



ESM RF TEST LAB CABLES

ESM short lead-time RF cable assembly solutions for Test Lab applications. Low-loss ePTFE coax cables are available in FIVE standard and EW configurations.

Products

- RF Test Lab Cables
- High Performance Flexible Cables

Frequency

- Up to 50 GHz

Lead Times

- 24 hour response to inquiries
- Prototypes, ARO: 1- 3 days
- Production, ARO: Stock to 4 weeks

Connector Types

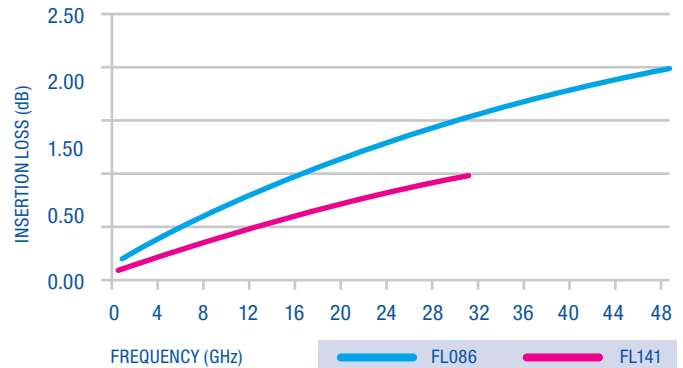
- SMA, 3.5mm, 2.9mm, 2.4mm, 1.85mm (available soon), precision N-type, TNCA

| | FL086 | FL141 |
|---------------------------------|--------------------------|--------------------------|
| Cable O.D. | 0.105" | 0.163 |
| Jacket | FEP | FEP |
| Outer Conductor | SPC Foil + 95% SPC Braid | SPC Foil + 95% SPC Braid |
| Dielectric | PTFE | PTFE |
| Center conductor diameter | 0.020" | 0.036" |
| Center conductor | SPCCS | SPCCS |
| Impedance | 50 | 50 |
| Vp (%) | 70 | 70 |
| Cutoff Freq. | 65 | 34 |
| Static bend radius (centerline) | .500" | 0.750" |
| Dynamic bend radius | 10X OD | 10X OD |
| Temperature range (C) | -55 to 200 | -55 to 200 |
| Weight (lb/100ft) | 1.4 | 3.2 |

Attenuation (dB/ft)

| FREQUENCY (GHz) | FL086 | FL141 |
|-----------------|-------|-------|
| 1 | 0.21 | 0.12 |
| 2 | 0.31 | 0.17 |
| 4 | 0.45 | 0.26 |
| 8 | 0.66 | 0.39 |
| 12 | 0.85 | 0.51 |
| 18 | 1.06 | 0.66 |
| 26 | 1.35 | 0.84 |
| 32 | 1.55 | 0.97 |
| 40 | 1.75 | |
| 50 | 2.00 | |

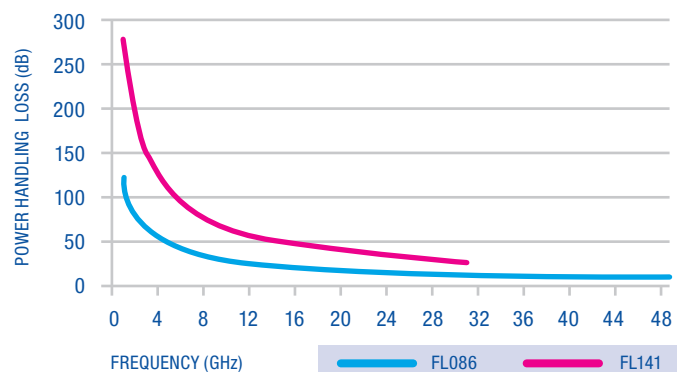
Insertion Loss Chart (dB)



Power Handling (WATTS)

| FREQUENCY (GHz) | FL086 | FL141 |
|-----------------|-------|-------|
| 1 | 120 | 280 |
| 2 | 80 | 190 |
| 4 | 50 | 130 |
| 8 | 35 | 80 |
| 12 | 25 | 60 |
| 18 | 20 | 45 |
| 26 | 15 | 30 |
| 32 | 12 | 25 |
| 40 | 10 | |
| 50 | 10 | |

Power Handling (WATTS)

