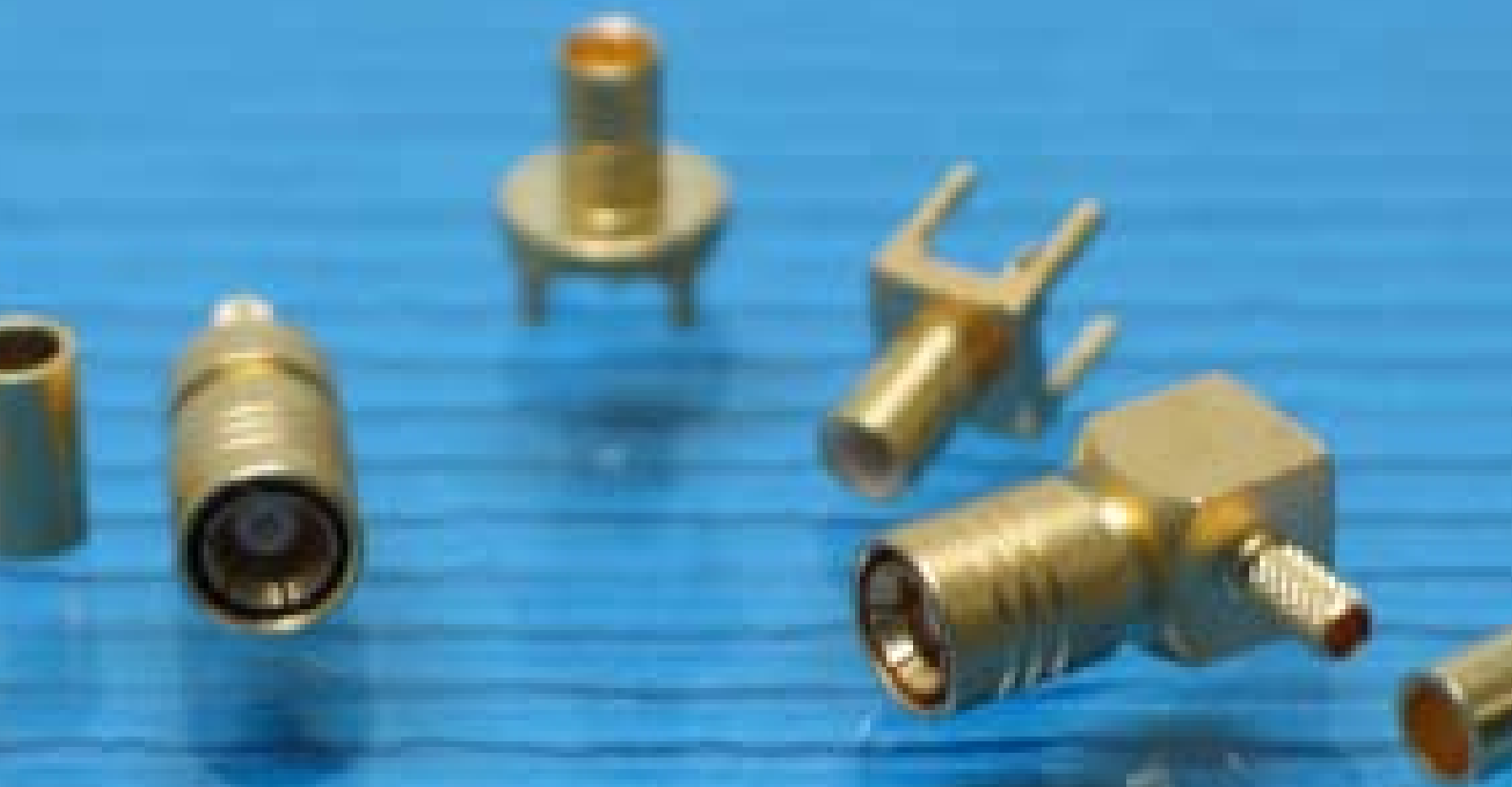


# SMB



 **ALFA'R CONNECTORS**

## LISTA DE CÓDIGOS

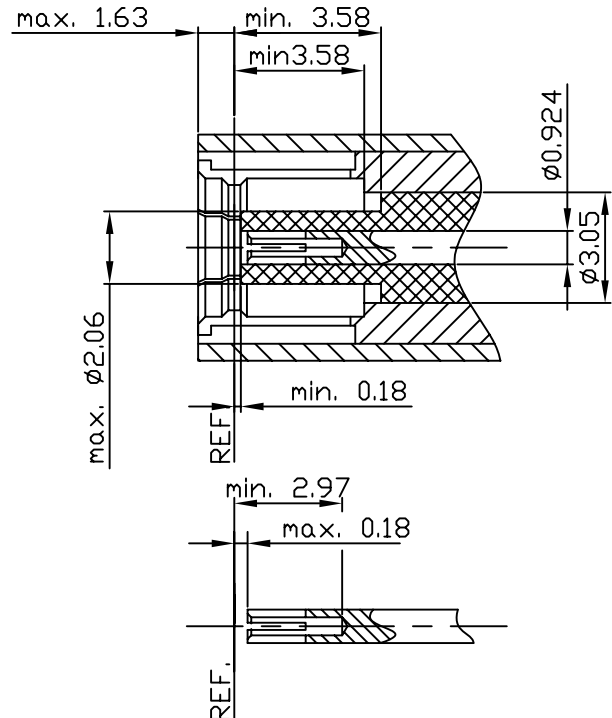
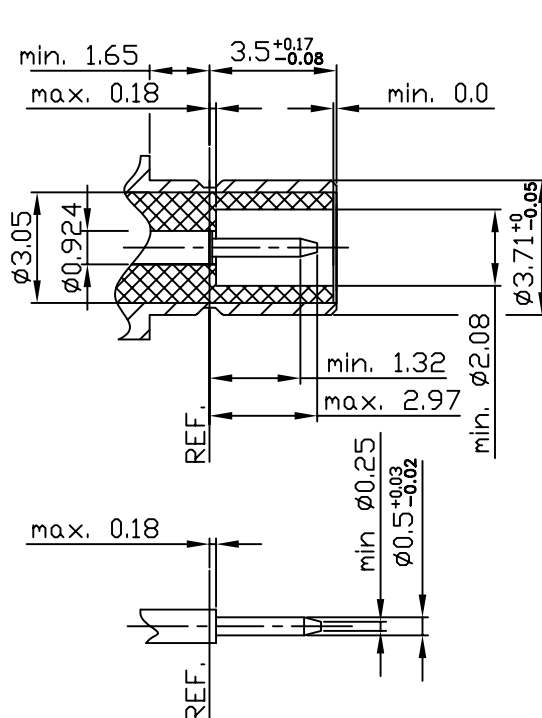
*CODE LIST*

