

CABLE DRAWING: MWA-3032

DRAWING TITLE:  
**SBC RF-Clock Cable**

DRAWING NO.: <b>MWACAB-0032</b>	DRAWN BY: <b>DRC</b>	DATE: 3-Nov-10	REV: <b>A</b>
		SHEET: 1 of 4	

**Cable Detail:**

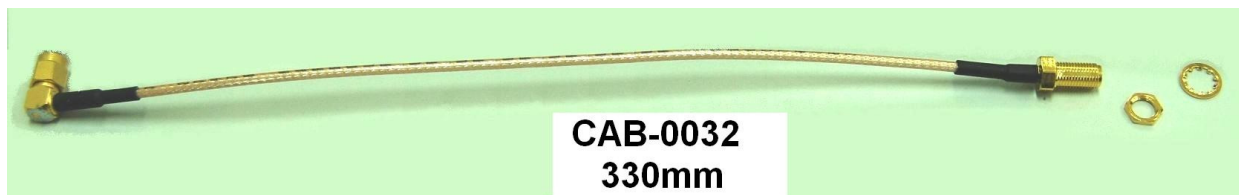
Connectors:	Description	Parts (Qty)
ASC-PCB	R125-172-000 R/A SMA Male Crimp for RG174/RG316/RG188	See Note1 Below(1)
ASC_OUT	AMPHENOL RF - 901-9875 SMA Bulkhead Jack	See Note2 Below(1)
<b>Conductors:</b>		
Cable	RG 316 Single Screen Cable DC-3GHz, 1.5dB/m@3GHz, Mil-C-17/113-RG316	See Note3 Below(35cm)
<b>Misc:</b>		
Numbering	Attach Cable Numbers 3 & 2 (Supplier to specify)	See Note4 Below

Overall Length 330+/-5mm

**Notes:**

1. The SMA R/A Plug connector can be supplied from Rojone #R125-172-000 or PSI stock (CON-0171). Any equivalent will be OK refer to data sheets supplied with this drawing.
2. The SMA Bulkhead Jack connector can be supplied from Element14 #170-4359. Any equivalent will be OK refer to data sheets supplied with this drawing.
3. The cable can be supplied from Rojone #CC-M17\_113\_RG316 or PSI stock (CAB-0182) Any equivalent will be OK refer to data sheets supplied with this drawing
4. Cable numbering parts are left to the cable manufacture to decide, only the last two digits are required, for example "MWACAB-0032" is designated as "32" on the cable.

**Typical Photo:**



**REVISION**

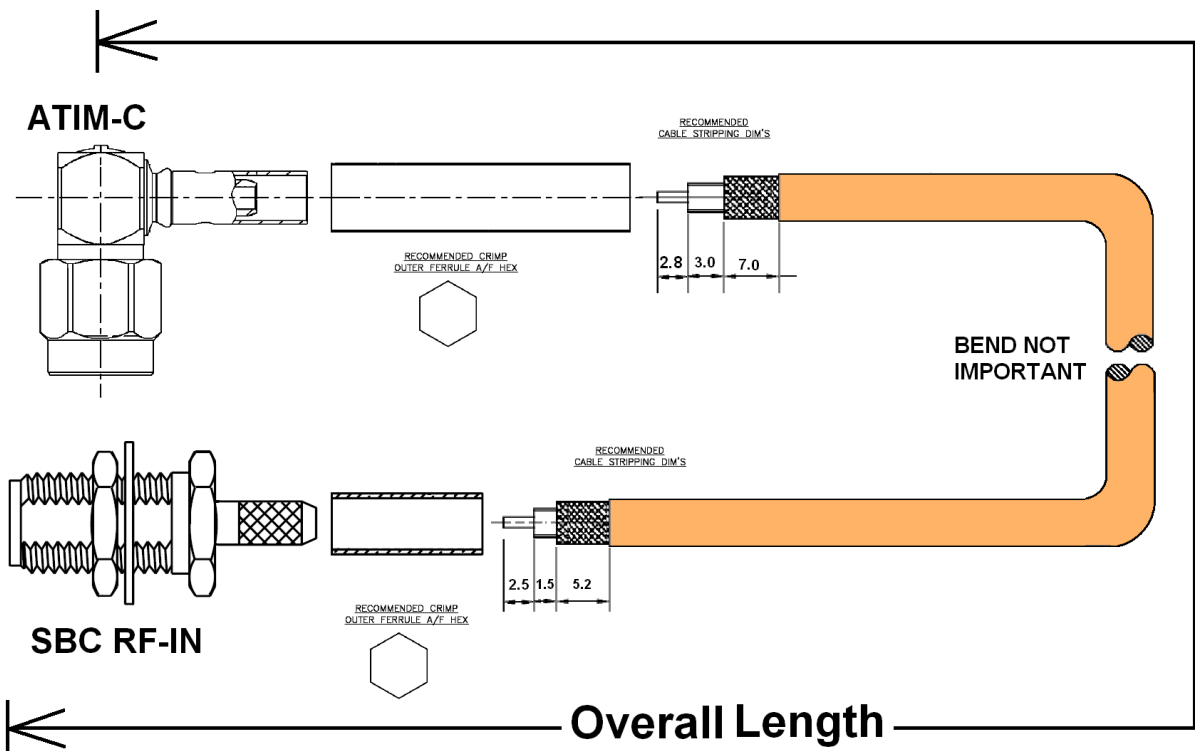
Date	Rev	Remarks
18/12/09	A	Draft
22/07/10	A	For Release
03/11/10	A	Salem Version – Farnell to Element14

