202 Method 204 Test Cond. B.
Salt Spray	MIL-STD-202 Method 101 Test Cond. B.
Thermal Shock	MIL-STD-202 Method 107 Test Cond. B.

How to order

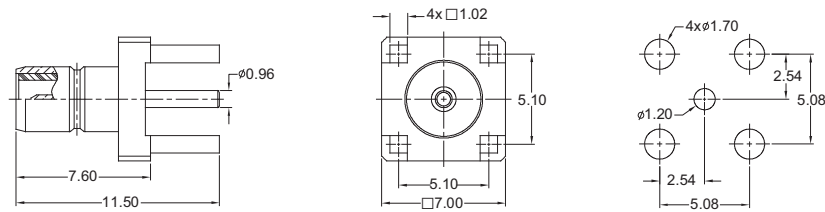
RF X - SB X - XX X 5 xx - 58



RF Connectors SMB Series

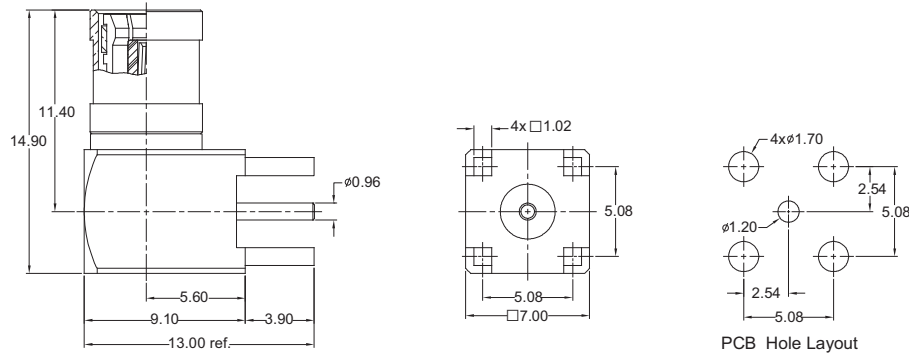


STRAIGHT THT JACK



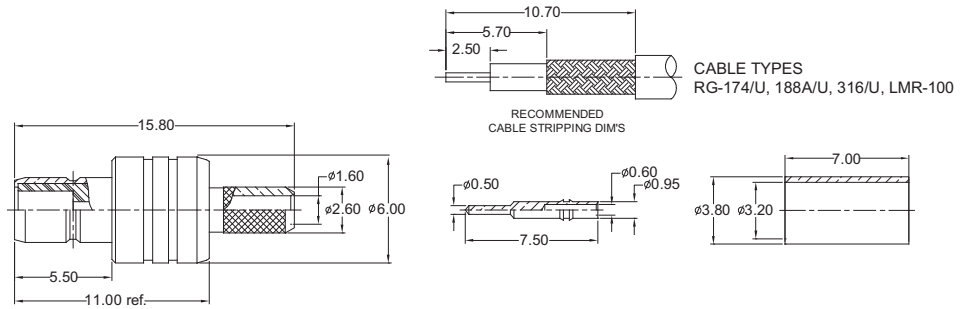
Order Code
RFJ-SBS-B1N592-58

R/A THT PLUG



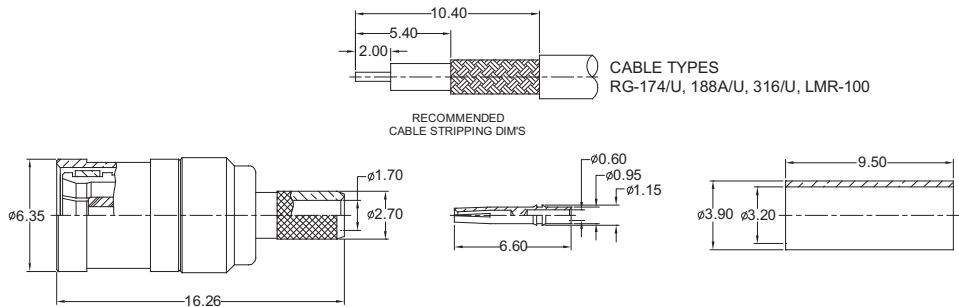
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CRIMP JACK



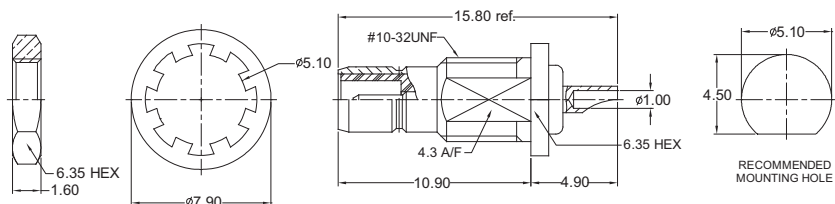
Order Code
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CRIMP PLUG



Order Code
RFP-SBS-C1N502-58

PANEL JACK



Order Code
RFJ-SBS-P1B591-58

Other SMB types available on request

RF Connectors

1.6/5.6 Series



1.6/5.6 coaxial connectors with 75Ω impedance are generally designed for radio and digital signal transmissions. These 1.6/5.6 connectors have become popular in modern telecommunication equipments.