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-10C50-50	8
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-13CI-50	12
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-15TF-50	11
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-20C31-50	9
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-20S22X-50	7
-21C18-50	9
-21C25A-50	9
-21C26-50	9
-21C27-50	9
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- macho 0.5W	<i>plug 0.5W</i>	15
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**DIMENSIONES INTERCONEXIÓN  
IEC 169-10**

**INTERFACE DIMENSIONS  
IEC 169-10**



Las series SMB y SMC (SubMiniatura B, C) corresponden a conectores miniatura. Basados en un mismo diseño interno. La única diferencia, existente entre ambas series, es el mecanismo de acoplamiento macho-hembra. Lo que proporcionará diferentes características mecánicas y eléctricas.

En la serie SMB, el acoplamiento macho-hembra se realiza mediante sistema rápido “snap-on”. Se utiliza, principalmente, en conexiones en el interior de equipos de alta frecuencia, donde existe una alta densidad de conexiones y donde el mecanismo de acoplamiento facilita la interconexión. Los conectores SMB son adecuados para aplicaciones de hasta 4 GHz.

Existen conectores para cables standard o especiales (flexibles, semirígidos, rígidos,...). Distintas versiones de forma: recto, acodado, montaje SMD.... Y en cuanto al montaje del cable, disponemos de versiones soldadas, prensa estopa, crimp,....

normativa: IEC 169-10

*SMB and SMC series (SubMiniatura B, C) are miniature connectors. They are manufactured using the same internal design. There is only a difference between both series: its male-female coupling mechanism. With this mechanism, different mechanical and electrical features are obtained.*

*In SMB series, the male-female coupling mechanism is made by means of snap-on system. It is used for cable interconnections in high frequency equipments, when it exists a high density of interconnections exist. And where the snap-on coupling makes easier the interconnection. SMB connectors are suitable for applications up to 4 GHz.*

*There are connectors for standard and special cables (flexible, semirigid, rigid,...). Different shaped versions: straight, 90° angle, SMD mounting....About cable assembly, several types are available: soldered, clamp, crimp,.....*

*standard: IEC 169-10*

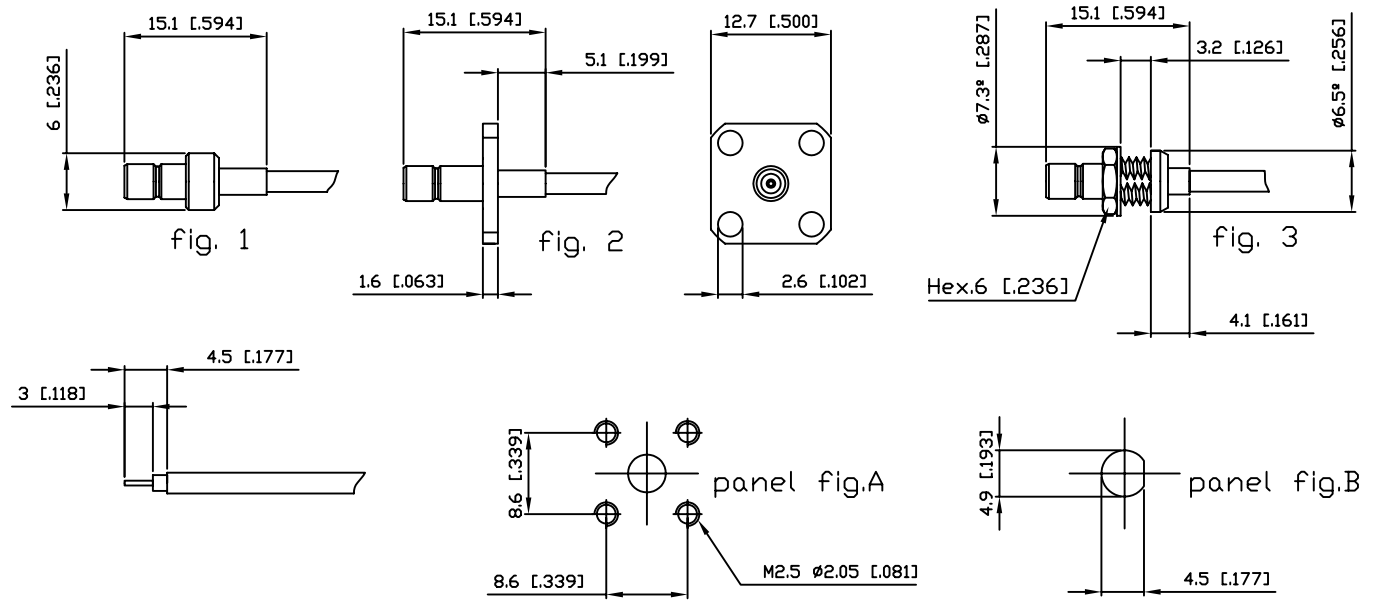
características eléctricas / <i>electrical characteristics</i>	
impedancia característica / <i>characteristic impedance</i>	50 Ω
margen de frecuencia utilizable (recomendado) / <i>useful frequency range (recommended)</i>	0...4 GHz
VSWR (depende de la frecuencia, del cable utilizado para el test y del tipo de conector / <i>depends on frequency, cable used for testing and connector type</i> )	Conector recto / <i>straight connector</i> : < 1.10 (1 GHz) < 1.30 (4 GHz) Conector acodado / <i>Right angle connector</i> : < 1.12 (1 GHz) < 1.35 (4 GHz)
pérdida de inserción / <i>insertion loss</i>	<0.1 dB (1 GHz)
RF-leakage	>55 dB
resistencia del aislante / <i>insulator resistance</i>	> 1 GΩ
resistencia del contacto interior / <i>inner contact resistance</i>	< 5 mΩ
resistencia del contacto exterior / <i>outer contact resistance</i>	< 2 mΩ
voltaje de trabajo / <i>working voltage</i>	200 Vrms
voltaje de pico / <i>peak voltage</i>	800 Vrms

