

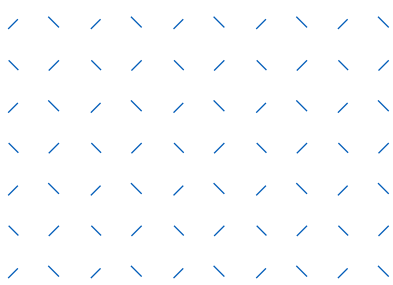


# DRAGONSKIN™: RF PERFORMANCE



*RFS Technologies DragonSkin coaxial cable has been tested to meet the most stringent UL and IEEE standards to provide the best RF performance in the industry.*





## RF PERFORMANCE

### UL 2196, STANDARD FOR SAFETY TESTS FOR FIRE-RESISTIVE CABLES

The UL 2196 test is designed to evaluate the performance of electrical circuit protective systems in severe fire events. UL 2196 assesses the functionality of electrical circuit systems when exposed to fire for 2 hours followed by the mechanical shock of a fire hose stream.

[LINK TO UL 2196 - RFS Technologies CERTIFICATION R40176](#)

In addition to the standard UL test protocol, RFS Technologies tested and evaluated the RF performance of the cable before, during and after the UL standard test. The pertinent data is presented on the RFS Technologies DragonSkin datasheet, as well as being listed on our Declaration of Conformity.

### UL 1655, STANDARD FOR COMMUNITY-ANTENNA TELEVISION CABLES

The UL 1655 Standard states the construction, test, and marking requirements covering the safety of single and multiple coaxial and coaxial/optical-fiber cables for the distribution of radio frequency signals such as employed in a community antenna television system, and for supplying low-energy power at a potential not exceeding 60 volts to equipment directly associated with the signal distribution. These are power-limited cables and are of the following types for installation and use as the CATV cables specified in Article 820 and other applicable parts of the National Electrical Code (NEC), NFPA 70. Electrically nonconductive material separates each optical-fiber member from the rest of the cable.

[LINK TO UL 1655 - RFS Technologies CERTIFICATION E23951](#)

PLENUM CABLES – Type CATVP (coaxial) and Type CATVP-OF (coaxial/optical-fiber). These cables are for installation as specified in Section 820.179 (A) of the National Electrical Code, ANSI/NFPA 70 in a duct, plenum, or other space used to transport environmental air without the cable being enclosed in raceway in that space.

RISER CABLES – Type CATVR (coaxial) and Type CATVR-OF (coaxial/optical-fiber). These cables are for installation as specified in Section 820.179 (B) of the National Electrical Code, ANSI/NFPA 70 in vertical runs in a shaft or for vertical runs that penetrate more than one floor.



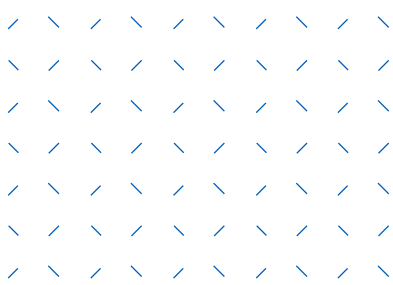
### EU STANDARDS

Directive 2014/53/EU – Radio Equipment states the following:

(10) In order to ensure that radio equipment uses the radio spectrum effectively and supports the efficient use of radio spectrum, radio equipment should be constructed so that: in the case of a transmitter, when the transmitter is properly installed, maintained and used for its intended purpose it generates radio waves emissions that do not create harmful interference, while unwanted radio waves emissions generated by the

transmitter (e.g. in adjacent channels) with a potential negative impact on the goals of radio spectrum policy should be limited to such a level that, according to the state of the art, harmful interference is avoided; and, in the case of a receiver, it has a level of performance that allows it to operate as intended and protects it against the risk of harmful interference, in particular from shared or adjacent channels, and, in so doing, supports improvements in the efficient use of shared or adjacent channels.





# RF PERFORMANCE

## EU STANDARDS

(14) Radio equipment can be instrumental in providing access to emergency services. Radio equipment should therefore in appropriate cases be designed in such a way that it supports the features required for access to those services.

(29) The manufacturer, having detailed knowledge of the design and production process, is best placed to carry out the conformity assessment procedure. Conformity assessment should therefore remain solely

[LINK TO EU DIRECTIVE 2014/53/ER - RFS Technologies CERTIFICATION](#)

[RFS Technologies DECLARATION OF CONFORMITY](#)

## DRAGONSKIN RF PERFORMANCE

RFS uses IEEE standards for RF testing on all its RF Communication Cables including DragonSkin. There are no requirements that state these tests are required to be performed in a laboratory. In fact, it is the responsibility of the manufacturer. These results are listed on the datasheet for DragonSkin, and the cable is tested in the field as part of the acceptance criteria which must fall within the required specifications for the OEM's radio equipment, to include insertion loss and return loss.

No other RF communication cable in the industry requires it to be tested in a laboratory for RF performance but is held to the performance

[LINK TO THE RFS Technologies DRAGONSKIN SPECIFICATION SHEET](#)

the obligation of the manufacturer.

(30) The manufacturer should provide sufficient information on the intended use of the radio equipment so as to allow its use in compliance with the essential requirements. Such information may need to include a description of accessories such as antennas and of components such as software, and specifications of the installation process of the radio equipment.

specifications listed on the manufacturer's datasheet. In fact, it is typically a requirement for these cables to be tested in the field after installation to ensure the performance of the cable is meeting the specifications listed on the manufacturer's datasheet. Testing should include RF Sweep testing to verify return loss, and insertion loss to confirm that the installed cable is free of damage that may have occurred during installation, and PIM testing to validate connectorization was completed properly. This process confirms that the installation was completed properly and that it will not trigger alarms on the active components of the system.



Patent-Pending. © 2020 RFS Technologies, An Amphenol Company. DragonSkin™ is a trademark



[www.rfstechnologies.com](http://www.rfstechnologies.com)

