

# Ecoflex® 10



## Ecoflex® 10 - ultraflexible and low loss coaxial cable

Ecoflex 10 is a flexible, low-loss coaxial cable specifically designed for use up to 6 GHz. Advanced manufacturing techniques combined with the use of a low-loss PE-LLC Dielectric yields a foaming rate of more than 70%. This results in very low attenuation. Ecoflex 10 sets standards among flexible coaxial cables. The flexibility of Ecoflex 10 is further enhanced through the use of a stranded, oxygen-free copper center conductor. Use of proprietary techniques, continuous center conductor calibration and compression as well as the application of a precoating results in low losses and good impedance matching. Further advantages of the cable include the use of double shielding which is constructed of overlapping copperfoil plus an additional tight woven copper braid.

A screening efficiency of > 90 dB @ 1 GHz is realized. The copperfoil has an applied PE-coating which prevents foil cracking due to short radius bends. The black PVC sheath of Ecoflex 10 is UV-stabilized. In addition to a full compliment of standard connectors, an easy to use solder free N-connector has been specially developed for Ecoflex 10. Connector installation only takes a few minutes and requires no special tools. Ecoflex 10 is the right choice when a low loss, highly flexible microwave rated cable is required.

Ecoflex 10 is available from stock in the following standard drum sizes: 25 m, 50 m, 100 m, 200 m, 400 m and 500 m.

### Ecoflex® 10 characteristics

Diameter .....	10,2 mm
Impedance .....	50 Ω
Attenuation @ 1 GHz/100m .....	14,2 dB
fmax .....	6 GHz

# Ecoflex®10

## Technical data

Centre conductor ...	stran. copper, oxygen free, 7 x 1,0 mm
Centre conductor Ø	2,85 mm
Dielectric	PE, low-loss Compound
Dielectric Ø	7,25 mm
Outer conductor 1	copperfoil, PE-coated
Shielding factor	100 %
Outer conductor 2	copper braid
Shielding factor	72 %
Sheath	black PVC, UV-resistant
Outer diameter Ø	10,2 mm
Weight	131 g/m
Min. bending radius .. one single bending	40 mm
15 repeated bendings	80 mm
Temperature range ... storage	-70 to +85°C
installation	-40 to +60°C
operation	-55 to +85°C
Pulling strength	5 daN

## Electrical specifications

Impedance	50 Ω
Capacity	78 pF/m
Velocity factor	0,85
fmax	6 GHz
Screening efficiency @ 1 GHz	> 90 dB
DC-resistance: Centre conductor	3,3 Ω/km
Outer conductor	8,4 Ω/km
RF peak voltage	1kV

### Ecoflex 10 RG 213/U RG 58/U

Capacity	78 pF/m	101 pF/m	102 pF/m
Velocity factor	0,85	0,66	0,66
Attenuation (dB/100 m)			
10 MHz	1,2	2,0	5,0
100 MHz	4,0	7,0	17,0
500 MHz	9,6	17,0	39,0
1000 MHz	14,2	22,5	54,6
3000 MHz	27,0	58,5	118

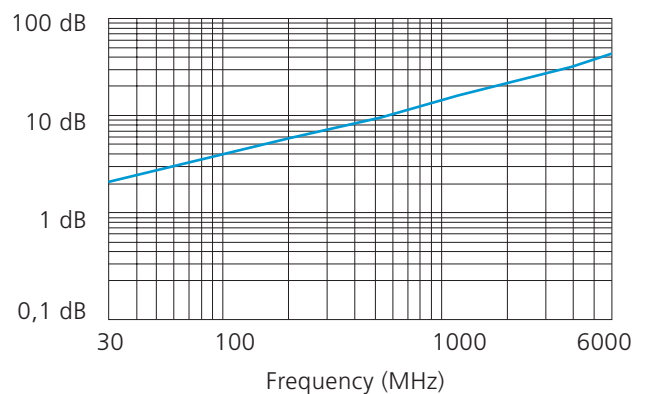
## Typ. attenuation (dB/100 m @ 20°C)

5 MHz	0,8	1000 MHz	14,2
10 MHz	1,2	1296 MHz	16,5
50 MHz	2,8	1500 MHz	17,9
100 MHz	4,0	1800 MHz	19,9
144 MHz	4,9	2000 MHz	21,2
200 MHz	5,8	2400 MHz	23,6
300 MHz	7,3	3000 MHz	27,0
432 MHz	8,9	4000 MHz	32,2
500 MHz	9,6	5000 MHz	37,0
800 MHz	12,5	6000 MHz	41,5

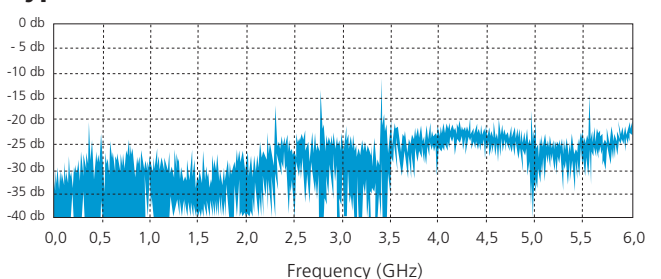
## Max. power handling (W @ 40°C)

10 MHz	3960	3000 MHz	180
100 MHz	1210	4000 MHz	150
500 MHz	510	5000 MHz	130
1000 MHz	350	6000 MHz	120
2000 MHz	230		

## Typ. Attenuation (dB/100 m) @ 20°C



## Typ. Return loss



Due to production tolerances the RTL may have different characteristics.