características mecánicas / <i>mechanical characteristics</i>	
durabilidad / <i>durability</i>	> 500 ciclos conexión / > 500 <i>matings</i>
presión de conexión-desconexión / <i>engagement-disengagement force</i>	8...50 N
material aislante / <i>insulator material</i>	PTFE
material contactos interiores / <i>inner contacts material</i>	macho / <i>male</i> : CuZn39Pb3 hembra / <i>female</i> : CuBe2
material cuerpos exteriores / <i>outer bodies material</i>	CuZn39Pb3
juntas estanqueidad / <i>gaskets</i>	silicona / <i>silicone</i>
acabados / <i>finish plating</i>	Au 1μ

características ambientales / <i>environmental characteristics</i>	
margen de temperatura / <i>temperature range</i>	-65°C...+165°C
categoría climática IEC / <i>IEC climatic category</i>	55/155/21
choque térmico / <i>thermal shock</i>	MIL-STD-202/107-B
resistencia a la humedad / <i>moisture resistance</i>	MIL-STD-202/106-B
resistencia a la corrosión / <i>corrosion resistance</i>	MIL-STD-202/101-B
resistencia a la vibración / <i>vibration resistance</i>	MIL-STD-202/204-B

## Conectores para cable semi-rígido

macho soldar



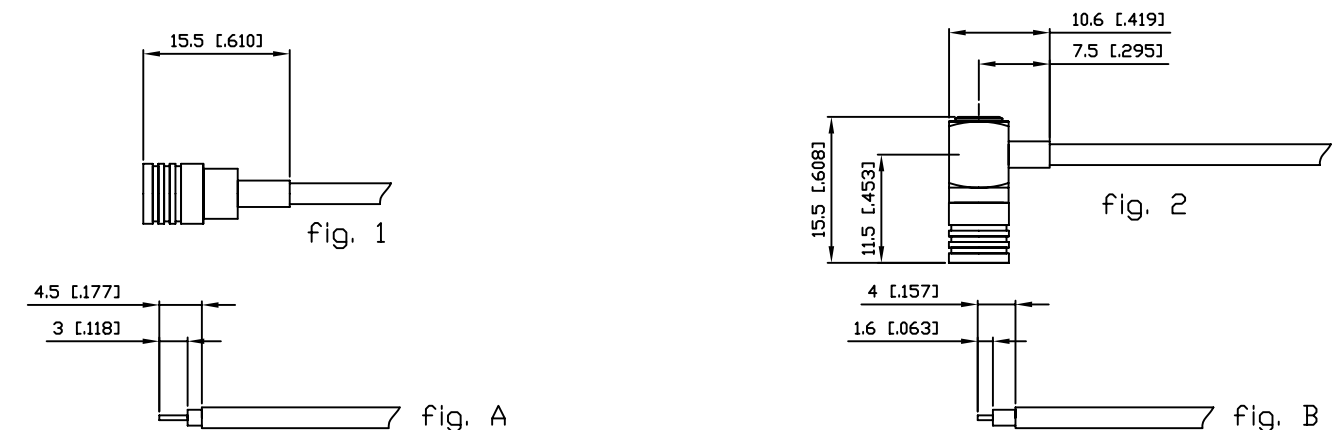
## Connectors for semi-rigid cable

solder type plug

CABLE CABLE	INSTRUC. INSTRUC.	ALFA'R CODE CODIGO ALFA'R	FIG. FIG.	NOTE NOTA
UT-86 (RG-405)	INS 3	A-SMB-10S22X-50	1	straight type plug macho recto
		A-SMB-12S22X-50	2	square flange pletina cuadrada
		A-SMB-16S22X-50	3	rear mounting montaje trasero

hembra soldar

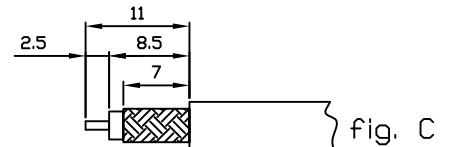
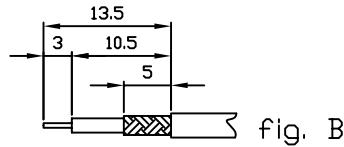
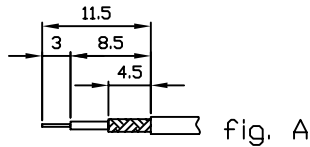
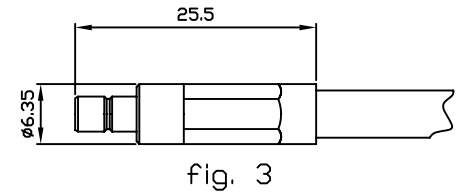
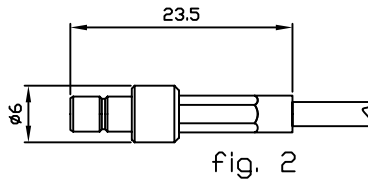
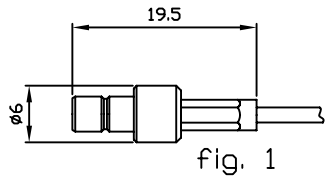
solder type jack



