CABLE ASSEMBLIES

## Flexible cable 7/75 D (HD 1.0/4.8 - RG6 type)



### P/N: C291 384 083

**APPLICATION NOTE**

Due to its 75 ohms characteristic impedance, this cable is rbetter suited for HDTV/Video application.

### CONSTRUCTION / DIMENSIONS

| | Material | mm | Inches |
|---|---|---|---|
| Center conductor | Solid BC[1] | 1.02 | 0.040 |
| Dielectric | FHD PE[2] | 4.56 | 0.180 |
| Inner shield | Al[3] tape | 4.70 | 0.185 |
| Outer shield | TC[4] braid | 5.26 | 0.207 |
| Jacket | Blue PVC[5] | 6.95 | 0.274 |

### ELECTRICAL CHARACTERISTICS

| | | |
|---|---|---|
| Characteristic impedance | 75Ω ± 1.5Ω | |
| Operating frequency range | DC - 4.5 GHz | |
| Shielding effectiveness | - | |
| Voltage withstanding | 300 V rms | |
| Peak power | - | |
| Capacitance | 53.15 pF / m | 16.2 pF / ft |
| Velocity of propagation | 82 % (4.1 ns / m) | |

### MECHANICAL CHARACTERISTICS

| | | |
|---|---|---|
| Recommended minimum bending radius | 69.85 mm | 2.75 inch |
| Weight | 59.5 g / m | 0.04 lbs / ft |

### ENVIRONMENTAL CHARACTERISTICS

| | | |
|---|---|---|
| Operating temperature range | -30 / +75 °C | -22 / +167 °F |
| Fire resistance | Yes (UL1666 Vertical Shaft) | |
| Halogen free | No | |

### FREQUENCY / ATTENUATION (typ.) / CW MAX POWER (sea level / 25 °C)

| GHz | dB / m | dB / ft | Watts |
|---|---|---|---|
| 0.5 | 0.134 | 0.040 | - |
| 1.0 | 0.193 | 0.058 | - |
| 1.5 | 0.240 | 0.073 | - |
| 2.0 | 0.281 | 0.085 | - |
| 2.5 | 0.318 | 0.096 | - |
| 3.0 | 0.352 | 0.107 | - |
| 3.5 | 0.384 | 0.116 | - |
| 4.0 | 0.414 | 0.125 | - |
| 4.5 | 0.443 | 0.134 | - |
| Attenuation calculation (dB/m) | (0.179 x √f GHz) + (0.014 x f GHz) | | |

[1] BC = Bare Copper
[2] FHD PE = Foam High Density PolyEthylene
[3] Al = Aluminum
[4] TC = Tinned Copper
[5] PVC = PolyVinyl Chloride

## Flexible cable 10/50 S (RG213 - KX4)



Cost effective solution

### P/N: C291 510 000 (MIL-C-17/74-RG213)

### P/N: C291 510 010 (NF-C-93/550-KX4)

**APPLICATION NOTE**

Due to its construction and raw material selection, RG213 is a cost effectiveness solution in the 10 mm cable range.

This cable may be considered for low frequency applications that do not require a high level of screening effectiveness.

### CONSTRUCTION / DIMENSIONS

| | Material | mm | Inches |
|---|---|---|---|
| Center conductor | Standed copper | 2.26 | 0.089 |
| Dielectric | Solid PE[1] | 7.24 | 0.285 |
| Inner shield | Copper braid | 8.13 | 0.320 |
| Outer shield | - | - | - |
| Jacket | Black PVC[2] | 10.30 | 0.406 |

### ELECTRICAL CHARACTERISTICS

| | | |
|---|---|---|
| Characteristic impedance | 50Ω ± 2Ω | |
| Operating frequency range | DC - 1 GHz | |
| Shielding effectiveness | 40 dB | |
| Voltage withstanding | 10 000 V rms | |
| Peak power | 6.5 kW | |
| Capacitance | 96 pF / m | 29 pF / ft |
| Velocity of propagation | 66 % (5 ns / m) | |

### MECHANICAL CHARACTERISTICS

| | | |
|---|---|---|
| Recommended minimum bending radius | 40 mm | 1.57 inch |
| Weight | 148 g / m | 0.0999 lbs / ft |

### ENVIRONMENTAL CHARACTERISTICS

| | | |
|---|---|---|
| Operating temperature range | -40 / +85 °C | -40 / +185 °F |
| Fire resistance | No | |
| Halogen free | No | |

### FREQUENCY / ATTENUATION (typ.) / CW MAX POWER (sea level / 25 °C)

| GHz | dB / m | dB / ft | Watts |
|---|---|---|---|
| 0.05 | 0.05 | 0.01 | 805 |
| 0.1 | 0.07 | 0.02 | 569 |
| 0.2 | 0.10 | 0.03 | 402 |
| 0.3 | 0.12 | 0.04 | 329 |
| 0.5 | 0.16 | 0.05 | 255 |
| 0.6 | 0.18 | 0.05 | 232 |
| 0.7 | 0.20 | 0.06 | 215 |
| 0.8 | 0.21 | 0.06 | 201 |
| 1.0 | 0.24 | 0.07 | 180 |
| Attenuation calculation (dB/m) | (0.20 x √f GHz) + (0.04 x f GHz) | | |
| Power calculation (W) | 180 / √f GHz | | |

[1] PE = PolyEthylene
[2] PVC = PolyVinyl Chloride

**Note:**
Typical attenuation for a couple of connectors (dB) = 0.045 x √f (GHz)