

CABLE DRAWING: **CAB-0XXX (SALEM CODE)**

DRAWING TITLE:
ASC Internal RF-OUT Cable

| | | | |
|------------------------------------|-------------------------|-----------------|------------------|
| DRAWING NO.: MWACAB-0003 | DRAWN BY: DRC | DATE: 17-Dec-09 | REV: A |
| | | SHEET: 1 of 3 | |

Cable Detail:

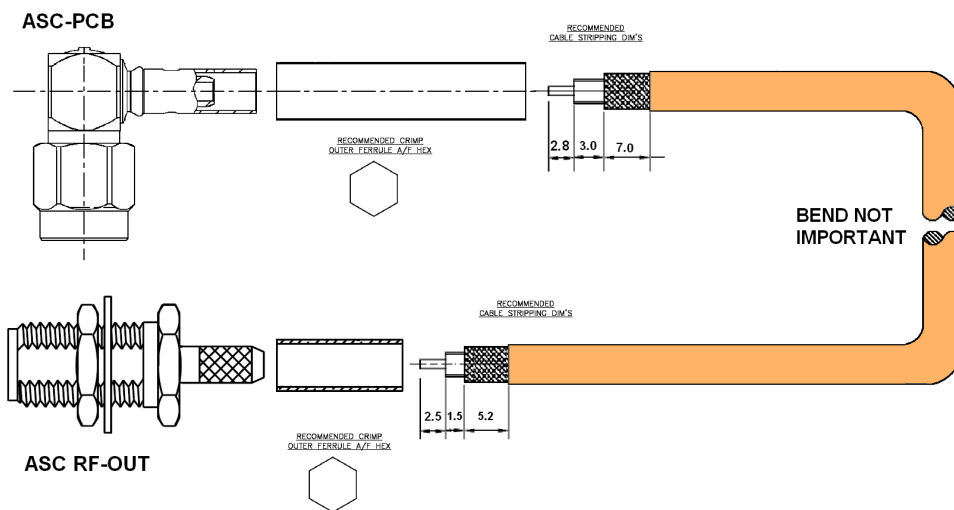
| Connectors: | Description | Parts (Qty) |
|-------------|--|---------------------|
| ASC-PCB | R125-172-000 R/A SMA Male Crimp for RG174/RG316/RG188 | See Note1 Below(1) |
| ASC_OUT | AMPHENOL RF - 901-9875 SMA Bulkhead Jack | See Note2 Below(1) |
| Conductors: | | |
| Cable | RG 316 Single Screen Cable DC-3GHz, 1.5dB/m@3GHz, Mil-C-17/113-RG316 | See Note3 Below(??) |
| Misc: | | |
| - | | |

Overall Length ??+/-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 Farnell #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

Typical Drawing:



REVISION

| Date | Rev | Remarks |
|----------|-----|---------|
| 03/12/09 | A | Draft |
| | | |
| | | |
| | | |

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DATE: 17-Dec-09

SHEET: 2 of 3

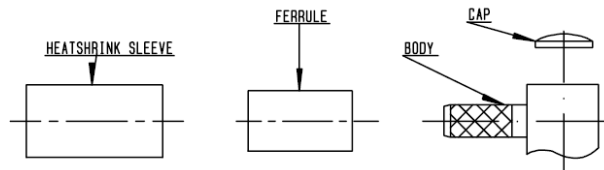
REV:

A

Assembly Details:

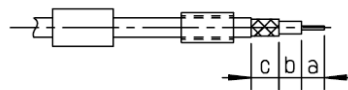
M 11

ASC-PCB End



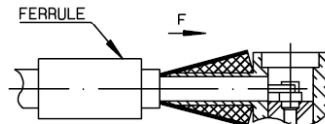
| P/N | Stripping length | | | Hex. dim H | Crimp tools | |
|---------------------|------------------|---|---|------------|---------------|--|
| | a | b | c | | Dies included | MIL standard R282 293 000 (M22520/5-01)+DIES |
| R125 172 000 | 2.8 | 3 | 7 | 3.25 | R282 211 000 | R282 235 003 (M22520/5-03)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

1



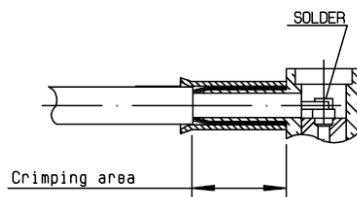
- 1.1 Slide onto the cable the ferrule and the heatshrink sleeve .
- 1.2 Strip the cable .