CABLE CABLE	INSTRUC. INSTRUC.	ALFA'R CODE CODIGO ALFA'R	FIG. FIG.	NOTE NOTA
UT-86 (RG-405)	INS 3	A-SMB-20S22X-50	1	straight type jack hembra recta
	INS 6	A-SMB-21S22X-50	2	90° type jack hembra 90°

**Conectores para cable flexible**  
macho recto crimp

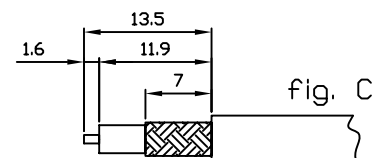
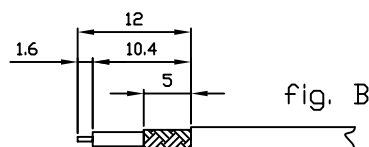
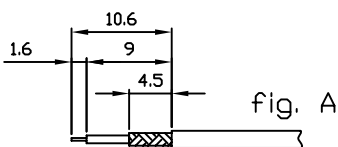
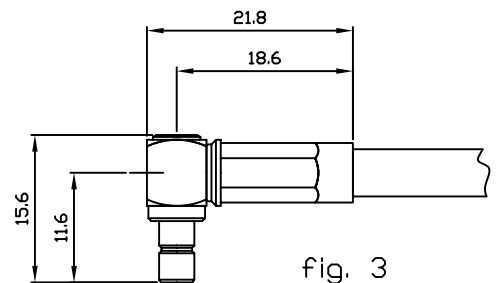
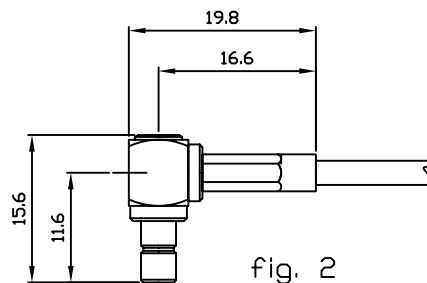
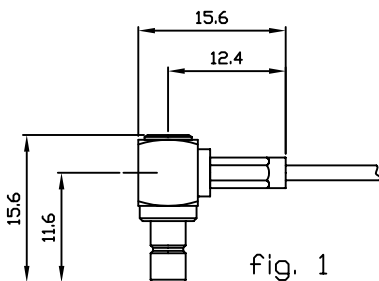
*Connectors for flexible cable*  
*straight crimp type plug*



CABLE CABLE	INSTRUC. INSTRUC.	ALFA'R CODE CÓDIGO ALFA'R	FIG. FIG.	CRIMPING TOOL HERRAMIENTA CRIMP
RG-178; RG-196	INS 8	A-SMB-10C18-50	1 A	A-EIN-C-1-C61
RG-316	INS 9	A-SMB-10C25A-50	2 B	A-EIN-C-1-641
RG-174; RG-188		A-SMB-10C26-50	3 C	A-EIN-C-1-931
RG-58; RG-141; RG-303		A-SMB-10C50-50		
FLEX-3	INS 9	A-SMB-10C35-50	3 C	A-EIN-C-1-931

macho 90° crimp

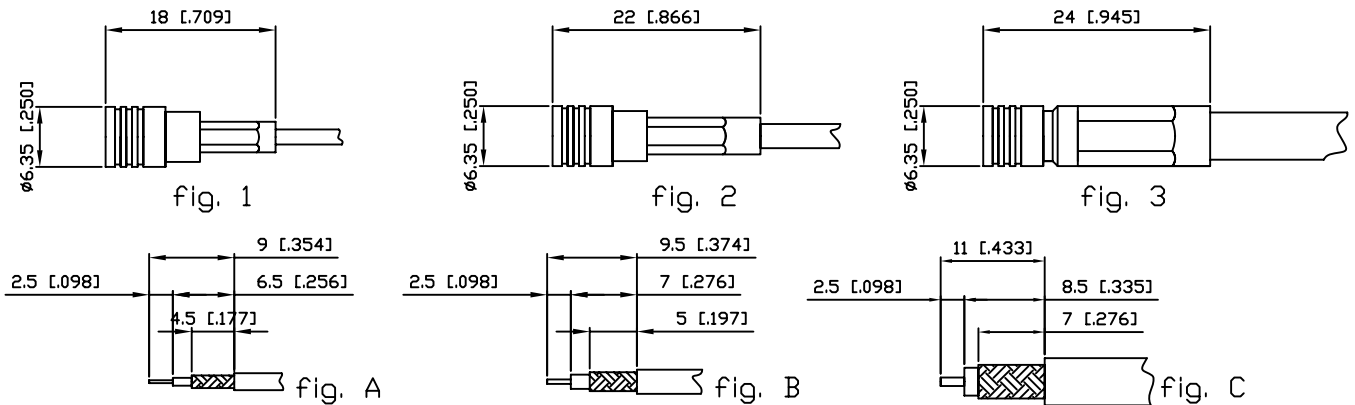
*90° crimp type plug*



CABLE CABLE	INSTRUC. INSTRUC.	ALFA'R CODE CÓDIGO ALFA'R	FIG. FIG.	CRIMPING TOOL HERRAMIENTA CRIMP
RG-178; RG-196	INS 11	A-SMB-11C18-50	1 A	A-EIN-C-1-C61
RG-316		A-SMB-11C25A-50	2 B	A-EIN-C-1-641
RG-174; RG-188		A-SMB-11C26-50	3 C	A-EIN-C-1-931
RG-58; RG-141; RG-303		A-SMB-11C50-50		

