

TRISSET-113

Detailed specifications

Coaxial cable TRISSET-113 is produced and sold in three versions with different sheath/jacket:

TRISSET-113 E1015

Dedicated for use in individual and shared antenna systems. Ideal for distribution of digital terrestrial television (DTT/DVB-T), FM/DAB radio and DVB-S/S2 programming (also via multiswitch SMATV systems) inside buildings. Due to PVC (polyvinyl chloride) jacket, the cable is intended only for indoor use.

TRISSET-113 PE E1017

Dedicated for use in individual and shared antenna systems. Ideal for distribution of digital terrestrial television (DTT/DVB-T), FM/DAB radio and DVB-S/S2 programming (also via multiswitch SMATV systems). Due to PE (polyethylene) jacket, the cable can be used outdoors (e.g. on roofs).

TRISSET-113 HF E1019

Dedicated for distribution of digital terrestrial television (DTT/DVB-T), FM/DAB radio and DVB-S/S2 programming (also via multiswitch SMATV systems) in public buildings. Due to HF (halogen free) jacket, the cable is safer in the event of fire, which is required in many countries e.g. for installations in schools, hospitals etc. In the case of fire, the cable is flame retardant and emits little smoke, the emitted gases are not corrosive.

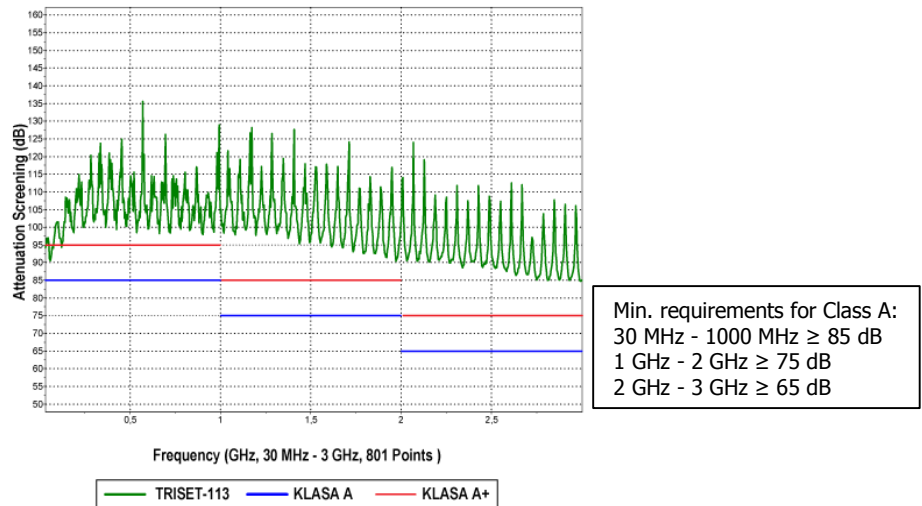
TRISSET-113 HF is compliant with the following standards:

- IEC 60332-1, EN 60332-1 - tests on electric and optical fiber cables under fire condition
- IEC 60754-1, EN 50267-2-1 - halogen content test
- IEC 60754-2, EN 50267-2-2 - determination of acidity of gases evolved during combustion
- IEC 61034-2, EN 61034-2 - method of test for the measurement of the density of smoke emitted from electric cables burning under the defined conditions of the test



Parameters of TRISET-113 cables

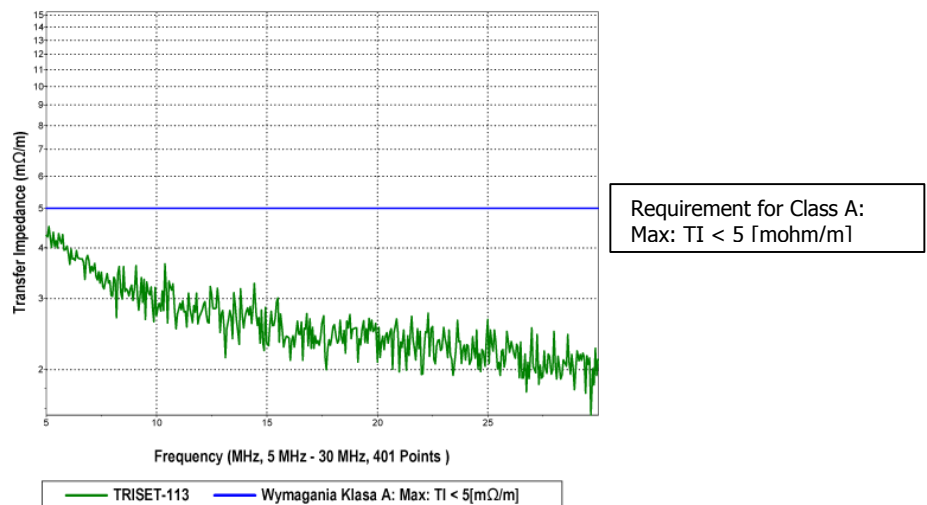
- A. Screening efficiency (Screening Attenuation) [dB] – is one of the most important parameters describing the properties of signal transmission cables. To classify a cable, the measured values are compared with requirements contained in the relevant standard. Screening efficiency shows how many times the signal coming out from the inside of the cable (penetrating the shielding layers and measured outside them) is attenuated compared to the transmitted signal, or vice versa (the attenuation ratio of an outer electromagnetic field).