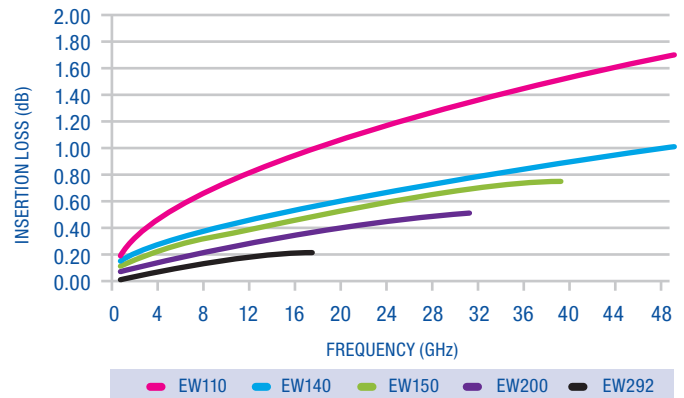


| | EW110 | EW140 | EW150 | EW200 | EW292 |
|---------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Cable O.D. | 0.110" | 0.140" | 0.145" | 0.190" | 0.295" |
| Jacket | FEP | FEP | FEP | FEP | FEP |
| Outer Conductor | SPC Foil + 95% SPC Braid | SPC Foil + 95% SPC Braid | SPC Foil + 95% SPC Braid | SPC Foil + 95% SPC Braid | SPC Foil + 95% SPC Braid |
| Dielectric | ePTFE | ePTFE | ePTFE | ePTFE | ePTFE |
| Center conductor diameter | 0.020" | 0.032" | 0.036" | 0.051" | 0.089" |
| Center conductor | SPC | SPC | SPC | SPC | SPC |
| Impedance | 50 | 50 | 50 | 50 | 50 |
| Vp (%) | 75 | 80 | 80 | 83 | 83 |
| Cutoff Freq. | 65 | 50 | 40 | 32 | 18 |
| Static bend radius (centerline) | .500" | 0.750" | 0.750" | 1.00" | 1.50" |
| Dynamic bend radius | 10X OD | 10X OD | 10X OD | 10X OD | 10X OD |
| Temperature range (C) | -55 to 200 | -55 to 200 | -55 to 200 | -55 to 200 | -55 to 200 |
| Weight (lb/100ft) | 1.5 | 2.1 | 2.2 | 3.4 | 6.5 |

Attenuation (dB/ft)

| FREQUENCY (GHz) | EW110 | EW140 | EW150 | EW200 | EW292 |
|-----------------|-------|-------|-------|-------|-------|
| 1 | 0.20 | 0.12 | 0.10 | 0.08 | 0.05 |
| 2 | 0.30 | 0.20 | 0.15 | 0.12 | 0.07 |
| 4 | 0.45 | 0.28 | 0.23 | 0.18 | 0.09 |
| 8 | 0.66 | 0.38 | 0.32 | 0.23 | 0.13 |
| 12 | 0.80 | 0.45 | 0.40 | 0.28 | 0.17 |
| 18 | 0.96 | 0.55 | 0.48 | 0.35 | 0.22 |
| 26 | 1.17 | 0.68 | 0.60 | 0.45 | |
| 32 | 1.32 | 0.77 | 0.66 | 0.50 | |
| 40 | 1.50 | 0.88 | 0.75 | | |
| 50 | 1.70 | 1.00 | | | |

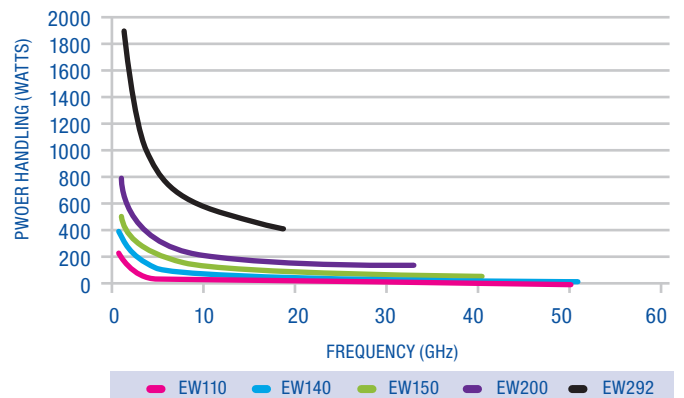
Insertion Loss Chart (dB)



Power Handling (WATTS)

| FREQUENCY (GHz) | EW110 | EW140 | EW150 | EW200 | EW292 |
|-----------------|-------|-------|-------|-------|-------|
| 1 | 230 | 425 | 540 | 800 | 1900 |
| 2 | 150 | 275 | 350 | 600 | 1400 |
| 4 | 100 | 190 | 250 | 400 | 900 |
| 8 | 80 | 150 | 175 | 275 | 650 |
| 12 | 65 | 125 | 140 | 220 | 550 |
| 18 | 50 | 100 | 110 | 190 | 450 |
| 26 | 40 | 75 | 95 | 175 | |
| 32 | 38 | 70 | 85 | 160 | |
| 40 | 30 | 60 | 80 | | |
| 50 | 28 | 50 | | | |

Power Handling (WATTS)



Standard Types

- 50 OHM
- 100+ DB shielding
- Up to 50 GHZ
- 70% Velocity Propagation

Phase Stable *over flexibility and temperature*

- Dynamic bend to 10x coax cable diameter
- Standard lengths available, up to five 5 feet
- Custom assembly available
- 80-85% velocity of propagation

Please contact a Field Applications Engineer at 209-892-3347 or 888-565-7878 to place an order or inquire about a custom cable assembly