hembra recta crimp

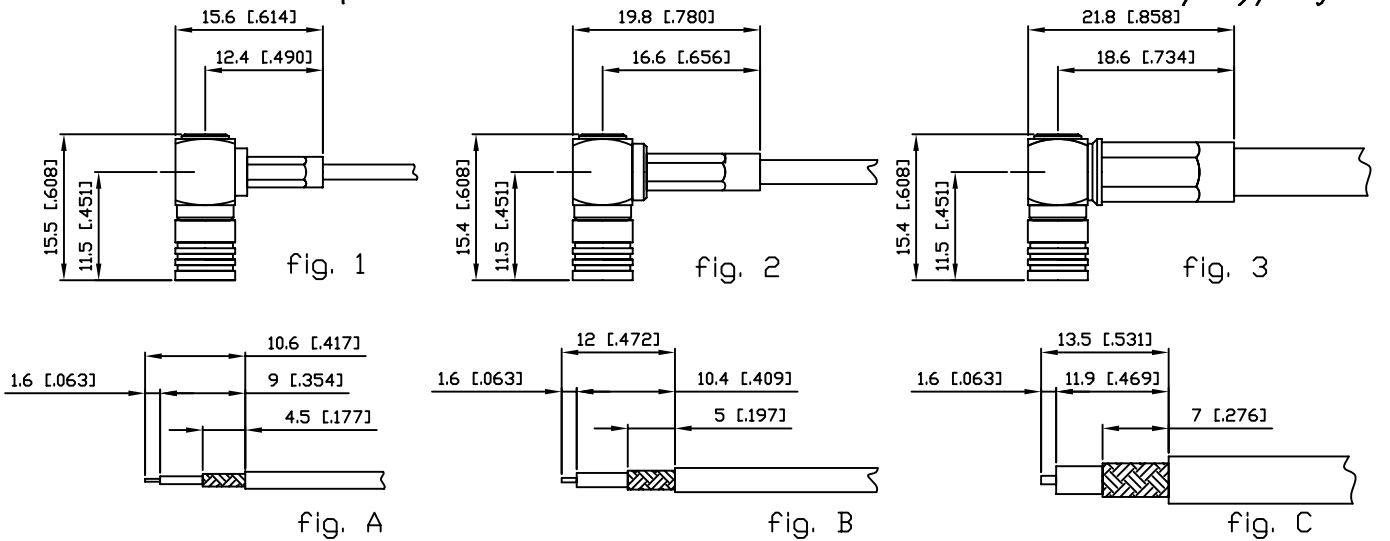
straight crimp type jack



CABLE	INSTRUC.	ALFA'R CODE	FIG.	CRIMPING TOOL
CABLE	INSTRUC.	CÓDIGO ALFA'R	FIG.	HERRAMIENTA CRIMP
RG-178; RG-196	INS 8	A-SMB-20C18-50	1 A	A-EIN-C-1-C61
RG-316	INS 9	A-SMB-20C25A-50	2 B	A-EIN-C-1-641
RG-174; RG-188		A-SMB-20C26-50	3 C	A-EIN-C-1-931
RG-58; RG-141; RG-303		A-SMB-20C50-50		
ST-212	INS 9	A-SMB-20C31-50	3 C	A-EIN-C-1-931

hembra 90° crimp

90° crimp type jack

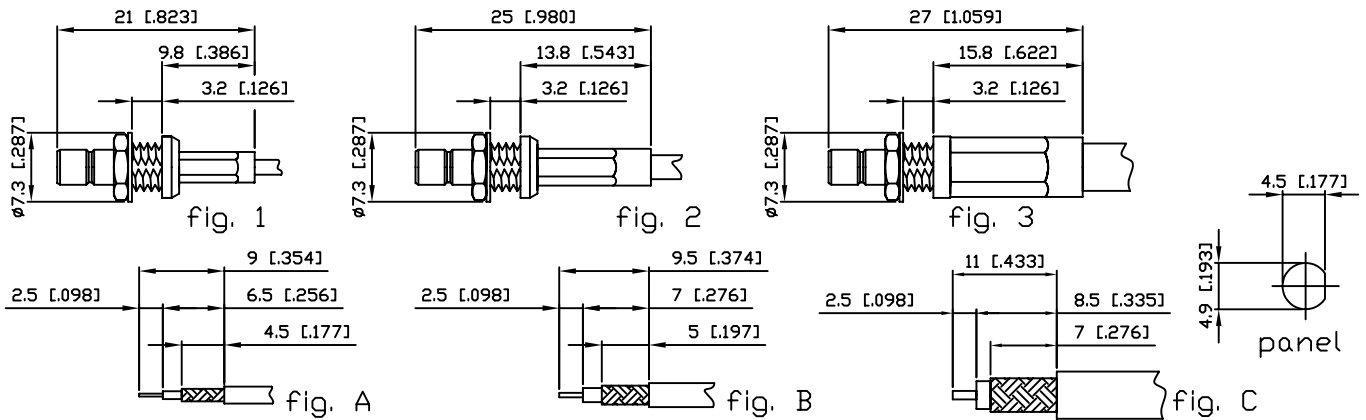


CABLE	INSTRUC.	ALFA'R CODE	FIG.	CRIMPING TOOL
CABLE	INSTRUC.	CÓDIGO ALFA'R	FIG.	HERRAMIENTA CRIMP
RG-178; RG-196	INS 11	A-SMB-21C18-50	1 A	A-EIN-C-1-C61
RG-316		A-SMB-21C25A-50	2 B	A-EIN-C-1-641
RG-174; RG-188		A-SMB-21C26-50	3 C	A-EIN-C-1-931
RG-58; RG-141; RG-303		A-SMB-21C50-50		
FLEX-2	INS 11	A-SMB-21C27-50	2 B	A-EIN-C-1-641
FLEX-3		A-SMB-21C35-50	3 C	A-EIN-C-1-931



macho recto panel crimp  
(montaje trasero)