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DRAWING TITLE:  
**SBC RF-Clock Cable**

DRAWING NO.: MWACAB-0032	DRAWN BY: DRC	DATE: 3-Nov-10	REV: A
		SHEET: 2 of 4	

**Typical Drawing:**



**Connection Detail:**

From: (ATIM-C-PCB) Attached to the ATIM-C PCB SMA Connectors  
 To: (SBC RF-IN) ATIM-C SMA Connector Inputs

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MWACAB-0032

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REV:

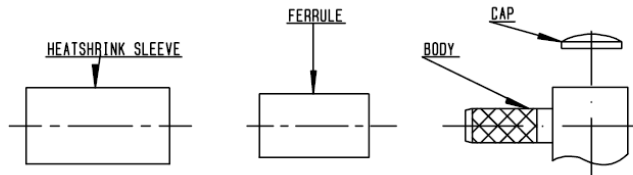
SHEET: 3 of 4

**A**

**Assembly Details:**

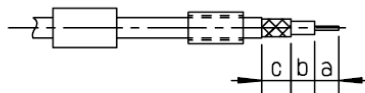
**ATIM-Control-PCB End**

**M 11**



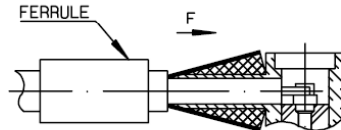
P/N	Stripping length			Hex. dim H	Crimp tools	
	a	b	c		Dies included	MIL standard R282 293 000 (M22520/5-01)+DIES
<b>R125 172 000</b>	2.8	3	7	3.25	R282 211 000	R282 235 003 (M22520/5-03)

**1**



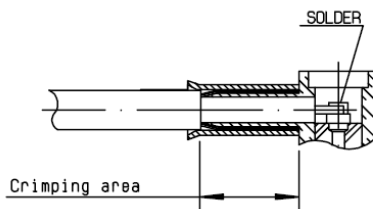
- 1.1 Slide onto the cable the ferrule and the heatshrink sleeve .
- 1.2 Strip the cable .

**2**



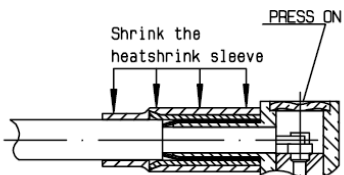
- 2.1 Fan the braid .
- 2.2 Push connector body under the braid
- 2.3 Slide the ferrule on the braid ( in direction F )

**3**



- 3.1 Crimp the ferrule.
- 3.2 Solder inner conductor .

**4**



- 4.1 Place the cap .
- 4.2 Press cap flush or slightly below surface of body assembly . Slide sleeve over ferrule and heatshrink in place.

