

## RFA 1/2" COAXIAL CABLE

### NK CODES

RFA 1/2"-50  
RFA 1/2"-50 BHF (UL) CATVR  
RFA 1/2"-50 GHF Cca  
RFA 1/2"-50 BHF Cca

NKRFA01200  
NKRFA01204  
NKRFA01211  
NKRFA01212

### CONSTRUCTION



|                 |                                                                        |           |           |
|-----------------|------------------------------------------------------------------------|-----------|-----------|
| Inner conductor | Copper-clad aluminium wire                                             | Ø 4.8 mm  | (0.19 in) |
| Dielectric      | Cellular polyethylene                                                  | Ø 12.1 mm | (0.48 in) |
| Outer conductor | Corrugated copper tube                                                 | Ø 13.9 mm | (0.55 in) |
| Jacket          | See Jacketing Options table below                                      | Ø 16.0 mm | (0.63 in) |
| Marking         | Draka, cable type, manufacture week, year, batch number and meter mark |           |           |

### ELECTRICAL CHARACTERISTICS at +20°C (+68°F)

|                                                       |                            |
|-------------------------------------------------------|----------------------------|
| Characteristic impedance                              | 50 ± 1 Ω                   |
| Return loss 24 dB for 100 m cable with NKC connectors |                            |
| - 380 - 500                                           | MHz                        |
| - 790 - 960                                           | "                          |
| - 1710 - 1880                                         | "                          |
| - 1900 - 2170                                         | "                          |
| - 2490 - 2700                                         | "                          |
| - 3400 - 3600                                         | "                          |
| Other bands also available on request                 |                            |
| Bands according to customer's specifications          |                            |
| Attenuation                                           | See table                  |
| Velocity factor                                       | 0.88                       |
| Capacitance                                           | 76.1 pF/m (23.2 pF/ft)     |
| Inductance                                            | 0.19 µH/m (0.058 µH/ft)    |
| Maximum frequency                                     | 9500 MHz                   |
| Max power rating                                      | See table                  |
| Peak RF voltage rating                                | 1.80 kV                    |
| Peak power rating                                     | 31.8 kW                    |
| DC resistance                                         |                            |
| - Inner conductor                                     | 1.60 Ω/km (0.44 Ω/1000 ft) |
| - Outer conductor                                     | 2.28 Ω/km (0.69 Ω/1000 ft) |

### MECHANICAL CHARACTERISTICS

|                             |             |                 |
|-----------------------------|-------------|-----------------|
| Weight                      | 0.25 kg/m   | (0.17 lb/ft)    |
| Maximum pulling force       | 1800 N      | (404 lb)        |
| Minimum bending radius      |             |                 |
| - Single bending            | 70 mm       | (2.8 in)        |
| - Repeated bending          | 120 mm      | (4.7 in)        |
| Operating temperature range | -55...+85°C | (-67...+185 °F) |
| Crush resistance            | 1.7 kg/mm   | (94 lb/in)      |
| Bending moment              | 3.8 Nm      | (2.8 lb-ft)     |
| Recommended clamp spacing   | 1.0 m       | (3.3 ft)        |

### JACKETING OPTIONS

| TYPE                       | JACKET                                                   | IEC 60754 -1/-2<br>Halogen free,<br>non corrosive | IEC 61034<br>low smoke<br>emission | IEC 60332-3-24<br>fire retardant | CPR class | UV<br>retardancy | UL<br>Rated | Min. installation<br>temperature |
|----------------------------|----------------------------------------------------------|---------------------------------------------------|------------------------------------|----------------------------------|-----------|------------------|-------------|----------------------------------|
| RFA 1/2"-50                | Black, halogen free polyethylene                         | yes                                               | no                                 | no                               | no        | yes              | no          | -40°C (-40°F)                    |
| RFA 1/2"-50 GHF Cca        | Grey, halogen free fire retardant thermoplastic          | yes                                               | yes                                | yes                              | C-s1d1a1  | no               | no          | -20°C (-4°F)                     |
| RFA 1/2"-50 BHF Cca        | Black, halogen free fire retardant thermoplastic         | yes                                               | yes                                | yes                              | C-s1d1a1  | yes              | no          | -20°C (-4°F)                     |
| RFA 1/2"-50 BHF (UL) CATVR | Black, halogen free fire retardant UL Riser rated jacket | yes                                               | yes                                | yes                              | no        | yes              | yes         | -20°C (-4°F)                     |

## RFA 1/2" COAXIAL CABLE

| FREQUENCY<br>MHz | ATTENUATION<br>dB/100 m | ATTENUATION<br>dB/100 ft | POWER RATING<br>kW |
|------------------|-------------------------|--------------------------|--------------------|
| 10               | 0.664                   | 0.202                    | 12                 |
| 30               | 1.16                    | 0.353                    | 6.9                |
| 50               | 1.50                    | 0.458                    | 5.3                |
| 88               | 2.00                    | 0.611                    | 4.0                |
| 100              | 2.14                    | 0.652                    | 3.7                |
| 108              | 2.23                    | 0.679                    | 3.6                |
| 174              | 2.85                    | 0.868                    | 2.8                |
| 200              | 3.06                    | 0.933                    | 2.6                |
| 300              | 3.78                    | 1.15                     | 2.1                |
| 400              | 4.40                    | 1.34                     | 1.8                |
| 450              | 4.68                    | 1.43                     | 1.7                |
| 500              | 4.95                    | 1.51                     | 1.6                |
| 512              | 5.01                    | 1.53                     | 1.6                |
| 600              | 5.45                    | 1.66                     | 1.5                |
| 700              | 5.92                    | 1.81                     | 1.3                |
| 800              | 6.36                    | 1.94                     | 1.2                |
| 850              | 6.57                    | 2.00                     | 1.2                |
| 890              | 6.74                    | 2.05                     | 1.2                |
| 900              | 6.78                    | 2.07                     | 1.2                |
| 950              | 6.98                    | 2.13                     | 1.1                |
| 960              | 7.02                    | 2.14                     | 1.1                |
| 1000             | 7.18                    | 2.19                     | 1.1                |
| 1200             | 7.92                    | 2.41                     | 0.98               |
| 1400             | 8.62                    | 2.63                     | 0.91               |
| 1600             | 9.28                    | 2.83                     | 0.85               |
| 1800             | 9.90                    | 3.02                     | 0.79               |
| 1900             | 10.2                    | 3.11                     | 0.77               |
| 2000             | 10.5                    | 3.20                     | 0.75               |
| 2200             | 11.1                    | 3.37                     | 0.71               |
| 2400             | 11.6                    | 3.54                     | 0.68               |
| 2600             | 12.2                    | 3.71                     | 0.65               |
| 2800             | 12.7                    | 3.86                     | 0.62               |
| 3000             | 13.2                    | 4.02                     | 0.59               |
| 3400             | 14.2                    | 4.31                     | 0.55               |
| 6000             | 19.7                    | 6.00                     | 0.40               |
| 8800             | 23.4                    | 7.12                     | 0.33               |

Attenuation values are typical at ambient temperature +20°C (+68°F).

Power rating ambient temperature +40°C (+104°F), inner conductor +100°C (+212°F).

## CODES FOR NKC CONNECTORS

| CONNECTOR TYPE        | NK CODE    |
|-----------------------|------------|
| N male                | NKC1012300 |
| N female              | NKC1012400 |
| 7-16 male             | NKC1012100 |
| 7-16 female           | NKC1012200 |
| N male Right angle    | NKC1012600 |
| 7-16 male Right angle | NKC1012500 |