Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION



7810A Coax - RG-8 Type

For more Information please call

1-800-Belden1



General Description:

RG-8 type, 10 AWG solid .108" bare copper-covered aluminum conductor, gas-injected foam HDPE insulation, Duobond® II + tinned copper braid shield (95% coverage), polyethylene jacket.

Physical Characteristics (Overall)

Conductor

AWG:

| # Coax | AWG | Stranding | Conductor Material | Dia. (in.) |
|--------|-----|-----------|-------------------------------------|------------|
| 1 | 10 | Solid | BCCA - Bare Copper Covered Aluminum | .108 |

Total Number of Conductors:

Insulation

Insulation Material:

| Insulation Material | Dia. (in.) |
|---|------------|
| Gas-injected FHDPE - Foam High Density Polyethylene | .285 |

Outer Shield

Outer Shield Material:

| Layer # | Outer Shield Trade Name | Type | Outer Shield Material | Coverage (%) |
|---------|-------------------------|-------|---|--------------|
| 1 | Bonded Duofoil® | Таре | Bonded Aluminum Foil-Polyester Tape-Aluminum Foil | 100 |
| 2 | | Braid | TC - Tinned Copper | 95 |

Outer Jacket

Outer Jacket Material:

Outer Jacket Material PE - Polyethylene

Overall Cable

Overall Nominal Diameter: 0.403 in.

Mechanical Characteristics (Overall)

| Operating Temperature Range: | -40°C To +75°C |
|-----------------------------------|-----------------|
| Non-UL Temperature Rating: | 80°C |
| Bulk Cable Weight: | 70 lbs/1000 ft. |
| Max. Recommended Pulling Tension: | 150 lbs. |
| Min. Bend Radius/Minor Axis: | 4 in. |

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| EU Directive 2011/65/EU (ROHS II): | Yes |
|---------------------------------------|------------|
| EU CE Mark: | No |
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2002/95/EC (RoHS): | Yes |
| EU RoHS Compliance Date (mm/dd/yyyy): | 01/01/2004 |
| EU Directive 2002/96/EC (WEEE): | Yes |
| EU Directive 2003/11/EC (BFR): | Yes |
| CA Prop 65 (CJ for Wire & Cable): | Yes |
| MII Order #39 (China RoHS): | Yes |
| RG Type: | 8/U |
| Series Type: | RF 400 |
| | |