2



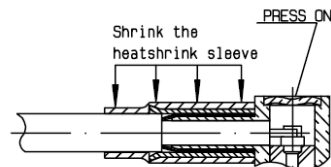
- 2.1 Fan the braid .
- 2.2 Push connector body under the braid
- 2.3 Slide the ferrule on the braid (in direction F)

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.

REVISION

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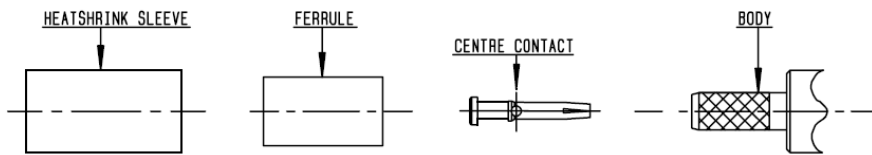
DATE: 17-Dec-09

REV:

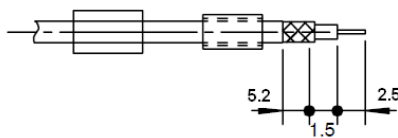
SHEET: 3 of 3

A

ASC RF-OUT End

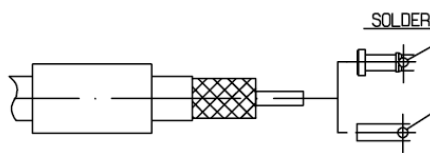


1



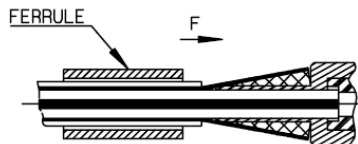
- 1.1 Slide onto the cable the ferrule and the heatshrink sleeve .
- 1.2 Strip the cable .

2



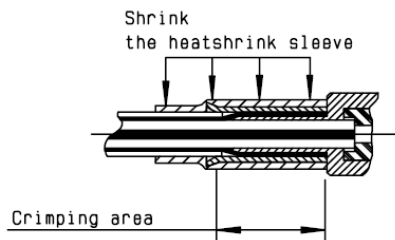
- 2.1 Slide on centre contact until it bottoms against cable dielectrique
- 2.2 Crimp or solder center contact
- 2.3 Clean soldering area .

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 .

Connection Detail:

From: (ACS-PCB) Attached to the ASC PCB SMA Connetors
 To: (ASC RF-OUT) ASC1/2 SMA Connector Outputs