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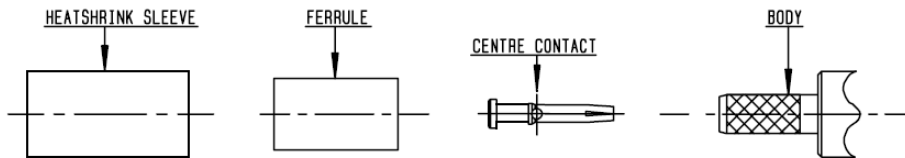
DATE: 3-Nov-10

REV:

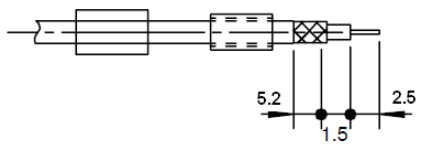
SHEET: 4 of 4

**A**

**SBC RF-IN End**

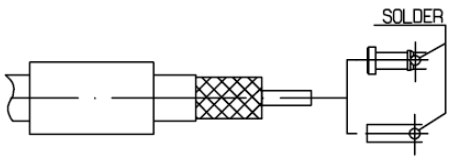


**1**



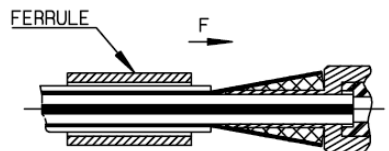
- 1.1 Slide onto the cable the ferrule and the heatshrink sleeve .
- 1.2 Strip the cable .

**2**



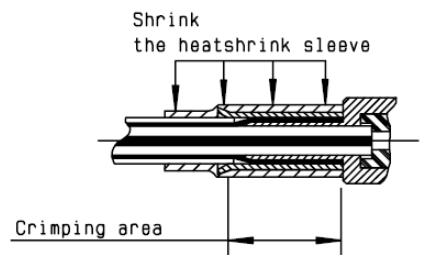
- 2.1 Slide on centre contact until it bottoms against cable dielectrique
- 2.2 Crimp or solder center contact
- 2.3 Clean soldering area .

**3**



- 3.1 Fan the braid .
- 3.2 Slide the cable into the body until it bottoms against insulator .
- 3.2 Slide the ferrule over the braid . (In direction F)

**4**



- 4.1 Crimp the ferrule.
- 4.2 Cut the excess of braid .
- 4.3 Slide sleeve over ferrule and heatshrink in place .

**REVISION**

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# SMA Brass Angle Plugs & Bulkhead Jacks

**Fig. 1**

SMA Angle Plug, Crimp  
**901-9872▲**  
 Gold Plated for RG-174, 188, 316  
**901-9873▲**  
 Gold Plated for RG-58  
**901-9874▲**  
 Gold Plated for RG-141, 223  
**901-9880-RFX▲**  
 Nickel Plated for RG-58  
**901-9881-RFX▲**  
 Nickel Plated for RG-174, 188, 316  
**901-10028-RFX**  
 Gold Plated for RD-174, 188, 316  
**901-10029-RFX**  
 Nickel Plated for RD-174, 188, 316

**Fig. 2**

SMA Low Profile Angle Plug, Crimp  
**901-9902**  
 Nickel Plated for RG-141, 223

**Fig. 3**

SMA Bulkhead Jack, Crimp  
**901-9875▲**  
 Gold Plated for RG-174, 188, 316  
**901-9879-RFX▲**  
 Nickel Plated for RG-174, 188, 316

**Fig. 4**

SMA Bulkhead Jack with O-Ring  
**901-10013-RFX**  
 RG-174, 188, 316

## SMA BRASS ANGLE PLUGS

Cable RG-/U	Connector Description	Cable Attachment		c Dia In. (mm)	CAI	Ins.	Notes	Amphenol Number	Fig.
		Outer	Inner						
58	Angle Plug	Crimp	Solder	.210(5.3)	C53	D1	Gold Plated Body	▲ <a href="#">901-9873</a>	1
	Angle Plug	Crimp	Solder	.210(5.3)	C53	D1	Nickel Plated Body	▲ <a href="#">901-9880-RFX</a>	1
174, 188, 316	Angle Plug	Crimp	Solder	.128(3.3)	C57	D1	Nickel Plated Body	▲ <a href="#">901-9881-RFX</a>	1
	Angle Plug	Crimp	Solder	.128(3.3)	C57	D1	Gold Plated Body	▲ <a href="#">901-9872</a>	1
	Angle Plug	Crimp	Solder	.128(3.3)	C57	D1	Gold Plated Body	<a href="#">901-10028-RFX</a>	1
	Angle Plug	Crimp	Solder	.128(3.3)	C57	D1	Nickel Plated Body	<a href="#">901-10029-RFX</a>	1
	Angle Plug	Crimp	Solder	.128(3.3)	C57	D1	Nickel Plated Body	<a href="#">901-10029-RFX</a>	1
141, 223	Angle Plug	Crimp	Solder	.220(5.6)	C53	D1	Gold Plated Body	▲ <a href="#">901-9874</a>	1
141, 223	Low Profile Angle Plug	Crimp	Solder	.220(5.6)	C53	D1	Plated Body	<a href="#">901-9902</a>	2

