The **Universal Micro RFID Tag** measuring 1 7/8" x 5/8" is a great solution to your identification projects that require the smallest RFID tag with great read range. With a tiny footprint and low profile, the Universal Micro RFID Tag easily fits where other tags are too big and obtrusive.

Achieving up to 9 ft read range on metal and 4-5 ft on plastic, wood, and glass, the Universal Micro provides incredible read ranges compared to other tags in its class. It's non-rigid, durable, foam core and polyester construction sets the Universal RFID Micro apart from molded tags allowing for greater flexibility in tag placement.

Developed using the same premise as our original Universal RFID Asset Tag, the Universal Micro Tag is a surface-independent using a patent inlay design and passive RFID technology to obtain excellent read ranges regardless of mounting surface.

Features	Micro RFID tag with extremely small footprint and thin profile while still achieving excellent read range Custom engineered foam core designed specifically to obtain optimum read distances Patented micro RFID inlay design provides excellent read ranges regardless of surface material–metal, plastic, glass, even wood Subsurface printing on durable polyester protects printed copy against moderate solvents and caustics/acids Compatible with RFID Tracking Software
Product Print Options	Barcode . Data Matrix . QR Code . RFID . Serial Number
Product Functionality	Abrasion Resistance . Chemical Resistance . Heat Resistance
Popular Applications	Audio / Visual . Government . Inventory . Restoration . Hospitals . IT Assets . Manufacturing . Schools
Category	Manufacturing - RFID . Information Technology - RFID . Medical - RFID . Warehouse - RFID . Equipment Rental - RFID . Education - RFID . Asset Tracking - RFID . Tool Tracking - RFID . Work-in-Process - RFID . RFID Tags . Custom Asset Tags . RFID for Metal Surfaces

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Along with the Universal RFID Asset Tag, Universal RFID Hard Tag, and Universal Mini, these products make a revolutionary product line that allows you to use only one RFID tag for your asset tracking applications.

Subsurface printing the Universal Micro RFID Tag protects any copy, logo, and/or barcode against moderate solvents and caustics. Additionally, our four-color processing capabilities allow you to promote your company with a label that shows off your company's logo and style.

What are Micro RFID Tags?

Micro RFID tags are small RFID device with a chip and antenna that communicates with an RFID reader through radio waves. They typically have a small footprint, like the 1 7/8" x 5/8" Universal Micro RFID Tag from Metalcraft, and is often used in applications where space is limited or where the RFID tag must be unobtrusive.

How do you select the best small RFID Tag?

Choosing the best small RFID tag depends on several factors related to your specific application requirements. Here's a guide to help you select the most suitable small tag:

1. Size: Consider the dimensions of the tag and ensure it fits the size constraints of your assets or items. Small RFID tags are ideal for applications where space is limited or discreet tagging is required.
2. Read Range: Determine the required read range for your application. Some small RFID tags have shorter read ranges compared to larger ones. Ensure that the selected tag offers sufficient read range to meet your needs.
3. Frequency: Choose the appropriate RFID frequency based on your application requirements. Common RFID frequencies include Low Frequency (LF), High Frequency (HF), and Ultra-High Frequency (UHF). UHF RFID tags are often preferred for their longer read ranges and faster data transfer rates.
4. Material and Environment: Assess the environmental conditions in which the tags will be used. Ensure that the tags are suitable for indoor or outdoor environments, as well as factors such as temperature, moisture, and exposure to chemicals or harsh elements.
5. Attachment Method: Consider how the RFID tags will be attached to your assets or items. Some small tags come with adhesive backing for easy attachment, while others may require alternative attachment methods such as rivets, screws, or cable ties.
6. Durability and Lifespan: Evaluate the durability and lifespan of the RFID tags, especially if they will be used in rugged or high-impact environments. Look for tags that are resistant to water, chemicals, abrasion, and temperature extremes to ensure long-term reliability.

7. Data Capacity: Determine the required data capacity of the tags based on the information you need to store and retrieve. Some small RFID tags offer limited memory capacity, while others support higher data storage capabilities.
8. Cost: Consider the cost-effectiveness of the RFID tags, taking into account factors such as tag price, volume discounts, and total cost of ownership over the tags' lifespan.

By carefully evaluating these factors and choosing RFID tags that align with your specific application requirements, you can select the best small RFID tag for your needs and achieve optimal performance and efficiency in your RFID system.

Specifications Data

Material	Inlay wrapped around 39 mils custom engineered foam.
Serialization	Barcode and human-readable equivalent are produced using the latest high-resolution digital technology available, which provides excellent clarity and easy scanning. Code 39 is the standard symbology with a range of 2.7 to 9.4 CPI (characters per inch). Optional linear and 2D symbologies available.
Label Copy	The label copy may include block type, stylized type, logos or other designs
Colors	Standard colors include black, red, yellow, green, dark blue, purple, orange or blue. Custom spot colors are also available at no additional charge. Due to contrast needed for the bar code scanner, all bar codes are black.
Standard Adhesive	Pressure-sensitive acrylic adhesive
Frequency Range	Custom designed UHF inlay optimized for use at 915 MHZ. (UHF, Class I Gen 2)
Sizes	1.875" x .625"
Packaging	Produced and shipped in roll form.

Chemical Testing

The Universal Micro tags were attached to a sheet of glass submerged in various chemicals. Observations were made at the following intervals: 2 hours, 24 hours, 48 hours. A Motorola handheld RFID reader as well as a handheld bar code reader were used to test the samples.

Chemical Test Data

Length of immersion	Water	Glas cleaner	Bathroom cleaner	Isopropyl alcohol 99%	Acetone	NaOH pH 12.0	HCl pH 1.0	Brake fluid
2 hours	no effect	no effect	no effect	adhesive	adhesive ooze	no effect	no effect	no effect
24 hours	no effect	no effect	no effect	adhesive ooze	tag delaminated	no effect	no effect	no effect
48 hours	no effect	no effect	no effect	adhesive	tag delaminated	no effect	no effect	no effect

Destructive Testing

Impact resistance test - Impact test consisted of 10 pound cylindical weight being dropped vertically from a height of 15.75". Tag samples were placed on concrete floor. A tag passed the test if the inlay still reads with a handheld reader. All tags tested all were still readable after being subject to impact with a 10 lb. weight dropped from a vertical distance of 15.75".

Destructive Test Data

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Temperature Testing

High-temperature resistance test - These tags were attached to a sheet of glass at raised temperatures for 15 minutes. Tags were then removed from the oven and tested for readability immediately. Low-temperature resistance test - The tags were attached to a sheet of glass and exposed to -40°F for 24 hours. Tags were then checked for readability with a Motorola handheld RFID reader. All samples were readable while at temperature just prior to removal from freezer. No tag construction defects were observed and adhesive still had a strong bond while in the freezer.

Temperature Test Data

Temperature	RFID read test (immediately out of oven)	Appearance of tags
200°F	Reads well	No change
300°F	Reads well	No change
400°F	Reads well	Slight curling at edge
500°F	Reads well	Tag destroyed

Read Range Testing

In many cases the tags read intermittently for longer distances than those indicated, however, the results reported below were for continuously responding reads.

Read Range Test Data

Universal Micro Anechoic Chamber Results

Sample	Metal	Wood	Glass	Plastic	Cardboard
Average	9 feet	5 feet	5 feet	4 feet	4 feet

Barcode Readibility Testing

Barcode Readability Test Data

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Abrasion Testing

Abrasion Test Data

Label Adhesion Testing

Label Adhesion Test Data

Pull Testing

Pull Test Data