

Engineered Products:

Intra-Flex™

ISO 9001 Certified

*High Performance, Low Loss
In-The-Box RF Interconnects*



Features & Benefits:

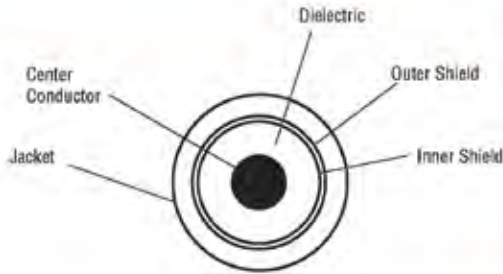
- Low loss improves performance
- Braid design maintains shielding when flexed and bent
- True flexible cable simplifies and eases installation
- Eliminates solder joint failures
- Buy as Assemblies or Cable and Connectors
- Short Lead Time

Intra-Flex™ is an in-the-box interconnect solution. A true, flexible coax it can be used as an alternative to 0.141" diameter copper semi-rigid, tin-soaked braid cable or other similar sized solid PTFE dielectric cables. Intra-Flex™ exhibits approximately 12% lower attenuation compared to 0.141" sized coax. Used as a substitute for semi-rigid coax, Intra-Flex™ eliminates the need for custom-formed configurations dedicated to a specific location within the system. It also eliminates the time and cost to develop drawings depicting the shape. Used as a substitute for tin-soaked braid cable, Intra-Flex™ assemblies eliminate failures from cracked solder joints.

Intra-Flex™ may also be substituted where RG 58, RG142, RG223 and RG400 are used. It exhibits 36% to 51% improvement in maximum attenuation, and achieves 25dB to 50dB better shielding than these RG cables. Intra-Flex™ may be repeatedly flexed without return loss performance degradation or shortening the products life cycle due to mechanical failure.

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Intra-Flex™ Specifications:



Cable Construction

Center Conductor: Bare Copper, 0.044" (1.12 mm)

Dielectric: Foam PE

Inner Shield: Silver Plated Copper Flat Ribbon Braid 0.126" (3.20 mm)

Outer Shield: 36GA Tinned Copper Round Wire Braid, 90%k 0.148" (3.76 mm)

Jacket: Black PVC 0.195" (4.95 mm)

Connector Construction

- Body: Nickel Plated Brass
- Center Pin: Gold Plated
- Dielectric: PTFE

Physical & Mechanical Specifications

Dimensions	in	mm
Outside Diameter	0.195	4.95
Weight per 1kft (305m)	40 lbs	18 kg
Minimum Bend Radius	0.2	5
Preferred Bend Radius	0.5	13
Number of Bends*	min radius: < 10	preferred radius: < 25
Operating Temperature	-40°C to + 85°C	
Connector Retention	> 15 lbs	> 6.8 kg
Termination Method	Solder center, crimp braid	
Length Tolerances (< 2.0', 0.6m)	-0,+0.4	-0,+10

Electrical Specifications

VSWR (max through 3 Ghz)	1.25:1
Impedance	50 Ohms
Velocity of Propagation	83 %
Shielding Effectiveness	>80 dB
Capacitance	24.3 pF/ft = 79.70 pF/meter

Attenuation max @ +77°F (+25°C)		
(MHz)	dB/100 ft	dB/100 m
150	4.2	13.8
450	7.3	23.9
900	10.3	33.8
2000	15.6	51.2
2400	17.3	56.1
3000	19.4	63.6

Max attenuation, any frequency:	$(0.33404 \times \sqrt{F\text{ghz}}) + (0.000364 \times F\text{ghz})$
Connector Attenuation, max	Straight Right Angle
(Includes attachment mismatch)	$(0.1 \times \sqrt{F\text{ghz}})$ $(0.15 \times \sqrt{F\text{ghz}})$

Power Handling**		
(MHz)	77°F (25°C)	104°F (40°C)
150	590	480
450	340	270
900	240	190
2000	160	130
2400	140	110
3000	126	105