REVISION

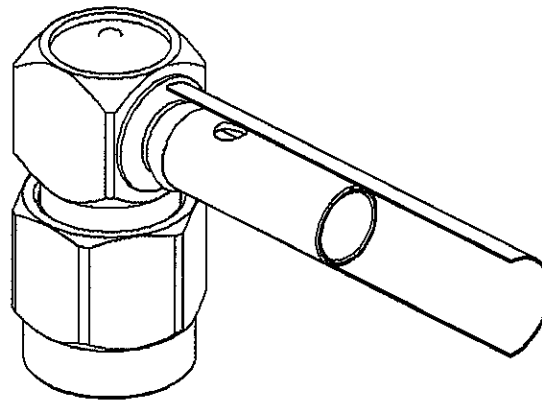
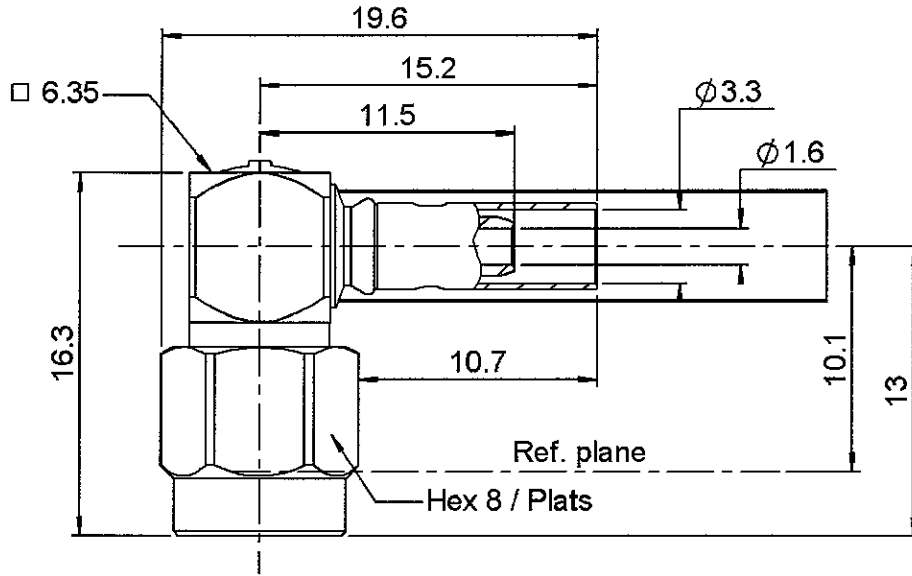
| Date | Rev | Remarks |
|----------|-----|---------|
| 03/12/09 | A | Draft |
| | | |
| | | |
| | | |

RIGHT ANGLE PLUG CRIMP OR SOLDER TYPE

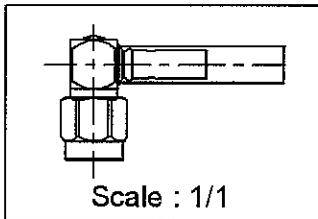
R125.172.000

CABLE 2.6/50 S

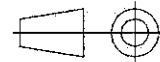
Series : SMA



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.



RADIALL®

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 | | 50 Ω |
| Frequency | | 0-12.4 GHz |
| VSWR | 1.15 + | 0.03 x F(GHz) Maxi |
| Insertion loss | | 0.15 √F(GHz) dB Maxi |
| RF leakage | - (| 60 - F(GHz)) dB Maxi |
| Voltage rating | | 250 Veff Maxi |
| Dielectric withstanding voltage | | 750 Veff mini |
| Insulation resistance | | 5000 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 | 27 | N mini |
| Axial force – Opposite end | 27 | N mini |
| Torque | 2.8 | N.cm mini |

TOOLING

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

| | | |
|--------------------|------------|------|
| Recommended torque | | |
| Mating | 100 | N.cm |
| Panel nut | NA | N.cm |
| Clamp nut | NA | N.cm |
| A/F clamp nut | 0 | mm |

| | | |
|-------------|------------|-------------|
| Mating life | 500 | Cycles mini |
| Weight | 4.3 | g |