Dimension	Millimeters	
	Minimum	Maximum
A	4.00	--
B	--	0.15
C	0.97	1.03
D	3.90	4.30
E	--	5.50
F	Flared To Meet Good Electrical Contact	
G	6.40	6.60
H	5.60	

Dimension	Millimeters	
	Minimum	Maximum
A	--	3.80
B	M9*0.5	
C	0.25	--
D	9.70	--
F	0.90	1.10
G	6.60	6.69
H	8.10	8.25
K	6.70	--
M	7.00	7.50

PLUG

JACK

NOTE
In order to meet the VSWR and CR values as specified, the inner hole diameter needs to be mated with a 0.97/1.03mm dia. pin.

Electrical		
Impedance		75 Ω
Frequency Range		0 - 1 GHz
Working Voltage		335 V rms max.
Dielectric Withstanding Voltage		1000 V rms min.
VSWR	Straight	1.3 max.
	Right Angle	1.5 max.
Contact Resistance	Center Contact	4 mΩ max.
	Outer Contact	2 mΩ max.
Insulator Resistance		1000 MΩ min.

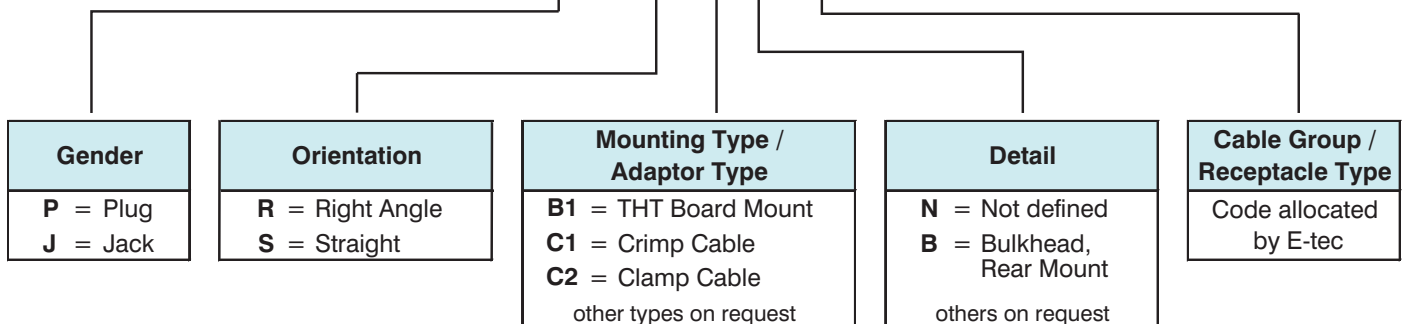
Material		
Parts Name	Material	Finish
Body, Metal Parts	Brass per QQ-B-626	Nickel 1.75μm (70 μ")
Outer Contact(Plug)	Phosphor Bronze per QQ-B-750	Gold 0.07μm (3 μ")
Center Contacts	Male: Brass per QQ-B-626	Gold 0.07μm (3 μ")
	Female: Beryllium copper per QQ-C-530	Gold 0.07μm (3 μ")
Insulators	Teflon	None
Crimp Ferrules	Annealed Brass	Nickel 1.75μm (70 μ")

NOTE: Other materials and platings are available on request.

Mechanical	
Engagement / Disengagement Force	27 N max.
Durability(Mating)	500 cycles min. (for Beryllium copper female contact only)

How to order

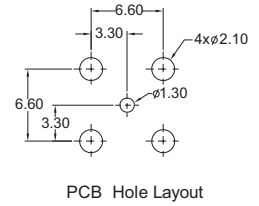
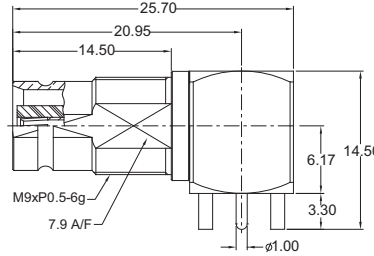
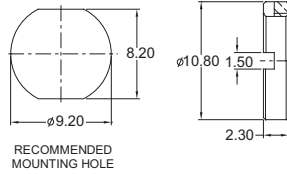
RF X - 16 X - XX X 7 xx - N5



