

TLMP RF Connectors

Designed for Military Aerospace and Space Flight



T **TIMES**
MICROWAVE SYSTEMS
AN AMPHENOL COMPANY

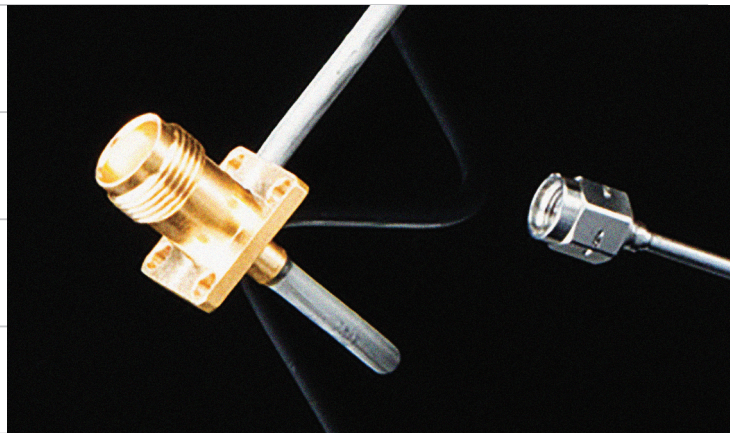
TLMP RF Connectors

Designed for Military Aerospace and Space Flight

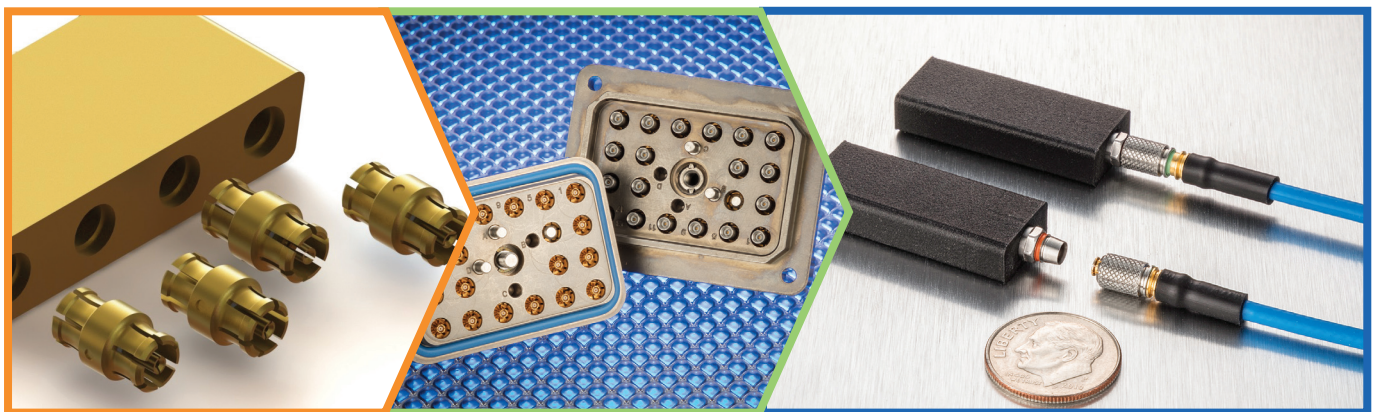
What is a TLMP Connector?

TLMP connectors address the disadvantages of SMP/SMPM connectors.

| | |
|----------|-----------|
| T | Times |
| L | Locking |
| M | Miniature |
| P | Push-On |