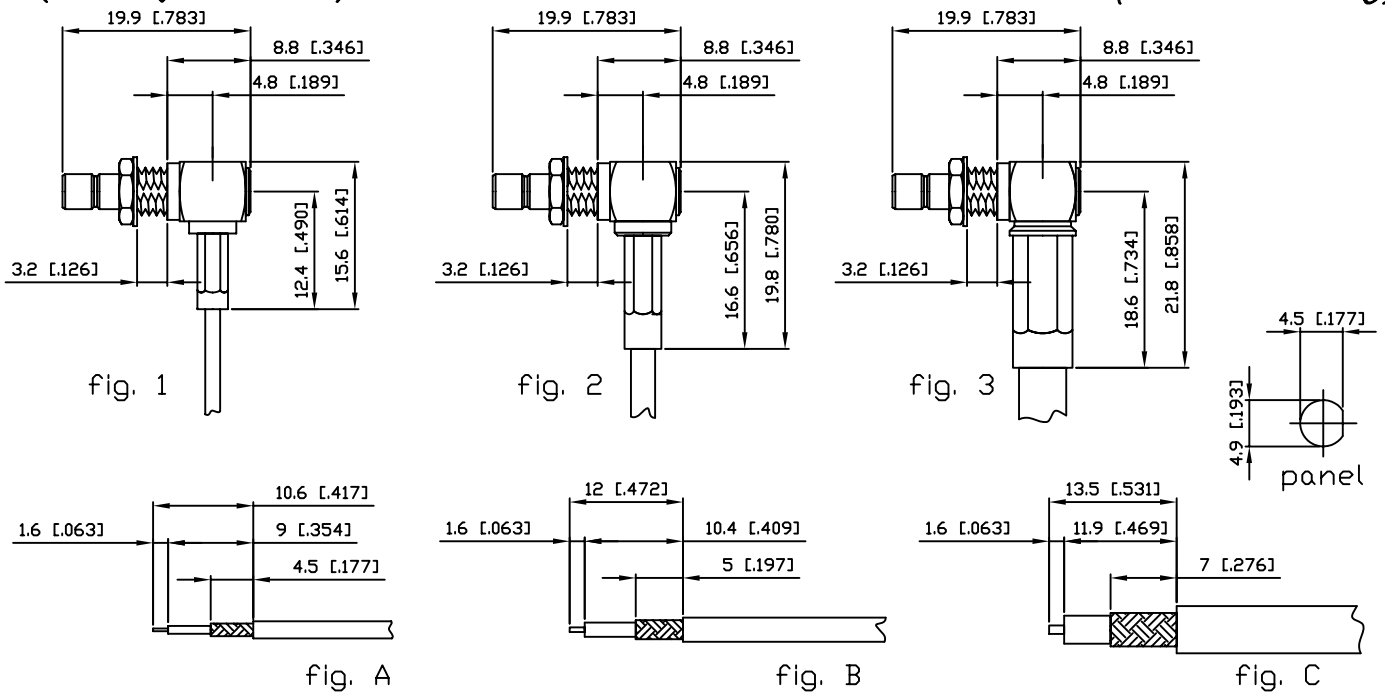
straight crimp type plug receptacle  
(rear mounting)



CABLE	INSTRUC.	ALFA`R CODE	FIG.	CRIMPING TOOL
CABLE	INSTRUC.	CÓDIGO ALFA`R	FIG.	HERRAMIENTA CRIMP
RG-178; RG-196	INS 8	A-SMB-16C18-50	1 A	A-EIN-C-1-C61
RG-316	INS 9	A-SMB-16C25A-50	2 B	A-EIN-C-1-641
RG-174; RG-188		A-SMB-16C26-50		
RG-58; RG-141; RG-303		A-SMB-16C50-50	3 C	A-EIN-C-1-931

macho 90° panel crimp  
(montaje trasero)

90° crimp type plug receptacle  
(rear mounting)



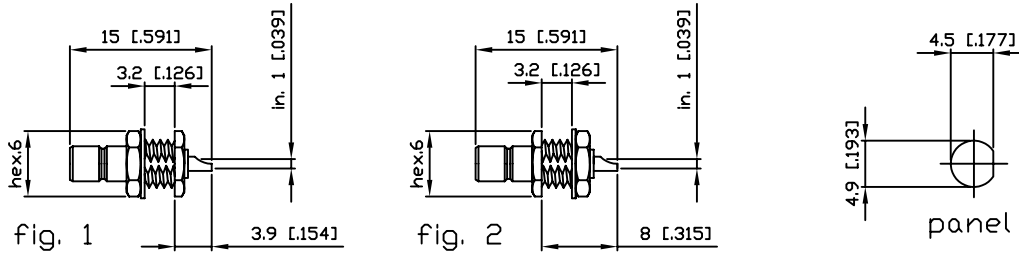
CABLE	INSTRUC.	ALFA`R CODE	FIG.	CRIMPING TOOL
CABLE	INSTRUC.	CÓDIGO ALFA`R	FIG.	HERRAMIENTA CRIMP
RG-178; RG-196	INS 11	A-SMB-18C18-50	1 A	A-EIN-C-1-C61
RG-316		A-SMB-18C25A-50		
RG-174; RG-188		A-SMB-18C26-50	2 B	A-EIN-C-1-641
RG-58; RG-141; RG-303		A-SMB-18C50-50		