RF Connectors 1.6/5.6 Series

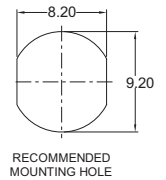
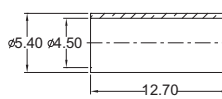
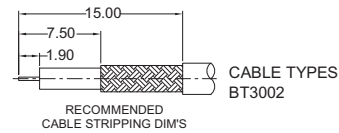
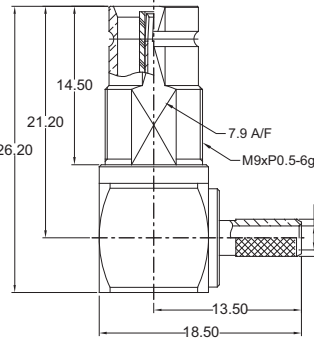
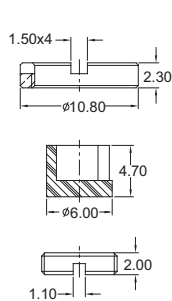


R/A THT JACK



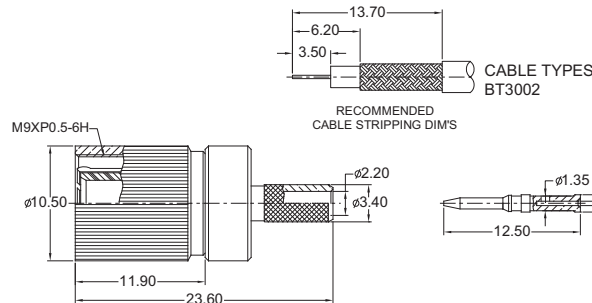
Order Code
RFJ-16R-B1B792-N5

R/A CRIMP JACK



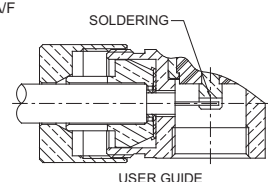
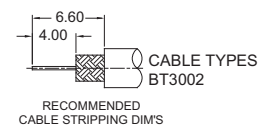
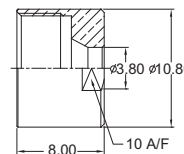
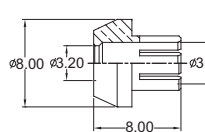
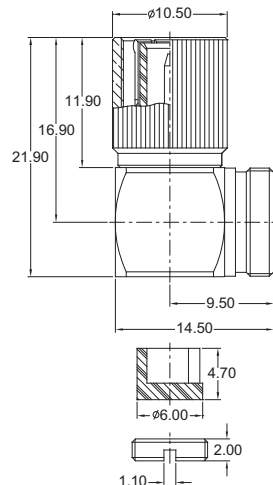
Order Code
RFJ-16R-C1B733-N5

CRIMP PLUG



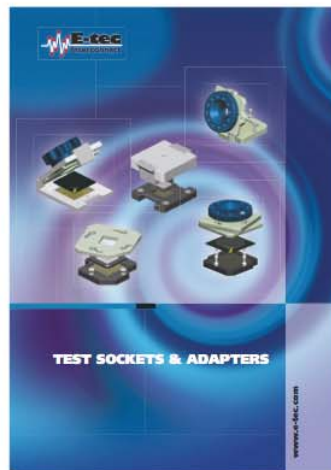
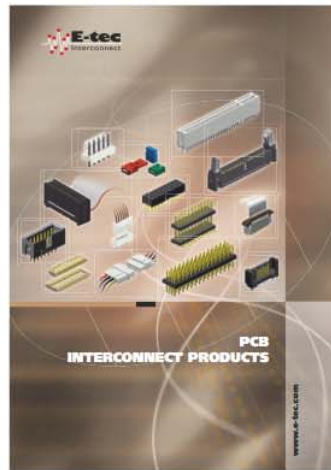
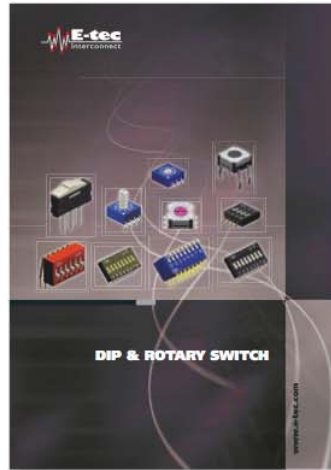
Order Code
RFP-16S-C1N733-N5

R/A CLAMP PLUG



Order Code
RFP-16R-C2N733-N5

Other 1.6/5.6 types available on request



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