Suitability

Plenum/Non-Plenum

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| Plenum (| (Y/N): | | | 1 |
|---|--|------------|-------------|---------------|
| F161-10 | N | | | |
| | Characteristics (O | verall) | | |
| | teristic Impedance: | | | |
| Impedance | e (Onm) | | | |
| 50 | | | | |
| Nom. Inductar | nce: | | | |
| Inductance | e (μH/ft) | | | |
| 0.060 | | | | |
| Nom. Canacita | tance Conductor to Shie | ıld: | | |
| | | iu. | | |
| Capacitano | ce (pr/π) | | | |
| 23.0 | | | | |
| Nominal Veloc | city of Propagation: | | | |
| VP (%) | | | | |
| 86 | | | | |
| | | | | |
| Nominal Delay | _ | | | |
| Delay (ns/f | ft) | | | |
| 1.17 | | | | |
| Nom. Conduct | ctor DC Resistance: | | | |
| | °C (Ohm/1000 ft) | | | |
| 1.34 | (511113 1000 10) | | | |
| | | | | |
| | er Shield DC Resistance | : | | |
| DCR @ 20° | °C (Ohm/1000 ft) | | | |
| 2 | | | | |
| Maximum VSV | wr. | | | |
| | | or (MILLS) | Ston From / | (MH=) May VOV |
| Description | on Freq. (MHz) Start Fre | | | |
| 1 | 5 | - 1 | | 1.25:1 |
| | " | | 6000 | 1.20.1 |
| Nom. Attenuat | | | 6000 | 1.20.1 |
| | ation: | | 6000 | 1.20.1 |
| | | | 6000 | 1.20.1 |
| Freq. (MHz) | ation: z) Attenuation (dB/100 to 0.7 | | 6000 | 1120.1 |
| Freq. (MHz 30 50 | ation: z) Attenuation (dB/100 t) 0.7 0.9 | | 6000 | 1120.1 |
| Freq. (MHz) 30 50 150 | ation: z) Attenuation (dB/100 t 0.7 0.9 1.5 | | 6000 | 112011 |
| Freq. (MHz 30 50 150 220 | ation: z) Attenuation (dB/100 t 0.7 0.9 1.5 | | 6000 | 1.20.1 |
| Freq. (MHz 30 50 150 220 450 | ation: z) Attenuation (dB/100 t 0.7 0.9 1.5 1.8 2.7 | | 6000 | 1.20.1 |
| Freq. (MHz) 30 50 150 220 450 900 | ation: z) Attenuation (dB/100 to 0.7 | | 6000 | 1.20.1 |
| Freq. (MHz) 30 50 150 220 450 900 1500 | ation: z) Attenuation (dB/100 t 0.7 0.9 1.5 1.8 2.7 | | 6000 | 1.20.1 |
| Freq. (MHz) 30 50 150 220 450 900 | ation: z) Attenuation (dB/100 to 0.7 | | 6000 | 1.20.1 |
| Freq. (MHz) 30 50 150 220 450 900 1500 | ation: z) Attenuation (dB/100 to 0.7 | | 6000 | 1.20.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 | ation: z) Attenuation (dB/100 to 0.7 | | 6000 | 1.26.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 | ation: z) Attenuation (dB/100 for 0.7 for 0.9 for 0.9 for 0.7 for 0.9 | | 6000 | 1.20.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3000 | ation: 2) Attenuation (dB/100 to 0.7 | | 6000 | 1.20.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3500 | ation: 2) Attenuation (dB/100 to 0.7) 0.9 1.5 1.8 2.7 3.8 5.1 5.6 6.0 6.7 7.5 8.2 | | 6000 | 1.20.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3000 4500 | ation: 2) Attenuation (dB/100 to 0.7) 0.9 1.5 1.8 2.7 3.8 5.1 5.6 6.0 6.7 7.5 8.2 9.5 | | 6000 | 1.20.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3000 4500 5800 | ation: 2) Attenuation (dB/100 to 0.7) 0.9 1.5 1.8 2.7 3.8 5.1 5.6 6.0 6.7 7.5 8.2 9.5 11.1 | | 6000 | 1.20.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3000 4500 | ation: 2) Attenuation (dB/100 to 0.7) 0.9 1.5 1.8 2.7 3.8 5.1 5.6 6.0 6.7 7.5 8.2 9.5 | | 6000 | |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3000 3500 4500 5800 6000 | ation: 2) Attenuation (dB/100 to 0.7 | | 6000 | |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3000 3500 4500 6000 | ation: 2) Attenuation (dB/100 to 0.7 | it.) | 6000 | |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3000 3500 4500 6000 Max. Attenuati | Attenuation (dB/100 to 10 to | it.) | 6000 | |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3000 3500 4500 5800 6000 Max. Attenuati | Attenuation (dB/100 to 10.7 | it.) | 6000 | 1.20.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3000 3500 4500 5800 6000 Max. Attenuati | Attenuation (dB/100 to 1.5 | it.) | 6000 | 1.20.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3000 3500 4500 5800 6000 Max. Attenuati Freq. (MHz 30 50 150 | Attenuation (dB/100 to 1.5 | it.) | 6000 | 1.20.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 2800 2500 3000 3500 4500 6000 Max. Attenuati Freq. (MHz 30 50 150 220 | Attenuation (dB/100 to 1.5 | it.) | 6000 | |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3000 3500 4500 5800 6000 Max. Attenuati Freq. (MHz 30 50 150 | Attenuation (dB/100 to 1.5 | it.) | 6000 | |
| Freq. (MHz 30 50 150 220 450 900 1500 2800 2500 3000 3500 4500 6000 Max. Attenuati Freq. (MHz 30 50 150 220 | Attenuation (dB/100 to 0.7 | it.) | 6000 | 1120.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 2500 3000 3500 4500 6000 Max. Attenuati Freq. (MHz 30 50 150 220 450 900 | Attenuation (dB/100 to 0.7 | it.) | 6000 | 1120.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 2800 2800 3000 3500 4500 6000 Max. Attenuati Freq. (MHz 30 50 150 220 450 900 1500 | Attenuation (dB/100 to 0.7 | it.) | 6000 | 1120.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 2800 2500 3000 3500 4500 6000 Max. Attenuati Freq. (MHz 30 50 150 220 450 900 1500 1800 | Attenuation (dB/100 to 0.7 | it.) | 6000 | 1.20.1 |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2500 3000 3500 4500 6000 Max. Attenuati Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 | Attenuation (dB/100 to 0.7 | it.) | 6000 | |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2500 3000 3500 4500 6000 Max. Attenuati Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 | Attenuation (dB/100 to 0.7 | it.) | 6000 | |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2500 3000 3500 4500 6000 Max. Attenuati Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 3000 | Attenuation (dB/100 to 0.7 | it.) | 6000 | |
| Freq. (MHz 30 50 150 220 450 900 1500 1800 2500 3000 3500 4500 6000 Max. Attenuati Freq. (MHz 30 50 150 220 450 900 1500 1800 2000 2500 | Attenuation (dB/100 to 0.7 | it.) | 6000 | |

Max. Power Rating:

5800

6000

| Freq. (MHz) | Rating (W) |
|-------------|------------|
| 30 | 3427 |

12.00

12.23

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| 50 | 2588 |
|------|------|
| 150 | 1428 |
| 220 | 1195 |
| 450 | 817 |
| 900 | 575 |
| 1500 | 437 |
| 1800 | 399 |
| 2000 | 375 |
| 2500 | 334 |
| 3000 | 305 |
| 3500 | 282 |
| 4500 | 247 |
| 5800 | 217 |
| 6000 | 213 |
| | |

Max. Operating Voltage - Non-UL:



Sweep Test

Sweep Testing: 100% Sweep tested to 6 GHz.

Misc. Information (Overall)

Notes (Overall)

Notes: Belden® The Wire in Wireless®

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---------------|----------|-------------|-------|-------|-------------------------------|
| 7810A 0101000 | 1,000 EA | 79.000 LB | BLACK | С | RF400 WIRELESS 50 OHM COAX PE |
| 7810A 010500 | 500 FT | 39.000 LB | BLACK | С | RF400 WIRELESS 50 OHM COAX PE |

Notes:

C = CRATE REEL PUT-UP.

Revision Number: 4 Revision Date: 07-19-2013

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