The SMP & SMPM Evolution



SMP/SMPM

- Small Form Factor
- Environmentally, EMI and Power Challenged

MMP

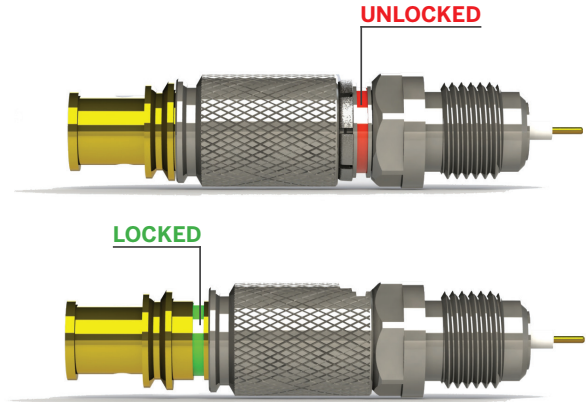
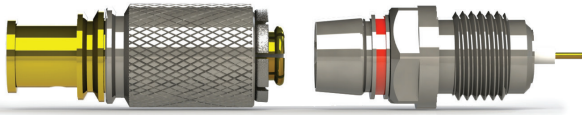
- Small Form Factor
- + Improved Environmental, Shielding and Power
- Difficult to use in a single port configuration

TLMP

- Small Form Factor
- + Improved Environmental, Shielding and Power
- + Single Interconnect
- Frequency from DC to 60 GHz

Positive Locking

VISIBLE "GREEN/RED" COLOR LOCKING



Vibration Proof

Prevents de-mating under vibration and shock

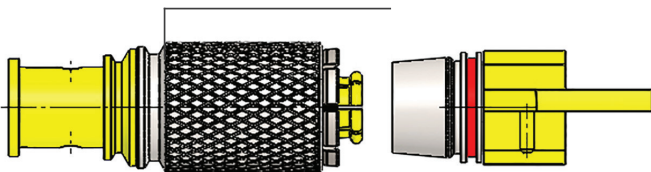
High Power/Voltage

The design overlaps the insulators cutting off a direct path to ground from the center conductor to the outer shield and enabling higher power or voltage functionality at higher altitudes.

TLMP Mating Sequence

STEP 1

Locking sleeve retracted
Green band obscured



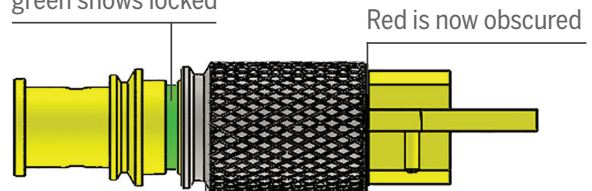
STEP 2 MATED, NOT LOCKED



Locking claw is free to snap into groove

STEP 3 MATED AND LOCKED

Locking sleeve is extended,
green shows locked



Red is now obscured

Locking claw is fully extended
with nub of claw snapped into
corresponding groove

