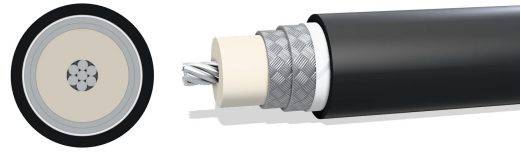


Application

RG214 TY-ZH is the halogen-free version of the heavy, double-screened 50 Ω RG214 coaxial cable. It is used for antenna feeders, transmit/receive lines, radar and measurement links where a low-loss coax with a higher screening performance than a single-braid cable is needed, and where the cable runs through spaces in which smoke and corrosive gases in a fire must be kept to a minimum. The designation follows the RG214 type of the MIL-C-17 coaxial cable family. The construction is a stranded silver-plated copper inner conductor of 7 × 0.75 mm, a low-density polyethylene dielectric, two silver-plated copper wire braids (81 % and 85 % coverage), a non-migrating polyester tape and a black, flame-retardant, non-corrosive halogen-free (LSZH) jacket with an outer diameter of 10.8 mm. The jacket complies with IEC 60754-1, IEC 60754-2 and IEC 61034-2 and the cable is classified Eca under the Construction Products Regulation (EN 50575). Attenuation and maximum power figures from 5 to 5800 MHz are given in the table below.



CONSTRUCTION

Inner conductor	Silver-plated copper, stranded, 7 × 0.75 mm.
Dielectric	Low-density polyethylene (LDPE), diameter 7.25 ± 0.18 mm.
First braid	Silver-plated copper wire braid, 144 × 0.16 mm, coverage 81 %; diameter over first braid 7.90 mm.
Second braid	Silver-plated copper wire braid, 168 × 0.16 mm, coverage 85 %; diameter over second braid 8.60 mm.
Tape	Non-migrating polyester tape over the second braid.
Outer jacket	Flame-retardant, non-corrosive, halogen-free thermoplastic (LSZH).
Jacket colour	Black.
Outer diameter	10.8 ± 0.18 mm.

ELECTRICAL AND TRANSMISSION PROPERTIES AT 20 °C

Characteristic impedance	50 ± 3 Ω.
Capacitance	100 pF/m.
Velocity ratio	66 %.
Resistance, inner conductor	6 Ω/km.
Resistance, braid	4.3 Ω/km.
Sheath spark test	6.0 kV.
Screening effectiveness	> 75 dB (100 to 900 MHz).
Attenuation and max. power	See table below (5 to 5800 MHz).
Structural return loss	See table below (30 to 5800 MHz).

MECHANICAL AND THERMAL PROPERTIES

Min. bending radius, single	5 × outer diameter.
Min. bending radius, repeated	10 × outer diameter.
Temperature range	-40 °C to +80 °C.
Weight, copper	96.7 kg/km.
Weight, total	186.6 kg/km.

FIRE BEHAVIOUR

Halogen-free, low smoke

Compliant with IEC 60754-1, IEC 60754-2 and IEC 61034-2.

Reaction to fire (CPR)

Eca (EN 50575:2014 + A1:2016).

ATTENUATION AND MAXIMUM POWER RATING

Frequency (MHz)	Attenuation (dB/100 m)	Max. power (W)	Frequency (MHz)	Attenuation (dB/100 m)	Max. power (W)
5	1.3	2828	900	23.1	211
10	1.9	2000	1000	24.7	200
30	3.5	1155	1500	32.2	163
50	4.5	894	1800	36.3	149
150	8.6	516	2000	38.9	141
220	10.6	426	2500	45.5	126
450	15.6	298	3000	52.2	115
600	18.1	258	5200	81.3	88
800	21.6	224	5800	88.5	83

STRUCTURAL RETURN LOSS

Frequency band (MHz)	Return loss (dB)	Frequency band (MHz)	Return loss (dB)
30 to 450	> 22	2000 to 3000	> 19
450 to 1000	> 20	3000 to 4000	> 18
1000 to 2000	> 19	4000 to 5800	> 17

Green code CU/PE/SCWB/SCWB/LSZH: stranded silver-plated copper inner conductor, polyethylene dielectric, two silver-plated copper wire braids (SCWB), halogen-free LSZH jacket. All values are nominal manufacturer values for the halogen-free version; indicative and non-binding.