Conectores panel con contacto central soldable

Receptacle connectors with solder inner contact

macho recto panel

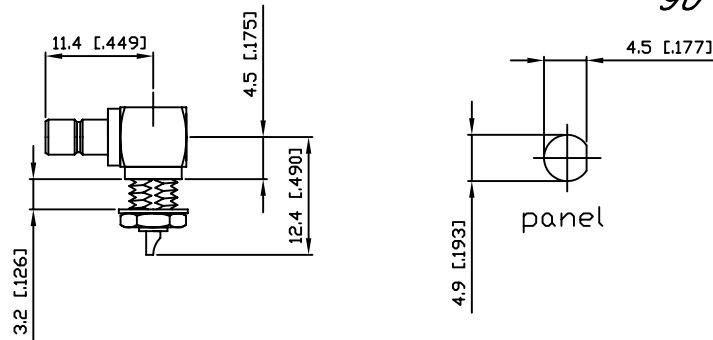
straight plug receptacle



NOTE NOTA	ALFA'R CODE CÓDIGO ALFA'R	FIG. FIG.	SOLDER TAG TERMINAL MASA
rear mounting montaje trasero	A-SMB-16TF-50	1	
front mounting montaje frontal	A-SMB-15TF-50	2	A-ACC-TM-050

macho 90° panel

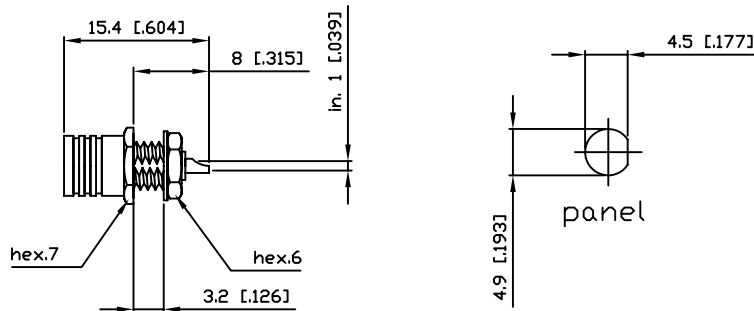
90° plug receptacle



	ALFA'R CODE CÓDIGO ALFA'R	SOLDER TAG TERMINAL MASA
	A-SMB-14TF-50	A-ACC-TM-050

hembra recta panel

straight bulkhead jack receptacle



NOTE NOTA	ALFA'R CODE CÓDIGO ALFA'R	SOLDER TAG TERMINAL MASA
front mounting montaje frontal	A-SMB-25TF-50	A-ACC-TM-050

Conectores para montar  
en circuito impreso

macho base

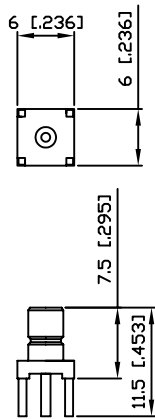


fig. 1

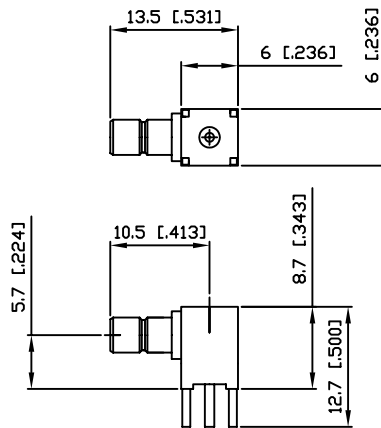


fig. 2

Connectors for printed  
circuit board mounting

plug receptacle

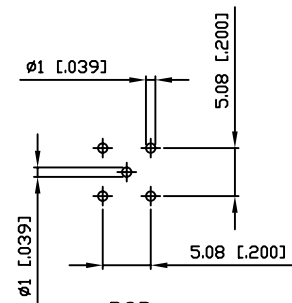


fig. A

NOTE NOTA	ALFA`R CODE CÓDIGO ALFA`R	FIG. FIG.	
straight plug macho recto	A-SMB-12CI-50	1	A
right angle plug (90°) macho en ángulo recto (90°)	A-SMB-13CI-50	2	

