

## NOTES:

## 1. DESCRIPTION

HERMETIC CONNECTOR, SOLDER TYPE, H+S Astrolab SMPM-T MALE,  
THREADED, TO BE USED WITH H+S Astrolab SMPM-T UNITS.  
(FEMALE-THREAD, H+S Astrolab 29971TCR SERIES, FIG 3).  
SEE CHART FOR DETENT AND PIN OPTIONS.

## 2. MATERIALS AND FINISHES

BODY AND CENTER CONDUCTOR,  
IRON NICKEL ALLOY (KOVAR) IAW ASTM F-15 AND F-1466  
(MIL-I-23011 CLASS1) UNS K94610  
GOLD PLATED .000050 IN MIN. THK. (1.27 MICRO METERS)  
PER ASTM B-488, CODE A, TYPE III, OVER  
NICKEL PLATE, .000050 IN MIN. THK. PER  
SAE-AMS-QQ-N-290, OR ASTM B-689 TYPE 1.

## DIELECTRIC

CORNING No. 7070 GLASS

## OUTGASSING,

ASSEMBLY MEETS OR EXCEEDS NASA  
LOW OUTGASSING REQUIREMENTS.

## 3. ELECTRICAL CHARACTERISTICS:

## IMPEDANCE

50.0 Ohms NOMINAL.

## FREQUENCY

50.0 GHz MAX.

## VSWR

1.25 : 1 MAX. AT 26.5 GHz MAX.

1.35 : 1 MAX. AT 40.0 GHz MAX.

## 4. SMPM-T INTERFACE MEETS MIL-STD-348.

## 5. OPERATING TEMPERATURE RANGE

-55° C TO +125° C.

## 6. HERMETIC SEAL:

100% OF CONNECTORS ARE TESTED AND QUALIFIED FOR  
LEAKAGE RATES LESS THAN  $1 \times 10^{-8}$  CCM/SEC OF  
HELIUM UNDER PRESSURE DIFFERENTIAL OF 15.00 PSIG,  
IAW ASTM E-498 AND MIL-STD-202.

## CONTROL DRAWING

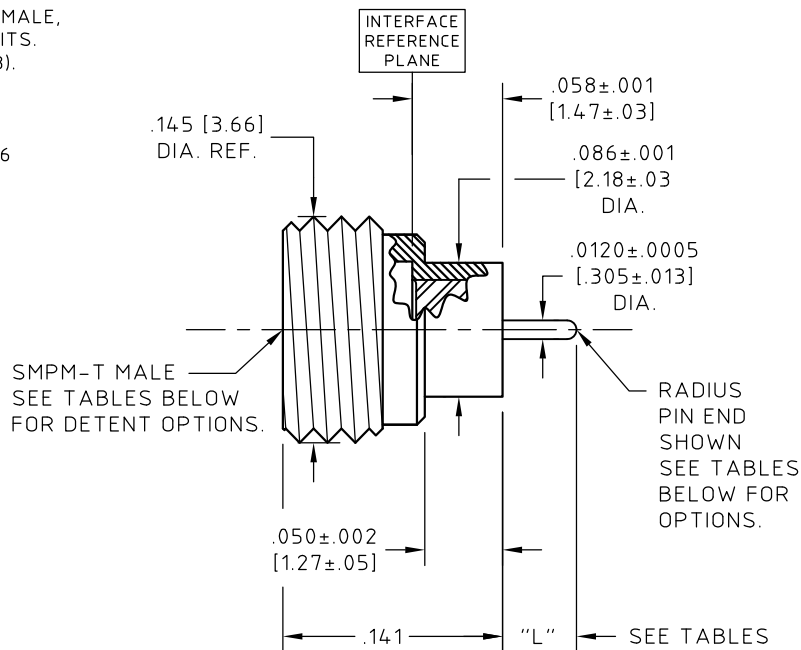


FIGURE 1, OUTLINE  
29976H1-X-NNNS

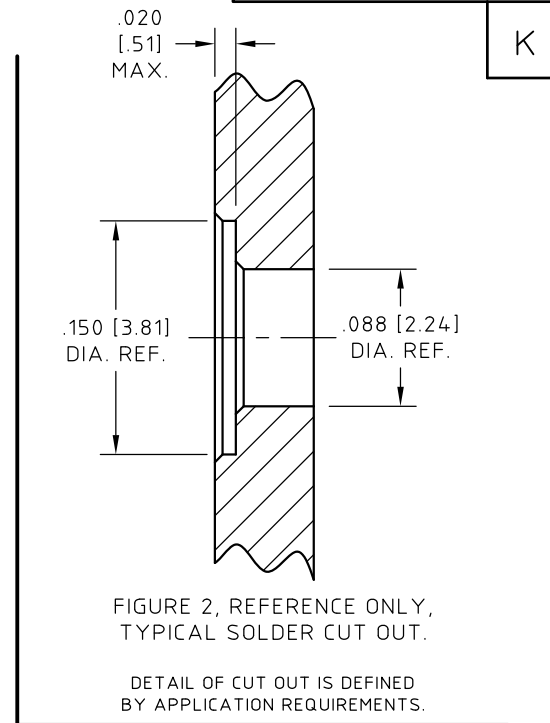


FIGURE 2, REFERENCE ONLY,  
TYPICAL SOLDER CUT OUT.

