

# TOPSeal RFID SEAL

## ISO 17712 Seal



UFO Communication

United Fiber Optic Communication Inc

Optical Fiber Brings the World Closer Together

### AVSL-G2XM-01

- Chip: EPCglobal C1G2 1.2.0 compliant
- Memory: 512-bit on-chip user memory
- Frequency: 860 ~ 960 MHz
- Read Range: 8~10 Meter (@4W EIRP)
- Testing Speed: 50 km/hr
- Mechanical: Complies ISO/PAS 17712
- Waterproof: IP5X
- Size: 112\*23.9 mm
- Weight: 75g
- Operating Temperature: -40~+85°C

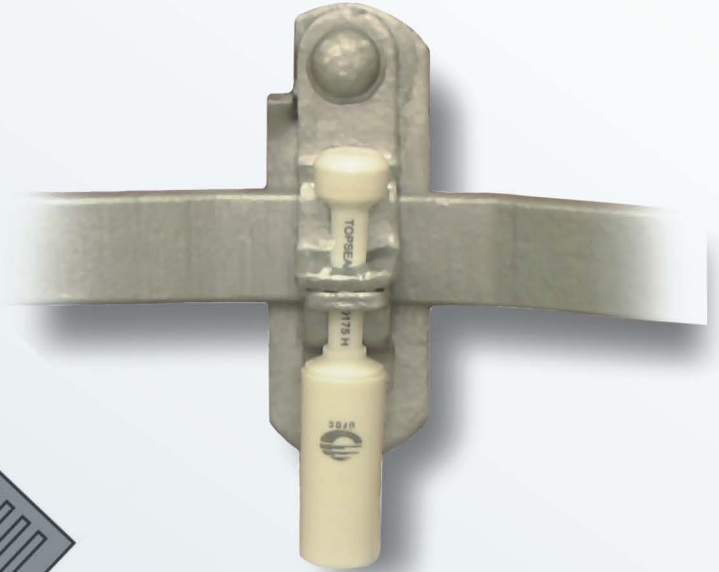
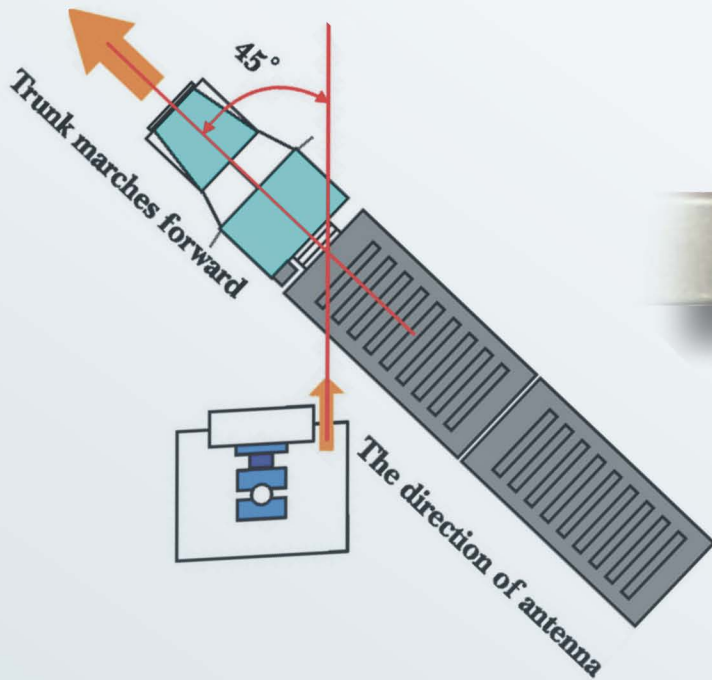


TOPSeal RFID Seal is used in areas where long-range reading, multi-data reading, high-speed identification, and unique authentication ID functions are required. The seal also enables offline and tampered verification of the authenticity.

The general descriptions of the seal is as the following :

- TOPSeal RFID Seal can be used for various security seal applications such as regular containers, container's chassis, railroad cars chassis, metallic pallet and other containers in the same way as a traditional seal does. TOPSeal RFID Seal has no direction restrictions, and have RF long-range verification and data capture functions, which traditional seal can't have.
- TOPSeal RFID Seal is compatible with all EPCglobal standard UHF readers. The reading distance can reach up to 10 meters.(@4W EIRP)
- TOPSeal RFID Seal can be read by handheld or other portable readers, the reading distance is ranged form 20 centimeters to 2 meters according to different reader power output and antenna sizes.

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## Mechanical Design

Item	Testing Value (Load to failure)	Seal classification
Tensile	10.0 kN (1N=0.2248089 lbf)	High security seal
Shear	341 kg-f (1kg-f=2.2045855 lbf)	High security seal
Bending	50 Nm (1Nm=0.7375621 ft-lbf)	High security seal
Impact	40.68 J (1J=0.7375621 ft-lbf)	High security seal

- Combing RF antenna with traditional seal cap, the length of seal would not be changed because of the antenna.
- Integrating sensor circuit with traditional seal bolt without reducing the strength of the bolt, to enable offline and tampered verification of the authenticity.
- Overall strengths fully comply with ISO 17712 requirements, and have been certified by EPCglobal certified lab (ITRI, Industrial Technology Research Institute).

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