## **Data Sheet**



# Low Noise Amplifier GNSS (GPS, GLONASS, BeiDou, Galileo) 86010142

### Description

The low noise amplifier 86010142 is designed for the use inside vehicles with train antennas with a embedded passive GNSS.

It includes a preselection filter to prevent the interference in case of simultaneous operation at the frequency range 380-960 / 1710-3800 MHz and GNSS.

The product fulfils the requirements according to EN 50155 and EN45545.



### **Technical Data**

Frequency (MHz): 1559 to 1609 Gain (dB):  $25 \pm 2$  Noise figure (dB): < 2.0 VSWR (input, output): < 1.8 Operation voltage (V):  $3.3 \dots 5.5$ , ripple < 50 mV, supplied at inner conductor RF-output. Operation current (mA): = 30 Connector input: TNC female Connector output: N female The housing contains an M4x6 (DIN7500) self-forming T20 torx grounding screw for earthing the LNA to the train body. The minimum recommended wire thickness is 0.05mm2.

#### **Mechanical Data**

Dimensions (w x h x l): 70 x 22 x 50 mm 2.8 x 0.9 x 2.0 inches

Mounting: 4 holes, 4.5mm diameter 4 holes, 0.2 inches diameter

#### **Environmental Data**

| Operation temperature (°C)   |  |
|------------------------------|--|
| Flammability rating          |  |
| 2011/65/EU (RoHS - including |  |
| 2015/863 and 2017/2102)      |  |
| WEEE 2012/19/EU              |  |
| ELV 2000/53/EC               |  |

-25 to 55 EN 45545-2 compliant no special marking needed compliant

#### Additional Features:

The maximum input power at the input of the amplifier at the frequency range 380-960 MHz and 1710-3800 MHz is limited to +25 dBm. The noise level at the GNSS-frequency generated by the operation at the frequency range 380-960 MHz and 1710-3800 MHz should not exceed the thermal noise level at the input of the GPS Amplifier, otherwise the noise figure will be increased.

Environmental Conditions: Temperature range: -25 °C to +55 °C (data as specified) -40 °C to +85 °C (extended range) \*)

#### \*) Extended range of operation:

Within an extended temperature range of -40 °C to +85 °C and an extended supplied voltage range of 3.0 V to 6.0 V operation is possible with the following restrictions: Noise figure: < 2.5 dB Gain: > 20 dB **Related Products** 87010003 Sencity Rail Antenna

87010032 Sencity Rail Antenna

#### 87010023 Sencity Rail Antenna

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# Low Noise Amplifier GNSS (GPS, GLONASS, BeiDou, Galileo) 86010142

87010011 Sencity Rail Antenna

87010005 Sencity Rail Antenna

87010006 Sencity Rail Antenna

Also compatible with 1399.99.0032 & 1399.99.0052

Related Documents 3D-model (Step)

DOC-0000862004

#### **Additional Information**

Please note: It is necessary to use four fixing screws to mount the LNA in case the installation height is more than 2 m. The system operator (receiver) needs to secure a current limit of < 1000 mA.

HUBER+SUHNER is certified according to ISO 9001, ISO 14001, AS/EN9100, ISO/TS 16949 and IRIS.

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Waiver: Fact and figures herein are for information only and do not represent any warranty of any kind.

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