DETAIL OF CUT OUT IS DEFINED  
BY APPLICATION REQUIREMENTS.

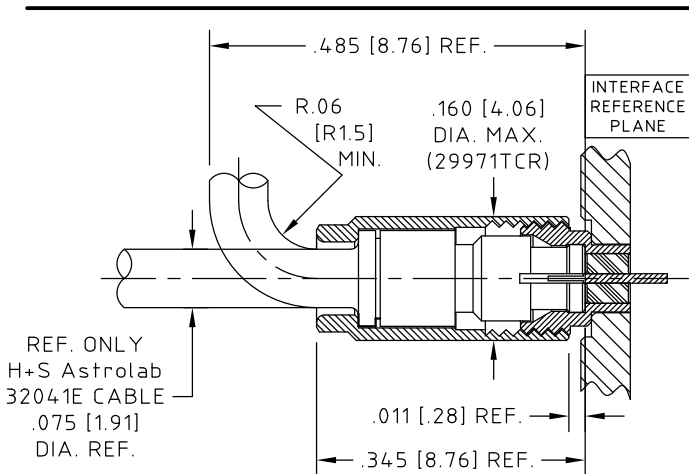


FIGURE 3 SCALE 4 : 1  
SHOWN ABOVE IS TYPICAL APPLICATION  
UTILIZING AN H+S Astrolab SMPM-T FEMALE  
CONNECTOR (29971TCR SERIES) MATED AND LOCKED.

| PART NUMBER    | DETENT | " L " | PART NUMBER    | DETENT | " L " |
|----------------|--------|-------|----------------|--------|-------|
| 29976H1-2-030S | FULL   | .030  | 29976H1-2-030R | FULL   | .030  |
| 29976H1-2-040S | FULL   | .040  | 29976H1-2-040R | FULL   | .040  |
| 29976H1-2-050S | FULL   | .050  | 29976H1-2-050R | FULL   | .050  |
| 29976H1-2-060S | FULL   | .060  | 29976H1-2-060R | FULL   | .060  |
| 29976H1-2-070S | FULL   | .070  | 29976H1-2-070R | FULL   | .070  |
| 29976H1-2-090S | FULL   | .090  | 29976H1-2-090R | FULL   | .090  |
| 29976H1-4-030S | S.B.   | .030  | 29976H1-4-030R | S.B.   | .030  |
| 29976H1-4-040S | S.B.   | .040  | 29976H1-4-040R | S.B.   | .040  |
| 29976H1-4-050S | S.B.   | .050  | 29976H1-4-050R | S.B.   | .050  |
| 29976H1-4-060S | S.B.   | .060  | 29976H1-4-060R | S.B.   | .060  |
| 29976H1-4-070S | S.B.   | .070  | 29976H1-4-070R | S.B.   | .070  |
| 29976H1-4-090S | S.B.   | .090  | 29976H1-4-090R | S.B.   | .090  |

UNLESS OTHERWISE SPECIFIED  
CONCENTRICITY .004 T.I.R.  
CORNERS AND FILLETS .005  
MAX. RADIUS OR CHAMFER.  
SURFACE FINISH 63 RMS  
MICROINCHES OR BETTER.

| FRACTIONS            | ± 1/16 |
|----------------------|--------|
| X                    | ± .030 |
| XX                   | ± .015 |
| XXX                  | ± .005 |
| ANGLES               | ± 1°   |
| DO NOT SCALE DRAWING |        |

| NAME      | DATE     |
|-----------|----------|
| PREP. GSG | 03/03/08 |
| ELEC.     |          |
| MECH. AW  | 03/05/08 |
| Q.C.      |          |

| NAME      | DATE     |
|-----------|----------|
| PREP. GSG | 03/03/08 |
| ELEC.     |          |
| MECH. AW  | 03/05/08 |
| Q.C.      |          |

| TITLE                                     | SCALE | CODE IDENT. | DWG NO.           | REV |
|-------------------------------------------|-------|-------------|-------------------|-----|
| CONNECTOR, HERMETIC, SMPM-T MALE (SHROUD) | 8:1   | 16301       | 29976H1-X-NNNS(R) | K   |

| K    | ECN No. 18207 | 05/31/16 | EB |          |
|------|---------------|----------|----|----------|
| REV. | DESCRIPTION   | DATE     | BY | APPROVED |