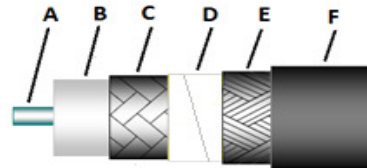


CABLE SPECIFICATIONS

Lab-Flex® 290Q



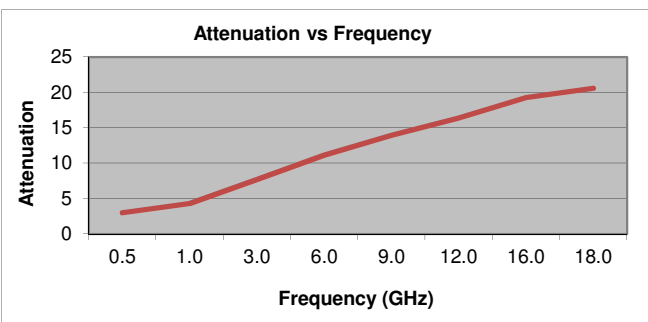
Lab-Flex® 290Q is designed to meet stringent NASA/ESA outgassing specification and maximum radiation resistance while utilizing the design techniques to provide the low-loss and high velocity cable our customers expect from a Lab-Flex cable assembly.



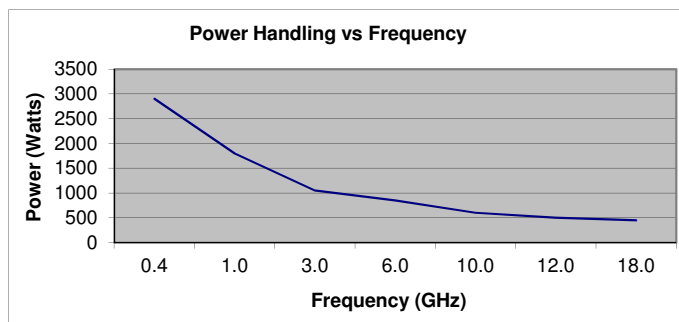
| 1.0 Electrical Data | | | |
|---|----------|----------|---|
| Frequency, Max (GHz) | 18.0 | | |
| Impedance, nominal (Ω) | 50 | | |
| Velocity of Propagation (%) | 84.5 | | |
| Shielding Effectiveness, 18 GHz (dB/ft) | >-90dB | | |
| Capacitance (pF/ft) | 24 | | |
| Delay (ns/ft), (ns/meter) | 1.21 | 3.972992 | |
| Attenuation k1 (db/100ft) @ 23 deg C | 0.131 | | Attenuation (Typical) at any Frequency =k1 x SqRt (FMHz) + k2 x (FMHz) |
| Attenuation k2 (db/100ft) @ 23 deg C | 0.000167 | | |

| 2.0 Mechanical/Environmental Data | | | |
|-----------------------------------|-------------|-------|--|
| Weight (lbs/100ft), (Kg/100m) | 9.00 | 13.53 | |
| Temperature Range (°C) | -50 to +150 | | |
| Minimum Bend Radius (inch), (mm) | 1.60 | 40.64 | |

| 3.0 Construction Data | | | |
|----------------------------|---|-------|----------------|
| Inner Conductor (inch) | A | - | Solid SC |
| Dielectric (inch) | B | - | Expanded PTFE |
| First Outer Shield (inch) | C | - | Flat Braid SPC |
| Second Outer Shield (inch) | D | - | Metalized Tape |
| Third Outer Shield (inch) | E | - | Round Braid SC |
| Jacket (inch O.D.) | F | 0.310 | ETFE |



(dB per 100 feet)



*CW Power in watts at sea level and 23°C

| | | | | | | |
|-----------------------|-----|-----|------|------|------|------|
| Frequency GHz | 1.0 | 2.5 | 5.8 | 8.0 | 12.0 | 18.0 |
| Typical Loss dB/100ft | 4.3 | 7.0 | 11.0 | 13.1 | 16.4 | 20.6 |

| | | | | | | |
|-------------------|--------|--------|-------|-------|-------|-------|
| Frequency GHz | 1.0 | 3.0 | 6.0 | 10.0 | 12.0 | 18.0 |
| CW Power in Watts | 1800.0 | 1050.0 | 850.0 | 600.0 | 500.0 | 450.0 |

CABLE SPECIFICATIONS

Lab-Flex® 290Q



Standard Connectors:

| Cable Code | Connector Code | Series | Gender | Type | C-Nut Style* | Body Material* | Body Finish* | Loss per GHz | Frequency Max GHz |
|------------|----------------|--------|--------|----------|--------------|----------------|--------------|--------------|-------------------|
| 290Q | SMS | SMA | (Male) | Straight | H | SS | P | 0.01 | 18 |
| 290Q | SMR | SMA | (Male) | R/A | H | SS | P | 0.02 | 18 |
| 290Q | NMS | Type N | (Male) | Straight | H | SS | P | 0.01 | 18 |
| 290Q | NMR | Type N | (Male) | R/A | H | SS | P | 0.02 | 18 |
| 290Q | TMS | TNC | (Male) | Straight | H | SS | P | 0.01 | 18 |
| 290Q | TMR | TNC | (Male) | R/A | H | SS | P | 0.02 | 18 |

* C-nut Style: H= Hex, K=Knurled, HK= Hex Nut & Knurled
 *Body Materials: B=Brass, SS=Stainless Steel, Be= Beryllium Copper
 *Body Finish: N= Nickel, S=Silver, G=Gold, P= Passivated, T= Tri-metal
 Sex of connector is determined by center pin

Standard Options:

| Cable Code | Option Code | Option Description | Option Details |
|------------|-------------|--------------------|--------------------------------|
| 290Q | +/-2.8PS | Phase Match | Standard Tolerance of +/-2.8PS |
| 290Q | RoHS | RoHS Compliant | Per EU Directive 2002/95/EC |

*for RoHS complaint assemblies (-ROHS) is required to be added to end of standard part number
 ex. TMS-290Q-120.0-TMS-ROHS

*for phase matched assemblies (+/-2.8PS) is require to be added to the end of standard part number
 ex. NMS-290Q-120.0-NMS+/-2.8PS

Custom Options:

The above connectors and options the most common types used. Florida RF Labs offers a wide range of cables, connectors and options. If you do not see an option you require please consult the sales department.