hembra base

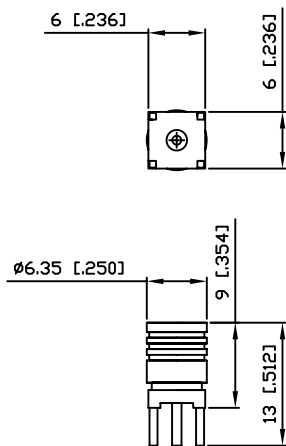


fig. 1

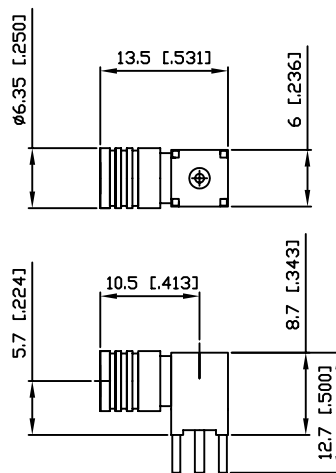


fig. 2

jack receptacle

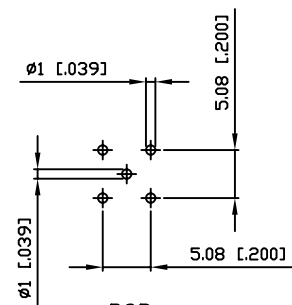


fig. A

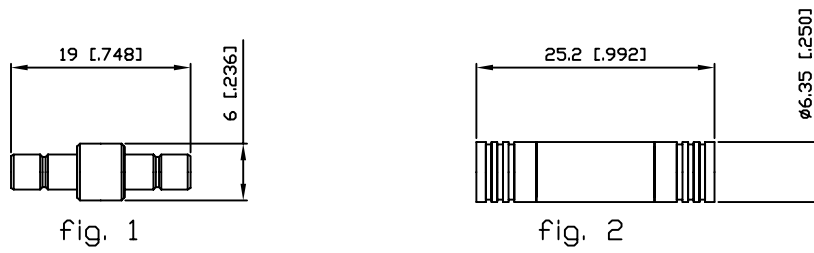
NOTE NOTA	ALFA`R CODE CÓDIGO ALFA`R	FIG. FIG.	
straight jack hembra recto	A-SMB-22CI-50	1	A
right angle jack (90°) hembra en ángulo recto (90°)	A-SMB-23CI-50	2	

## Adaptadores

## Adapters

### prolongación

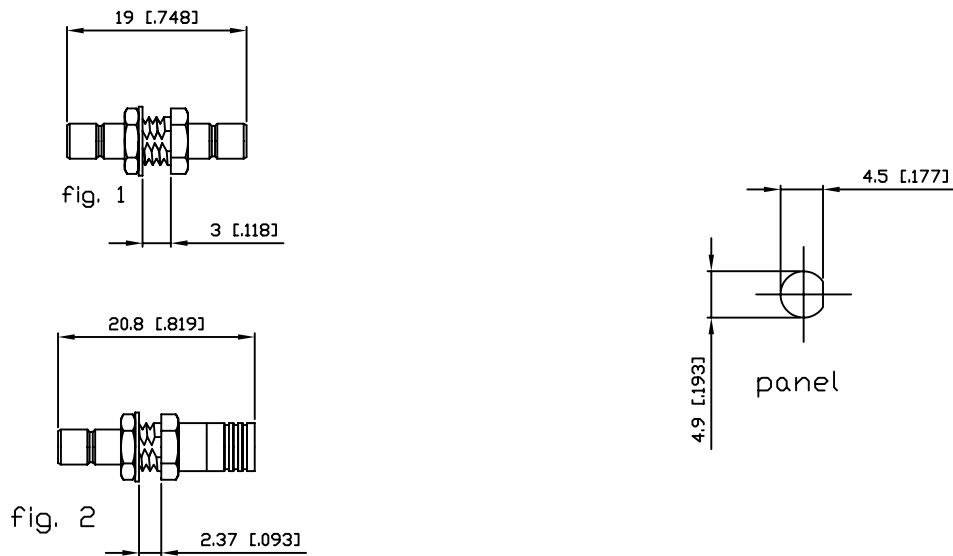
### prolongation



NOTE NOTA	ALFA'R CODE CÓDIGO ALFA'R	FIG. FIG.	
plug-plug macho-macho	A-SMB-03-50	1	
jack-jack hembra-hembra	A-SMB-00-50	2	

### pasamuros

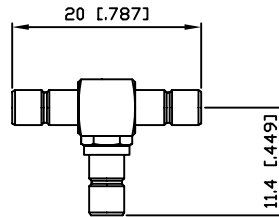
### bulkhead



NOTE NOTA	ALFA'R CODE CÓDIGO ALFA'R	FIG. FIG.	
plug-plug macho-macho	A-SMB-05-50	1	
plug-jack macho-hembra	A-SMB-09-50	2	

adaptador en T

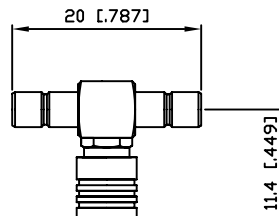
*T adapter*



<i>NOTE</i> NOTA	<i>ALFA`R CODE</i> CÓDIGO ALFA`R	
<i>plug-plug-plug</i> macho-macho-macho	A-SMB-45-50	

adaptador en T

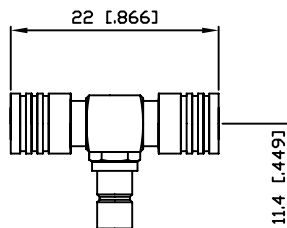
*T adapter*



<i>NOTE</i> NOTA	<i>ALFA`R CODE</i> CÓDIGO ALFA`R	
<i>plug-jack-plug</i> macho-hembra-macho	A-SMB-42-50	

adaptador en T

*T adapter*



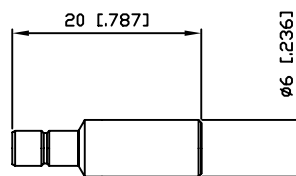
<i>NOTE</i> NOTA	<i>ALFA`R CODE</i> CÓDIGO ALFA`R	
<i>jack-plug-jack</i> hembra-macho-hembra	A-SMB-40-50	

## Terminaciones

## Terminations

macho

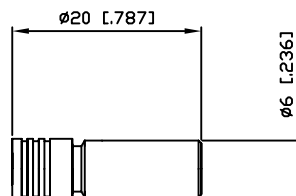
*plug*



NOTE NOTA	IMPEDANCE IMPEDANCIA	POWER POTENCIA	ALFA`R CODE CÓDIGO ALFA`R	VSWR	
				300MHz	1000MHz
<i>plug</i> macho	50 Ω ±1Ω	0.5 Watt	A-SMB-54-50	≤1.05	≤1.1

hembra

*jack*



NOTE NOTA	IMPEDANCE IMPEDANCIA	POWER POTENCIA	ALFA`R CODE CÓDIGO ALFA`R	VSWR	
				300MHz	1000MHz
<i>jack</i> hembra	50 Ω ±1Ω	0.5 Watt	A-SMB-55-50	≤1.05	≤1.1