Screening efficiency of TRISET-113 cables in the 30-3000 MHz range and requirements for class A.

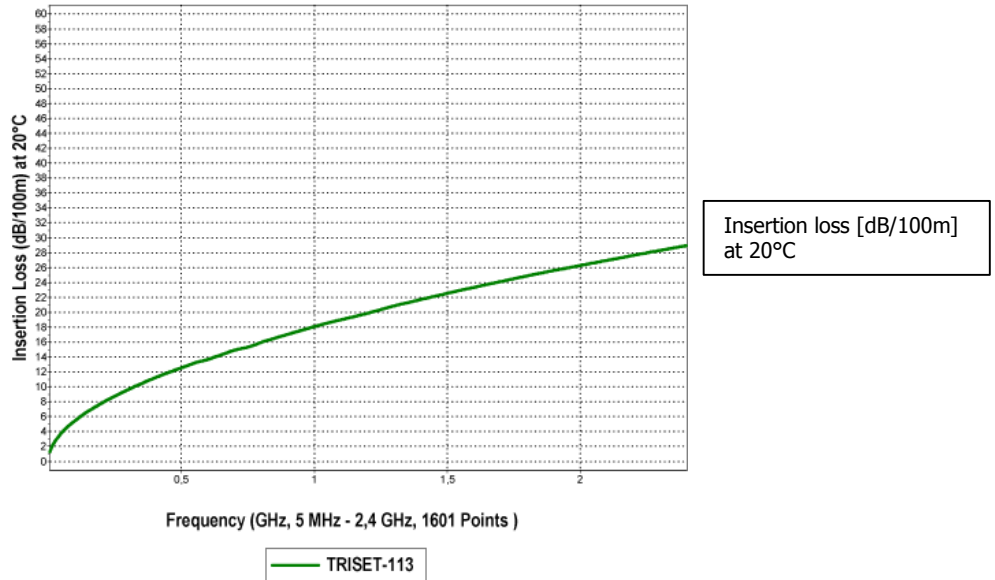
According to EN50117 standard, there are C, B, A, A+, A++ classes described by the minimum screening attenuation in the sub-ranges of the 30-3000 MHz frequency range. Triset 113 features the highest screening efficiency among subscriber cables (distributing FM/DAB, TV, SAT TV programming to end users) available on the market, which places it close to A+ class.

- B. Transfer Impedance [$m\Omega/m$] – is the measure of signal penetration in the 5-30 MHz range (the lower the better).



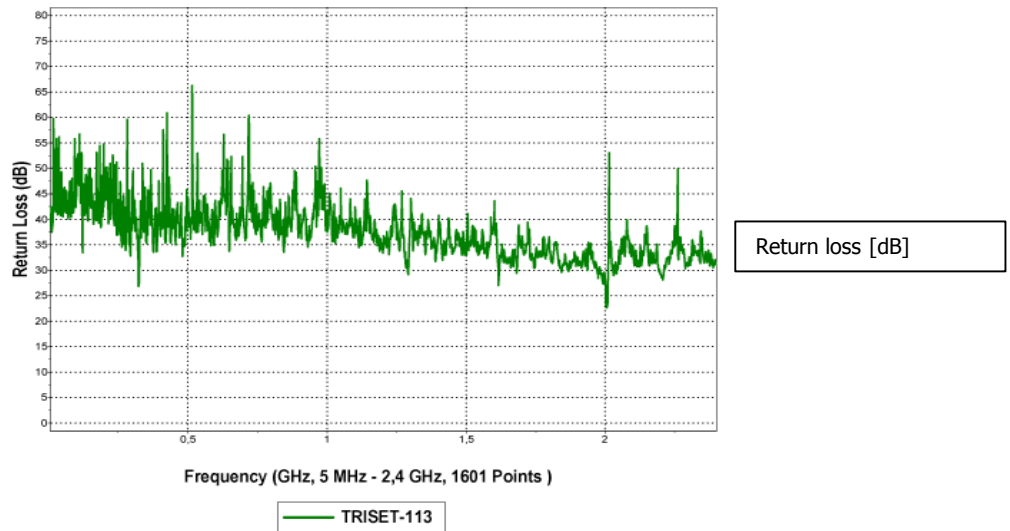
Transfer impedance of TRISET-113 cable measured in the 5-30 MHz range, compared with the requirement for Class A (blue line)

- C. Insertion Loss (IL) [dB/100m] – determines the quality of the cable in terms of attenuation of the signal along the transmission line, like in any transmission medium. The values of the attenuation of a coaxial cable (IL) are usually given for 100 meters, . Higher quality coaxial cables are characterized by lower attenuation, which translates into higher signal levels at the inputs of the receivers.