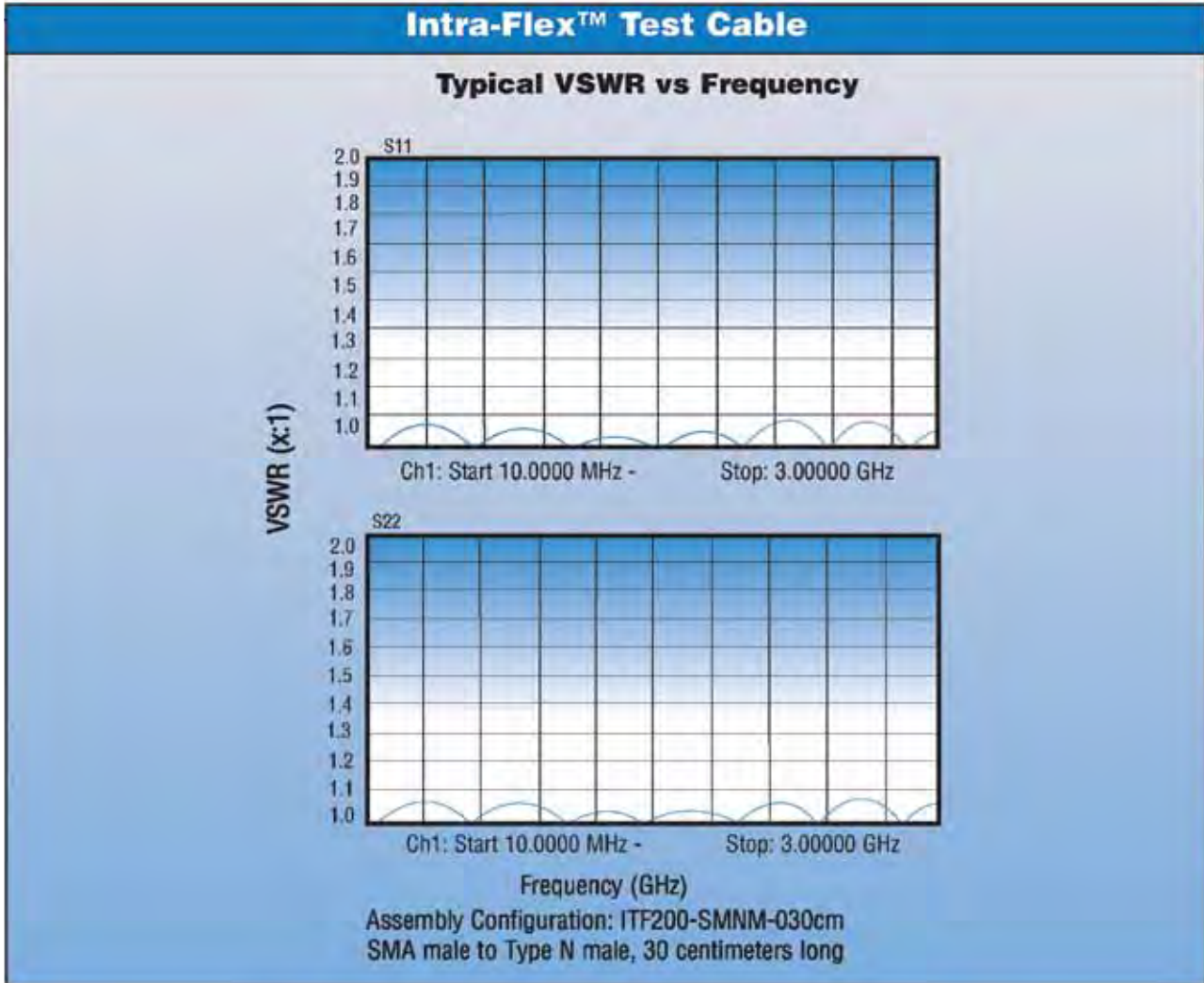
*Assumes a single location on the cable is repeatedly flexed, and 3 Ghz operation.

** Sea level

Specifications subject to change without notice.

All *Intra-Flex™* cable assemblies are 100% RF tested for VSWR and insertion loss.

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Cable Assembly Ordering Information

Cable Diameter

Length (cm)**

Example: 030 = 30cm

ITF200-XXXX-XXXX-XXXcm

Connector Codes (2 or 3 Characters)

- BM = BNC Male (3 Ghz only)
- SM = SMA Male
- SMR = SMA Right Angle
- SFB = SMA Female Bulkhead
- NM = Type N Male*
- NFB = Type N Female Bulkhead
- NMR = Type N Right Angle*
- NF4F = Type N Female 4-Hole Flange

Conn. 1

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Conn. 2

* Type N has Hex/Knurled Coupling Nut

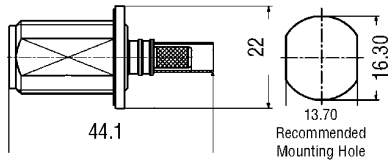
** Length tolerances: ≤ 50cm: -0, +5mm

50cm-100cm: -0, +10mm

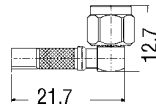
See Page 4 to Order Cable and Connectors Separately

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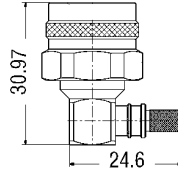
Connector Ordering Information:



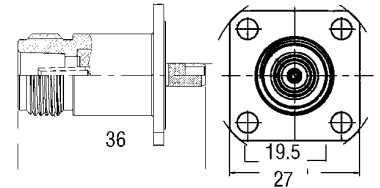
Type N Female Bulkhead
3190-2430



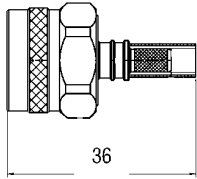
SMA Right Angle
3190-2112



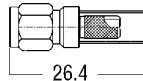
Type N Right Angle
3190-2425



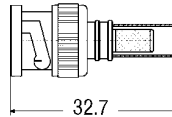
Type N Female 4-Hole Flange
3190-2213



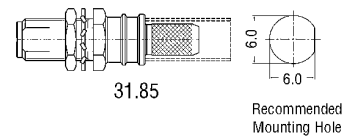
Type N Male
3190-2349



SMA Male
3190-2214



BNC Male
3190-2429



SMA Female Bulkhead
3190-2428

*Dimensions in millimeters

Cable Ordering Information:

Number: MI 55026