## SMA BRASS BULKHEAD JACKS

Cable RG-/U	Connector Description	Cable Attachment		c Dia. In. (mm)	CAI	Ins.	Notes	Amphenol Number	Fig.
		Outer	Inner						
174, 188, 316	Bulkhead Jack	Crimp	Solder	.128(3.3)	C53	D1	Gold Plated Body	▲ <a href="#">901-9875</a>	3
	Bulkhead Jack	Crimp	Solder	.128(3.3)	C53	D1	Nickel Plated Body	▲ <a href="#">901-9879-RFX</a>	3
	Bulkhead Jack	Crimp	Solder	.128(3.3)	C53	D1	Nickel Plated Body	<a href="#">901-10013-RFX</a>	4

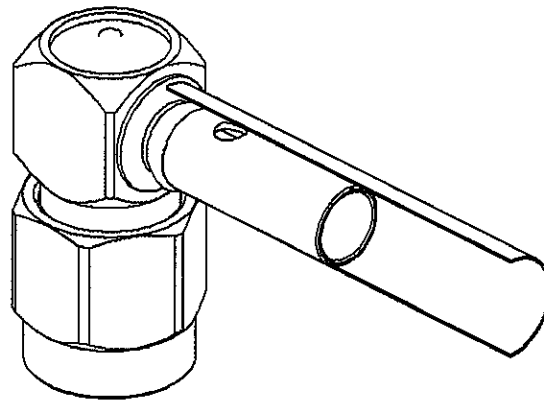
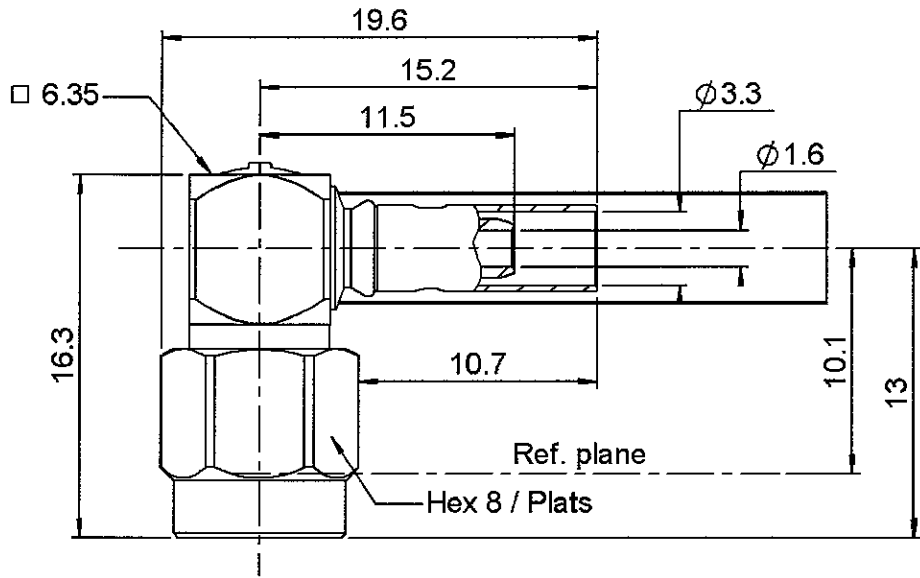
▲ distributor stocked

**RIGHT ANGLE PLUG CRIMP OR SOLDER TYPE**

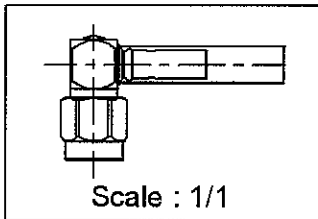
**R125.172.000**

**CABLE 2.6/50 S**

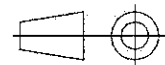
Series : SMA



CECC 22111-810-01



All dimensions are in mm.



COMPONENTS	MATERIALS	PLATINGS (µm)
BODY	STAINLESS STEEL	GOLD 0.5 OVER NICKEL 2
CENTER CONTACT	BRASS	GOLD 1.3 OVER NICKEL 2
OUTER CONTACT	-	-
INSULATOR	PTFE	-
GASKET	FLUORE SILICONE	-
OTHERS PARTS	STAINLESS STEEL	GOLD 0.5 OVER NICKEL 2
-	-	-
-	-	-

Issue : 0539 G

In the effort to improve our products, we reserve the right to make changes judged to be necessary.



