



SENSOR TEMPERATURE DOGBONE™

Temperature Level Sensing Inlay

Smartrac's first state-of-the-art SENSOR TEMPERATURE DOGBONE™ brings new temperature detection features to the company's product range of passive sensor inlays and tags. It is designed to measure temperature conditions, e.g. in cold chain management, and to detect crucial temperature settings in many other demanding environments.

The Smartrac SENSOR TEMPERATURE DOGBONE is a passive UHF inlay equipped with Axzon's Magnus® S3 IC. This RFID sensor inlay offers great performance, and accurately detects and measures temperature and optionally moisture levels in the surrounding environment. The temperature sensing range is available as single-point-calibration or two-point-calibration according to customer preferences for measurement accuracy. It provides accurate read results as determined by the customer's selected calibration needs. Additionally, the IC offers the option to read the sensor code and on-chip RSSI (Received Signal Strength Indicator) value to detect how much power the IC is receiving from the reader.

The sensing information is digitized and wirelessly communicated to off-the-shelf readers, and operates with specially developed software for temperature sensing.

The innovative SENSOR TEMPERATURE DOGBONE is a passive UHF single-chip sensor inlay solution that offers cost-efficiency and ease of implementation. SENSOR TEMPERATURE DOGBONE is available as a wet inlay, and can be delivered with TID list and sensor code values for increased accuracy and complementary data analysis, in conjunction with Smart Cosmos, the company's Internet of Things platform.

Overview

Operating Frequency
860 - 960 MHz (FCC)

Integrated Circuit (IC)
Axzon Magnus®S3

Antenna Size
89 × 24 mm (3.5 × 0.9 in)

Die-cut Size
97 × 27 mm (3.8 × 1.1 in)

International Standards

▶ EPC Class 1 Gen 2
v.2.0.0 ISO 18000-6C

Application Areas

- ▶ Cold chain management
- ▶ Diverse temperature sensing environments

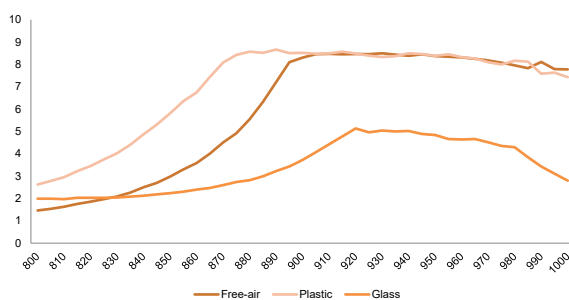
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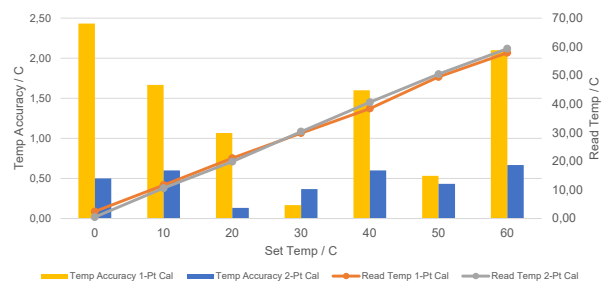
Technical Features

IC + Memory	Size	Format*	Sales Code
Axzon Magnus®S3 64bit TID, 128bit EPC + 128bit User Memory	97 × 27mm / 3.8 × 1.1 in	Wet	3005532
Frequency	860-960 MHz (FCC band)		
Antenna Size	89 × 24 mm / 3.5 × 0.9 in		
Die-Cut Size	97 × 27 mm / 3.8 × 1.1 in		
Web Width	100 mm / 3.9 in		
Operating Temperature	-40 °C to +85 °C / -40 °F to +185 °F		
Adhesive	RA-2		
Qty/Reel	2.000 pcs		
Core Size	76 mm / 3 in		
Shelf Life	+20 °C, 50 % RH / 68 °F, 50 % RH - minimum 2 years from the date of manufacturing		

Read Range (m)



Magnus S3 Temperature Accuracy (1-pt vs. 2-pt Cal)



All the graphs are indicative; performance in real life applications may vary. The data has been determined based on calculations for transmitters with a 2W ERP output power level.

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