Datasheet
FUJITSU RFID and Sensor Solution RFID Integrated Label

Take control over aerospace part identification by creating your own ATA Spec 2000 Capter9-compliant RFID, bar code and nameplate labels on demand

Fujitsu's RFID Integrated Label provides all the functionality and flexibility needed to create your own Spec 2000-compliant identification labels for aerospace parts. Using RFID smart label printer/encoder, you can produce product ID labels and nameplates exactly when you need them with exactly the data you want to include. The labels support RFID, bar code and text, can be used on metal and non-metal materials, come in a variety of different sizes and offer different memory options up to 8KByte to support single record, dual record and multiple record encoding needs.

With the RFID Integrated Label, you don't have to order pre-printed, pre-encoding labels and can keep them in stock. You can create exactly whatever and whenever you need it, in compliance with ATA SPEC 2000 Chapter9[*1], SAE AS5678[*2], and GS1 EPCglobal Class1 Generation2[*3] standards that are used throughout the aerospace industry.

High performance On or Off metal
Unlike most RFID labels on the market, the RFID Integrated Label provides outstanding performance when it is attached to a metal object. That performance is essential in MRO and other aerospace operations where the environment is filled with metal parts, tools and composite materials. The RFID Integrated Label provides highly accurate, reliable reads with approximately 1.5 meters.

Tough but flexible
The RFID Integrated Label is less than 2mm thick and flexible so that it can be applied to a variety of objects regardless of their surface profile. The label material is made from non-flammable silicone rubber that can withstand temperatures up to 150°C (302°F). The material meets SAE AS5678 testing requirements and is suitable for lifetime identification of flyable parts.

Versatile for different item and data needs
The RFID Integrated Label is available in three physical sizes, each with two memory options, to efficiently meet all kinds of item identification needs. Up to 8KBytes of RFID user memory is available, which is more than enough to meet multi-record data encoding requirements. The material also produces high-quality bar codes, text and graphics for creating labels that will stay legible and look professional throughout their lifetime.

Developed for aerospace identification
Fujitsu has delivered thousands of RFID tags to airframers, MROs and other organizations throughout the aerospace industry value chain. We understand the technical and business requirements for aerospace part and component labeling. The RFID Integrated Label was created specifically to meet ATA SPEC 2000 item identification requirements and to give users the flexibility to quickly and conveniently create quality, long-lasting labels in-house.

Technical details

Specification	Large label	Medium label	Small label
Dimensions (width x length x thickness)	70 x 32 x 1.45 mm 2.76 x 1.26 x 0.06 inches	55 x 25 x 1.85 mm 2.17 x 1.0 x 0.07 inches	35 x 25 x 1.85 mm 1.38 x 1.0 x 0.07 inches
Weight	4.7 g (0.17 oz)	3.7 g (0.13 oz)	2.3 g (0.08 oz)
Label substrate	Silicone rubber		
Temperature resistance	Up to 150 °C (302 °F)		
Standards	GS1 EPCglobal Class 1 Generation 2, ISO/IEC 18000-63*4, SAE AS5678,		
Frequency	860 - 960 MHz (Worldwide)		
Memory Size	EPC Bank: 496 bits; User Memory: 65,536 bits or 8,192 bits (two sizes)		

Product name	Part number
RFID Integrated Label – 8KByte Large	AIT-T8KELx
RFID Integrated Label – 8KByte Medium	AIT-T8KEMx
RFID Integrated Label – 8KByte Small	AIT-T8KESx
RFID Integrated Label – 1KByte Large	AIT-T1KELx
RFID Integrated Label – 1KByte Medium	AIT-T1KEMx
RFID Integrated Label – 1KByte Small	AIT-T1KESx

*1 ATA SPEC 2000 Chapter9 : ATA SPEC 2000 is a document that stipulates the standards established by the ATA (Air Transport Association) regarding such matters as the procedures for exchanging and processing information relating to the materials used in aircraft components and their reliability. Chapter 9 specifies comprehensive standards relating to the barcodes, 2D codes and RFID tags that can be attached to components.

*2 SAE AS5678 : AS5678 is a standard issued by the SAE (Society of Automotive Engineers) defining environmental specifications and test methods for passive RFID tags used in aviation applications. SAE has categorized and defined environmental specifications for RFID tag use, for the three environmental categories of "Interior," "Exterior" and "Power Plant".

*3 GS1 EPCglobal Class1 Generation2 : EPCglobal is a non-profit organization established by GS1 (formerly known as EAN International), which promotes the international standardization of barcodes, and GS1 US™ (formerly the Uniform Code Council, Inc.). Class1 Generation2 is a transmission standard instituted by EPCglobal, for data transmission between reader/writers and UHF-RFID tags.

*4 ISO/IEC 18000-63 ISO/IEC 18000-63 defines the air interface for RFID devices operating in the 860 MHz to 960 MHz Industrial, Scientific, and Medical (ISM) band used in item management applications.

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