OTHERS CHARACTERISTICS

ENVIRONMENTAL

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

Issue : 0539 G

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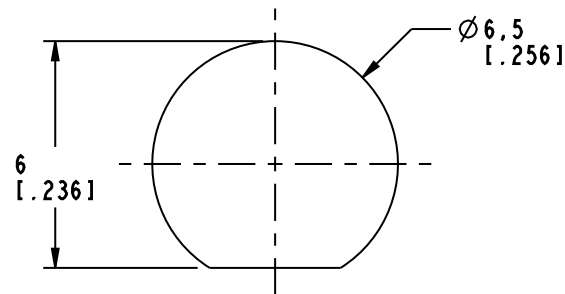
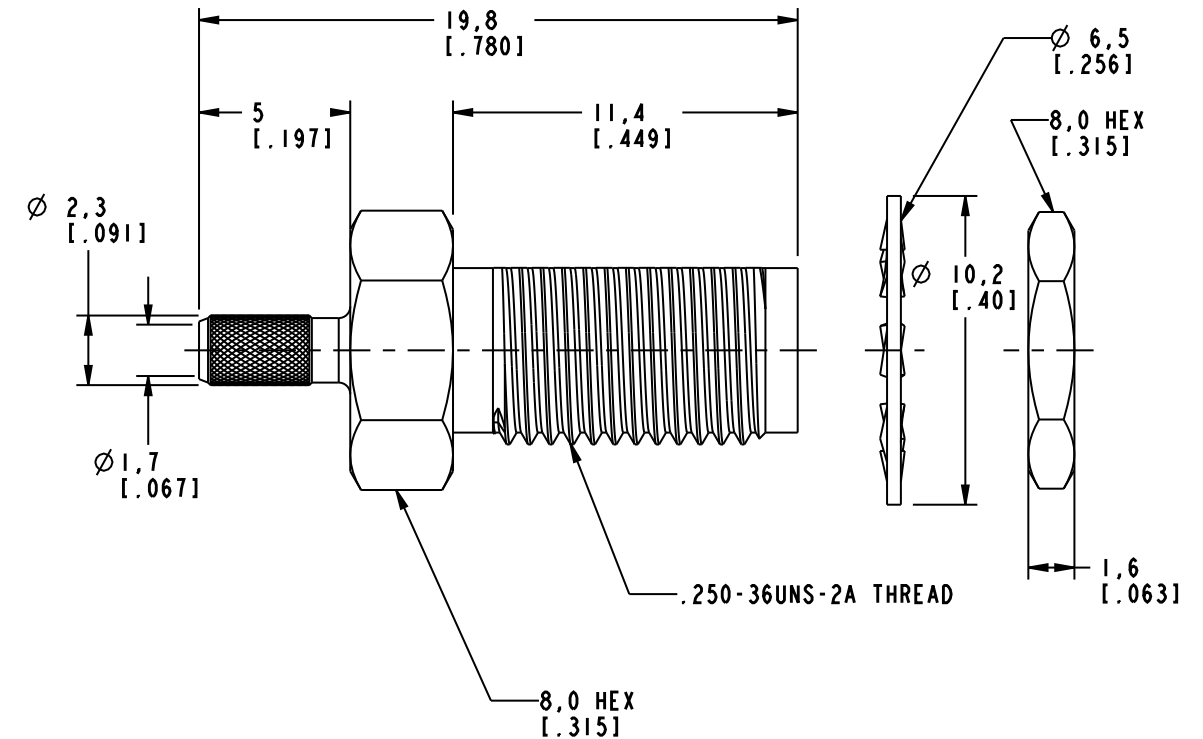
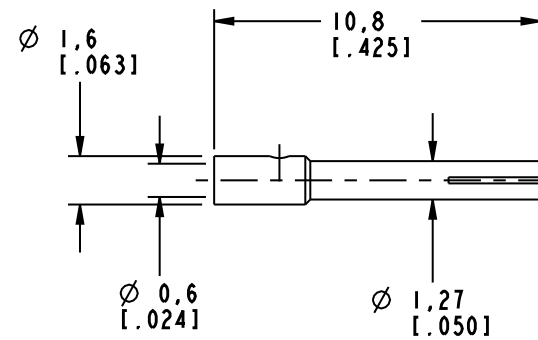
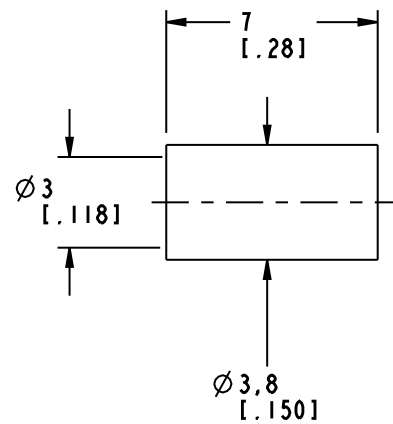
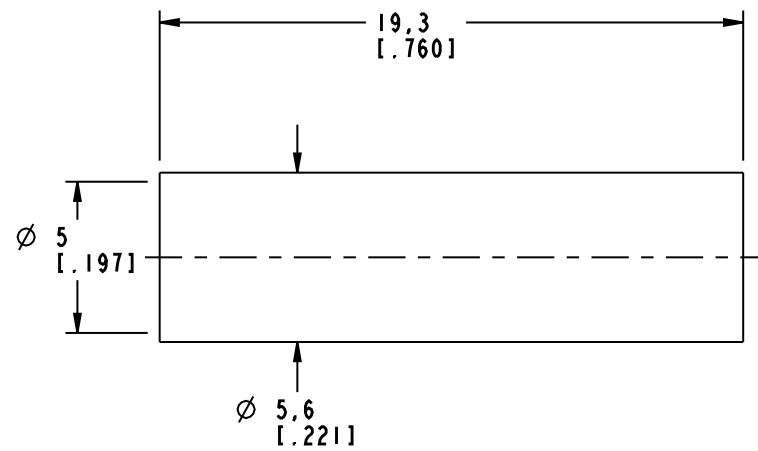
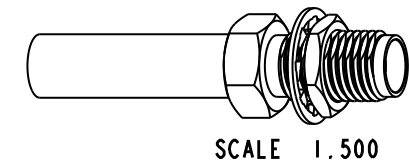