TLMP RF Connectors

Designed for Military Aerospace and Space Flight

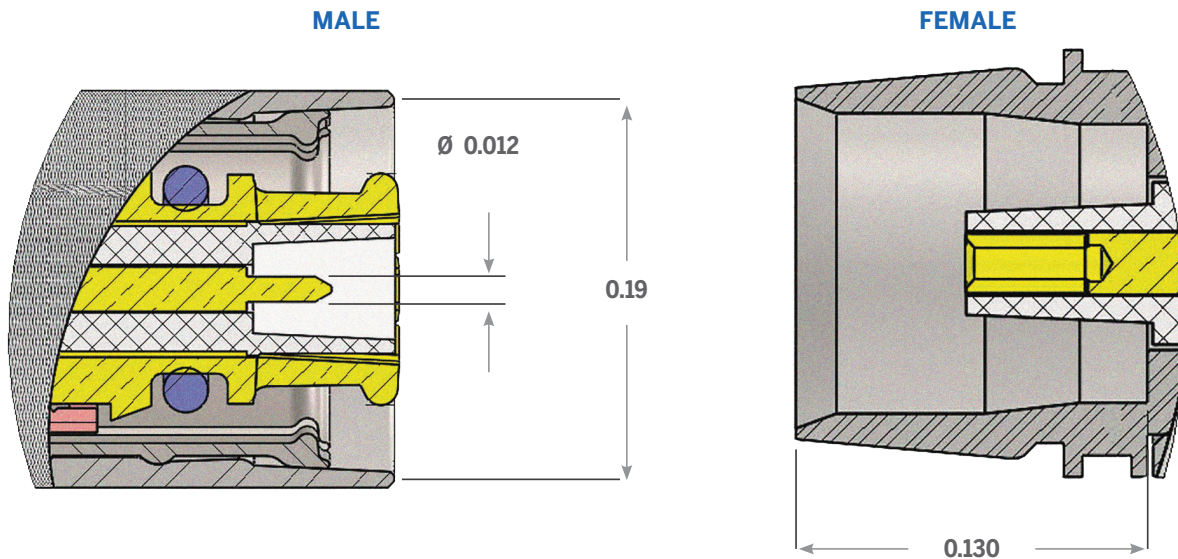
Features

Finish

Gold/Passivated

Mechanical Durability

1000 mating cycles



Component

| Component | Material |
|------------|------------------------|
| Bodies | BeCu / Stainless Steel |
| Contacts | BeCu |
| Insulators | PTFE |

Electrical

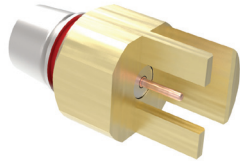
| | Units | |
|---------------------------------|------------|--|
| Frequency Range | GHz | DC to 60 |
| Insulation Resistance | M Ω | > 5000 |
| Dielectric Withstanding Voltage | method 301 | per MIL-STD-202 |
| Contact Resistance | m Ω | 3 |
| RF Leakage | GHz | -105 dB @ 40 |
| VSWR | GHz | $1.05 + (.007 \times f \text{ (GHz)})$ |

Environmental (per MIL-STD-202)

| | | |
|---------------------|---------------------------|---------------------------|
| Vibration | Method 202 | Test condition D |
| Mechanical shock | Method 213 | Cond I |
| Thermal shock | Method 107 | Cond B |
| Corrosion | Method 101 | Cond B 5% salt solution |
| Moisture resistance | Method 106 | |
| Corona level | Corona free @ 70,000 feet | (dependent on cable size) |
| Temperature rating | | -65°C to +165°C |

TLMP Configurations

FEMALE FOR PCB LAUNCHES



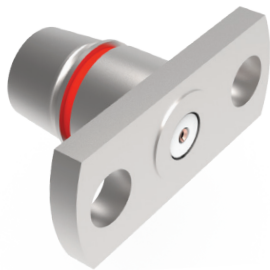
MALE FOR FLEX AND SEMI-RIGID



RIGHT ANGLE MALE FOR FLEX AND SEMI-RIGID (NESTED CONFIGS)

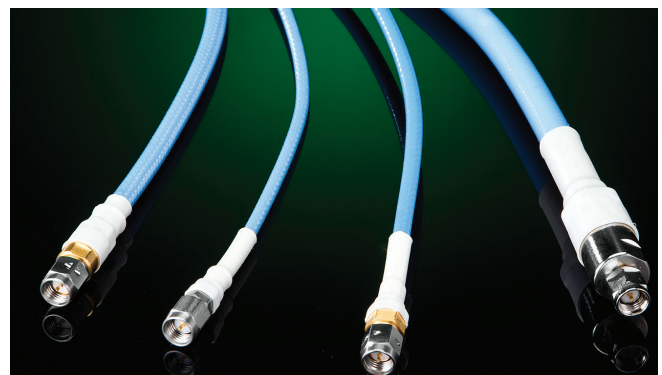


FEMALE FOR MIC PACKAGE MOUNTS



Cables

| | |
|----------|---------------------------|
| PTF047 | PTFlex 047 |
| PTSRB047 | PhaseTrack 047 Semi-Rigid |
| PTSRB086 | PhaseTrack 086 Semi-Rigid |
| PT110 | PhaseTrack 110 |
| MT130 | MilTech 130 |
| TFlex405 | TFlex405 |
| 047 S/R | 047 Semi-Rigid |
| 086 S/R | 086 Semi-Rigid |