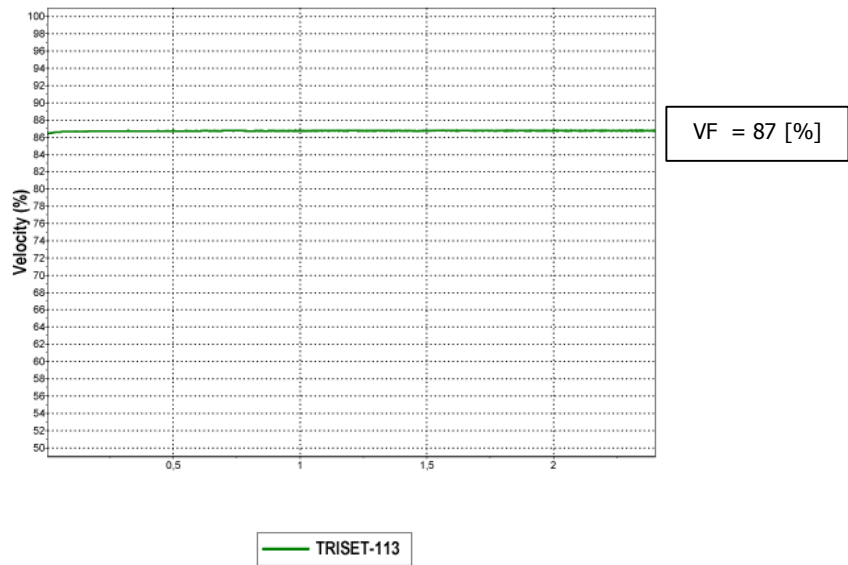
Insertion loss of TRISSET-113 cable as a function of frequency (5-2400 MHz)

- D. Return Loss (RL) [dB] – is the ratio of the input signal level to the amount of the signal that is reflected back towards the transmitter. The reflection of the signal is caused by variations of impedance in the cable line.



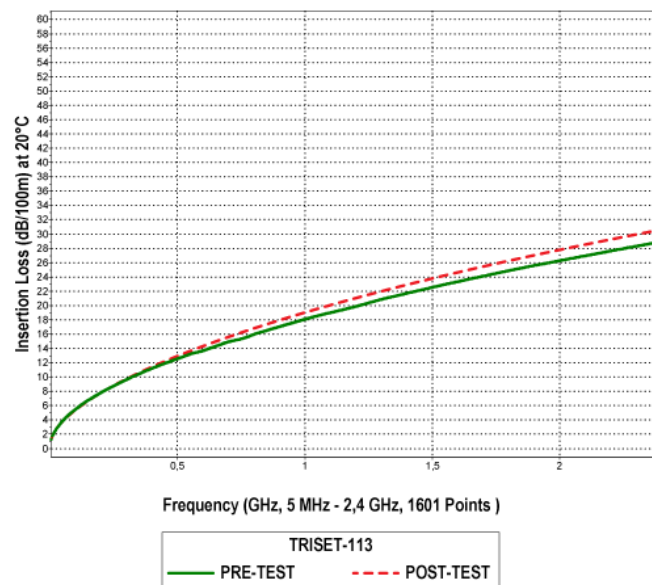
Return loss of TRISSET-113 cable as a function of frequency (5-2400 MHz)

- E. Velocity Factor (VF) [%] – gives the speed an electromagnetic wave travels along a coaxial cable relative to the speed in a vacuum. The factor is provided as a decimal fraction or percentage.



The velocity factor of TRISET-113 cable is 87% in the whole 5-2400 MHz range

- F. Triset-113 cable longevity – each coaxial cable is subject to the natural process of aging – the attenuation of the cable increases with its age. Triset cables passed the test of accelerated aging of coaxial cables (IEC68-2-3 standard). The standard defines the maximum allowable increase of attenuation at high temperature and with increased humidity during a three-week test run.



In compliance with the IEC 68-2-3 standard, the increase of attenuation is below 5%

These measurements were carried out with the use of the German network analyzer and equipment specified in the table below:

Item	Description	Serial number
R&S ZVB8	50 Ohm NA (300kHz-8 GHz)	1145.1010.08
Agilent	Imp. matching unit	61454
Agilent	75 Ohm calibration kit	MY97310597
CoMeT Tube	Triaxial test setup for screening test	-
Aesa Optitest	Professional test station software	3.0.2012-01-17 U



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- G. Triset-113 features 81% braid coverage, which is one of the foundations of the high shielding effectiveness (high Screening Attenuation and low Transfer Impedance, see the items A. and B.).

Braid			
Material	Aluminum		
Wire diameter	mm	0.12	± 0.01
Number of wires	pcs.	24 x 6	
Winding angle	deg.	19.34	
Coverage	%	81	



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