**RIGHT ANGLE PLUG CRIMP OR SOLDER TYPE**

**R125.172.000**

**CABLE 2.6/50 S**

Series : SMA

**PACKAGING**

Standard	Unit	Other
100	'W' option	Contact us

**SPECIFICATION**

**ELECTRICAL CHARACTERISTICS**

Impedance		<b>50</b> Ω
Frequency		<b>0-12.4</b> GHz
VSWR	<b>1.15 +</b>	<b>0.03</b> x F(GHz) Maxi
Insertion loss		<b>0.15</b> √F(GHz) dB Maxi
RF leakage	<b>- (</b>	<b>60</b> - F(GHz)) dB Maxi
Voltage rating		<b>250</b> Veff Maxi
Dielectric withstanding voltage		<b>750</b> Veff mini
Insulation resistance		<b>5000</b> MΩ mini

**CABLE ASSEMBLY**

Stripping	a	b	c	d	e	f
mm	2.8	7	12.8	0	10	0

Assembly instruction : **Crimp 05**

Recommended cable(s)  
 KX 3B  
 RG 188  
 RG 316  
 KX 22A  
 RG 174 FTX  
 RG 174  
 ECO 316

Characteristics indicated on this data sheet are those that can be achieved with the highest performance cable. Intrinsic limitations of the cable may diminish the performance of the assembly

Cable retention  
 - pull off **90** N mini  
 - torque **NA** N.cm

**MECHANICAL CHARACTERISTICS**

Center contact retention		
Axial force – Mating end	<b>27</b>	N mini
Axial force – Opposite end	<b>27</b>	N mini
Torque	<b>2.8</b>	N.cm mini

Recommended torque		
Mating	<b>100</b>	N.cm
Panel nut	<b>NA</b>	N.cm
Clamp nut	<b>NA</b>	N.cm
A/F clamp nut	<b>0</b>	mm

Mating life	<b>500</b>	Cycles mini
Weight	<b>4.3</b>	g

**TOOLING**

Part Number	Description	Hexagon
R282.211.000	CRIMPING TOOL	3.25
R282.235.003	CRIMPING DIES	3.25
R282.293.000	CRIMPING TOOL	

**OTHERS CHARACTERISTICS**

**ENVIRONMENTAL**

Operating temperature	<b>-65/+165</b>	°C
Hermetic seal	<b>NA</b>	Atm.cm3/s
Panel leakage	<b>NA</b>	

Issue : 0539 G

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**RADIALL**®

This specification describes a 50-ohm high temperature coaxial cable constructed to meet the requirements of Mil-C-17/113-RG316.

**CONDUCTOR**

Material: Silver-coated Copper Covered Steel  
 Size: AWG 25  
 Construction: 7 x .0067  
 OD(nom): .0201"

**INSULATION**

Material: Extruded PTFE  
 OD(nom): .059"

**SHIELD**

Material: Silver-coated Copper Braid  
 Size: AWG 38  
 Coverage(nom): 95.9%  
 OD(nom): .077"

**JACKET**

Material: Extruded FEP  
 OD: .098" ± .004"

**COLOR**

Natural  
 Jacket: Translucent Brown

**CABLE CHARACTERISTICS**

Impedance: 50 +/- 2 ohms  
 Capacitance(max): 32 pF/ft  
 Weight(max): 12.2 lbs/1,000 ft

Frequency (MHz)	Attenuation (dB/100 ft)
50	7.5
100	11
400	21
1000	38
3000	58

All of the statements, illustrations, technical information and recommendations contained herein are based on tests and other information Tensolite Company believes to be reliable, but the accuracy or the completeness thereof or the suitability of the product described herein for a particular application or use is not guaranteed, and this disclaimer is made in lieu of all warranties either expressed or implied.

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TENSOLITE COMPANY  
 SUBSIDIARY OF CARLISLE CORPORATION  
 ST. AUGUSTINE, FL

Drawn by: **Chris Lowe** Date: **1/16/97**

Approved By: **John Beatty** Date: **1/16/97**

Customer Spec

Tensolite P/N File  
**M17/113-RG316**

-	1/16/97	Redrawn