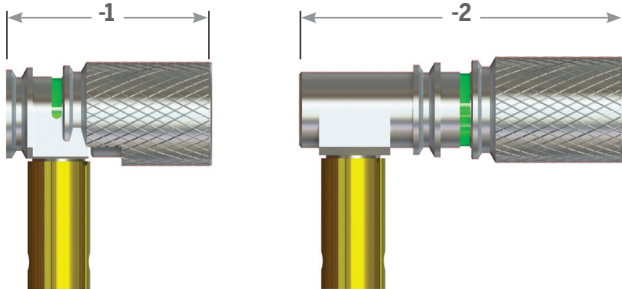


TLMP RF Connectors

Designed for Military Aerospace and Space Flight

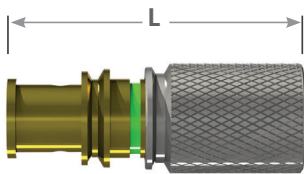
Connectors

Angle Male for Flexible and Semi-Rigid Cable



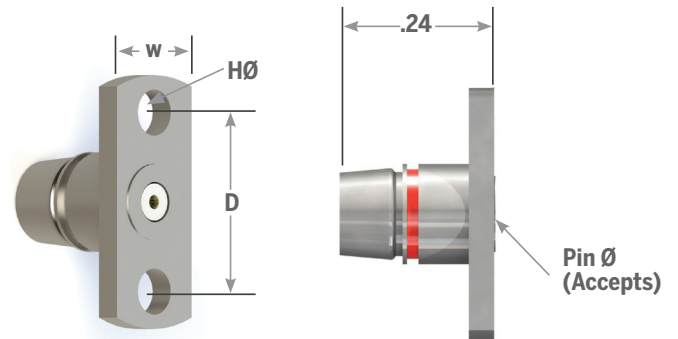
| | Cable Type | -1 (in) | -2 (in) |
|------------|------------|---------|---------|
| PN 26550-X | PT047 | 0.370 | 0.570 |
| PN 26552-X | PT110 | 0.370 | 0.570 |
| PN 26553-X | MT130 | 0.370 | 0.570 |
| PN 26548-X | TFlex405 | 0.370 | 0.570 |
| PN 26551-X | 047 S/R | 0.370 | 0.570 |
| PN 26549-X | 086 S/R | 0.370 | 0.570 |
| PN 26554-X | PTSRB086 | 0.370 | 0.570 |

Male for Flexible and Semi-Rigid Cable



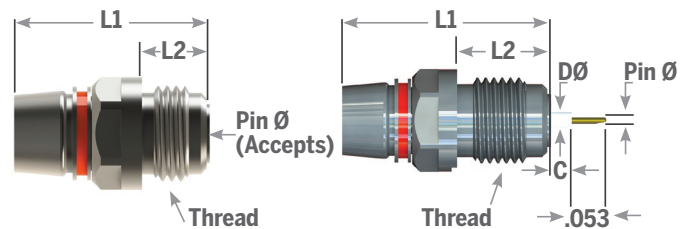
| | Cable Type | L(in) |
|----------|------------|-------|
| PN 26543 | PT047 | 0.440 |
| PN 26545 | PT110 | 0.500 |
| PN 26546 | MT130 | 0.500 |
| PN 26524 | TFlex405 | 0.500 |
| PN 26544 | 047 S/R | 0.440 |
| PN 26532 | 086 S/R | 0.458 |
| PN 26547 | PTSRB086 | 0.458 |

Female for MIC Hermetics



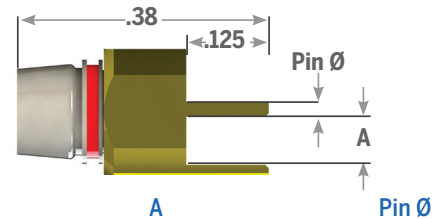
| | D | H Ø | W | Pin Ø |
|------------|-------|-------|-------|-------|
| PN 26542-1 | 0.282 | 0.073 | 0.165 | 0.012 |
| PN 26542-2 | 0.282 | 0.073 | 0.165 | 0.015 |

Female for MIC Hermetics



| | L1 | L2 | C | Ø D | Pin Ø | Thread |
|------------|-------|-------|-------|-------|-------|----------|
| PN 26531 | 0.392 | 0.175 | 0.041 | 0.032 | 0.012 | 0.164.64 |
| PN 26555-1 | 0.335 | 0.115 | | | 0.012 | 0.164.64 |