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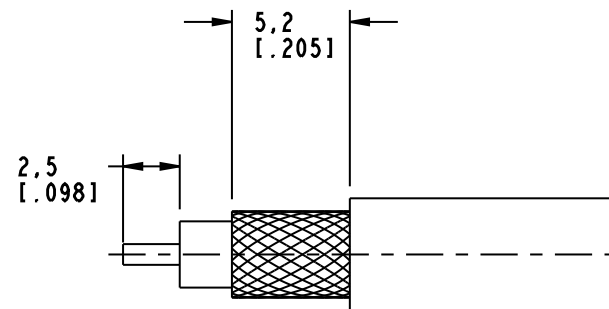
NOTES:

- MATERIALS OF CONSTRUCTION:
 BODY & HEX NUT = BRASS (ASTM-B16 HO2, C36000), GOLD PLATED (.000003 MIN THICK)
 CONTACT PIN = BeCu (QQ-C-530), GOLD PLATED (.000050 MIN THICK)
 LOCKWASHER = BRASS (QQ-B-613), GOLD PLATED (.000003 MIN THICK)
 FERRULE = COPPER, GOLD PLATED (.000003 MIN THICK)
 INSULATOR = PTFE, ASTM D 1710 OR EQUIV.
 HEAT SHRINK TUBING = COLOR BLACK

| 901-9875 | | REVISIONS | | | |
|-------------------|-----|-----------------|---------|-------|-------|
| DRAWING NO. | REV | DESCRIPTION | DATE | ECO | APPR |
| THIRD ANGLE PROJ. | A | RELEASE TO MFG. | 4/7/95 | 40352 | PB/RV |
| | C | SEE SHEET 1 | 10/2/02 | 44222 | CPM |



RECOMMENDED MOUNTING HOLE DIMENSIONS
SCALE 5.000



RECOMMENDED CABLE STRIPPING DIMENSIONS
SCALE 3.000

CUSTOMER OUTLINE DRAWING
ALL OTHER SHEETS ARE FOR INTERNAL USE ONLY

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MM (INCHES) AND TOLERANCES ARE:
 0.5 - 6mm ±0.2mm
 6 - 30mm ±0.4mm
 30 - 120mm ±0.6mm

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MATERIAL
 REFERENCE
 GEN# 901-10039-RFX_ASSY
 EAR 966280-3 & 111-964413

DRAWN
C. McGRATH
 ENGINEER
O. BARTHELME
 APPROVED
O. BARTHELME
 CAD FILE
I:\SMA\901-9875

DATE
10/1/02
 DATE
10/1/02
 DATE
10/2/02

TITLE
SMA BULKHEAD
CRIMP JACK
(FOR RG-174/U, 188A/U,
316/U CABLES)

Amphenol
Amphenol Corporation
Communication and Network
Products Division
Danbury, CT U.S.A. 06810

SCALE: 4.0:1 SHEET 2 OF 2

CODE ID 74868 DWG SIZE B DRAWING NO. 901-9875 REV C

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 |

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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 |