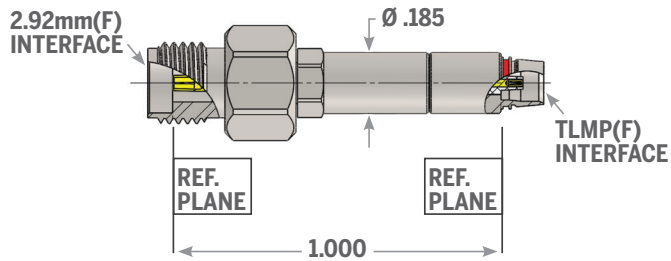
Female PCB Edge Launch



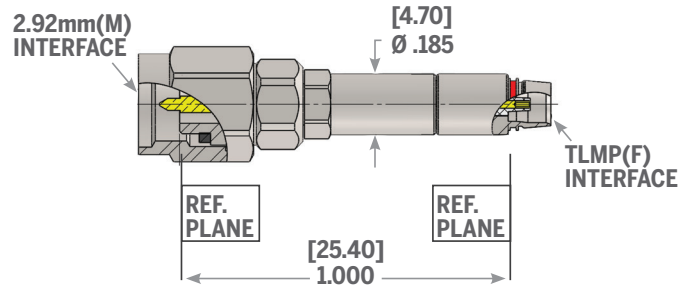
| | A | Pin Ø |
|------------|-------|-------|
| PN 26540-1 | 0.073 | 0.015 |
| PN 26540-2 | 0.056 | 0.115 |

Adapters

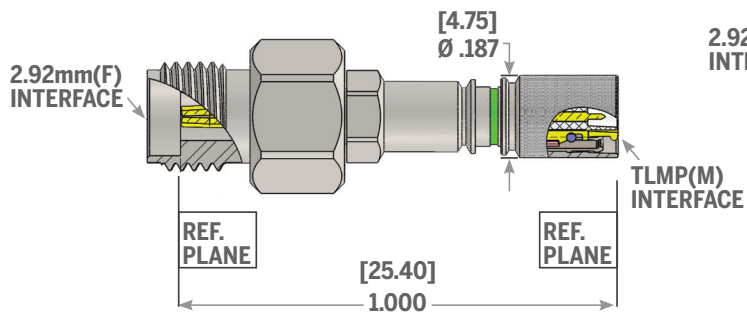
26952



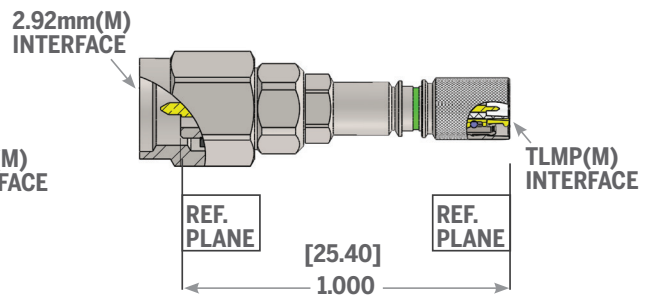
26953



26951

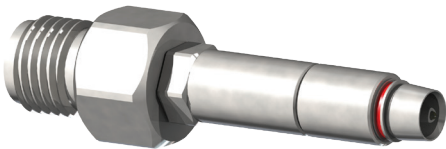


26950



2.9mm Adapters

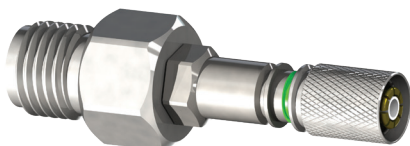
26952



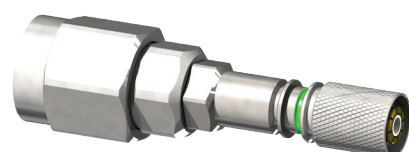
26953

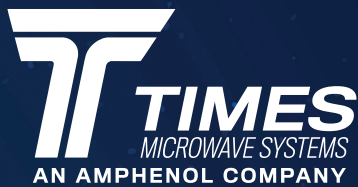


26951



26950





Times Microwave Systems

358 Hall Avenue

Wallingford, CT 06492

USA

T 800. 867.2629

F 203. 949.8423