

BRADY L-2588-40A UHF FLAG LABEL

TDS No. L-2588-40A
Effective Date: 12/12//2023

Catalog Number: THT-UHF-425-34x24

Description:

UHF Flag Label for general application is suitable for use indoor especially on wires and cables identification. No outdoor used is recommended.

Details:

Material Specifications:

Face Material	B-425A - White polypropylene
Adhesive	Permanent adhesive
Finishing	Matte White
Antenna	Aluminium
IC to antenna construction	Chip bonded to antenna using Anisotropic Conductive Film adhesive
Tag base material	PET

General Specifications:

Applications	UHF Flag Label is designed for data center application is made with extended user memory to store data specific to customer or products. The label is made with specialty adhesive and is suitable for application on both on-metal and non-metal.
Print Technology	Thermal transfer print, including RFID encoding.
Recommended Ribbon	Brady Series R4300
Operating Temperature	-40 °C to 85 °C
Regulatory/Agency Approvals	For information on the Weee-RoHS compliance status for a Brady Product go to one of the following websites: In Canada: www.bradycanada.ca/weee-rohs In Europe: www.bradyeurope.com/rohs In Japan: www.bradyc.co.jp/products/labelsuse/rohs All other regions: www.bradycid.com/weee-rohs

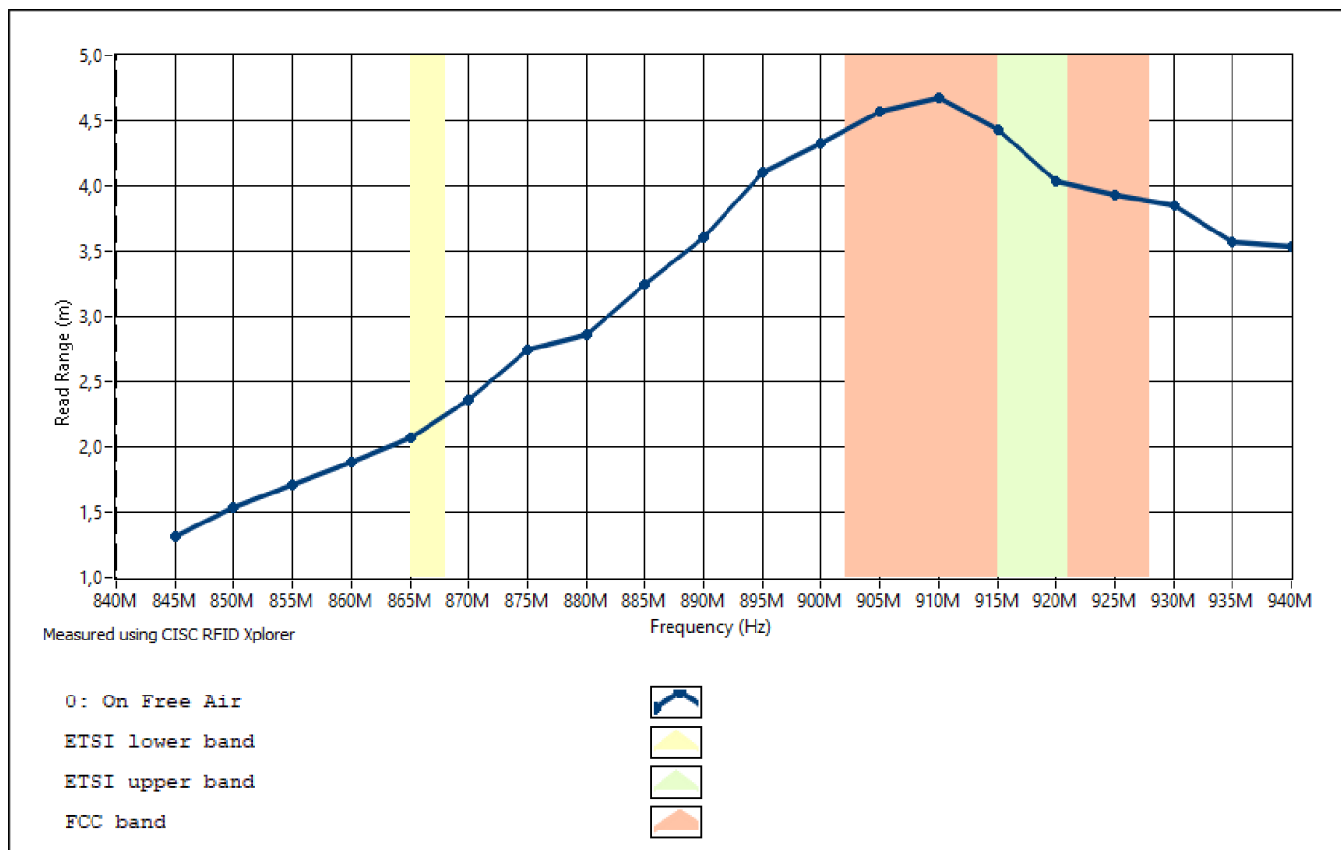
Electronic Specifications:

IC / Chip	NXP U7XM2
Operating Frequency	860 - 960 MHz (ETSI band)
Supported Standard	ISO 18000-6C, EPC Class 1, Gen 2v2
EPC Memory	448 bits
User Memory	2048 bits

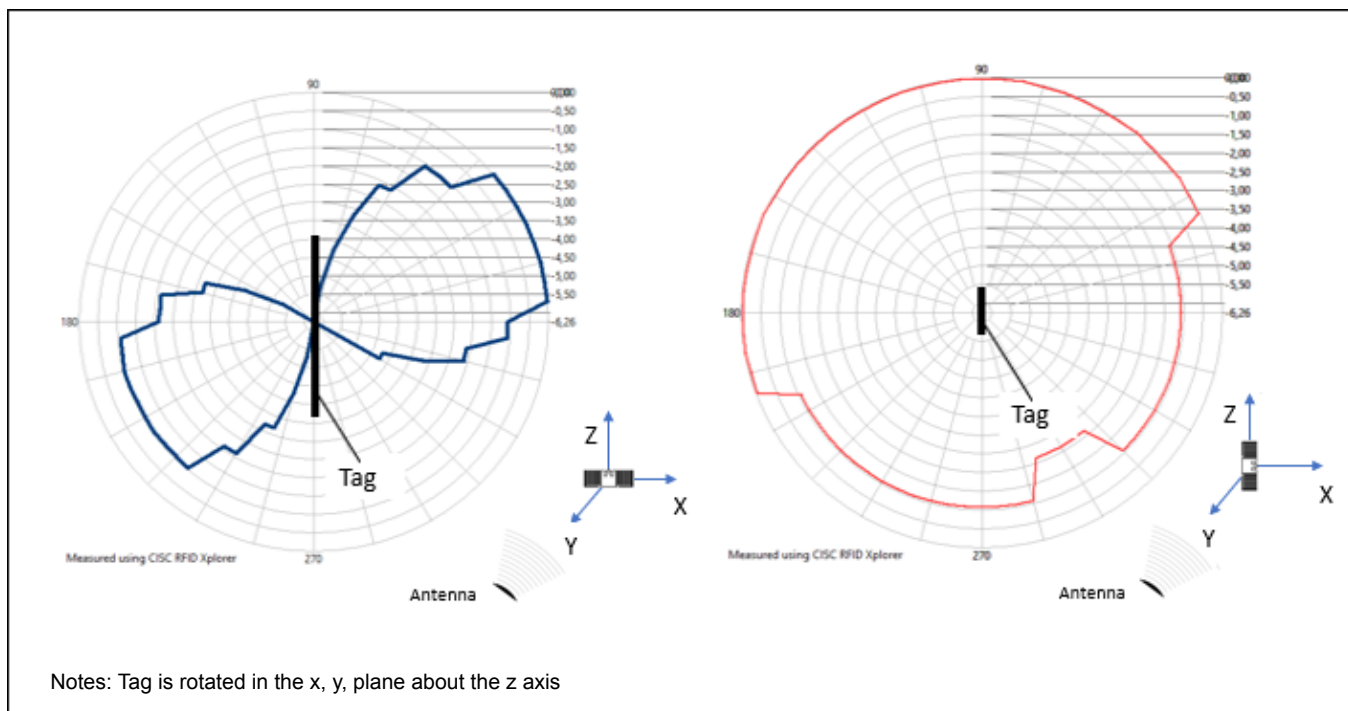
Read Range:

Details RFID performance in ETSI lower bandwidth:

PERFORMANCE PROPERTIES	REGULATION	TYPICAL RESULTS
RFID Read range on free air	ETSI	up to 2m



Radiation Patterns:



All graphs are indicative: performance in real life applications may vary.

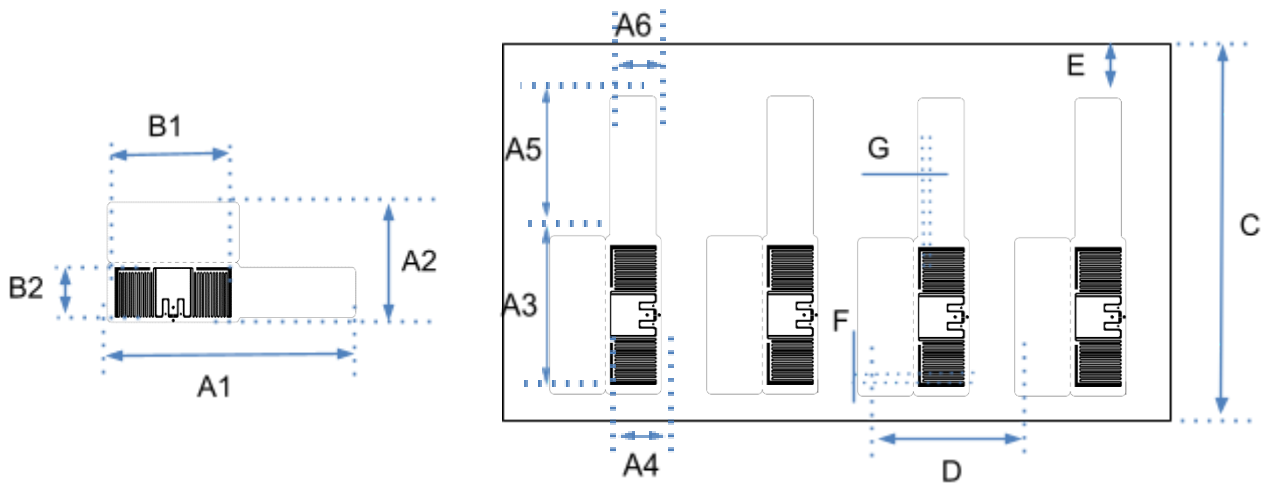
Label Dimensions:

Metric (mm)		
Width	Length	Thickness Total (with chip)
64.00	24.00	0.32

Label Mass (including antenna and chip)

Label Mass (g)
0.25

Dimensions (mm)



		Length (mm)	Tolerance (mm)
A1	Tag Width	64.00	+/- 0.2
A2	Tag Length	24.00	+/- 0.2
A3	Printable Area Width	34.00	+/- 0.2
A4	Printable Area Length	12.00	+/- 0.2
A5	Tag Tail Width	30.00	+/- 0.2
A6	Tag Tail Length	10.00	+/- 0.2
B1	Antenna Width	30.00	+/- 0.5
B2	Antenna Length	10.00	+/- 0.5
C	Web Width	70.00	+/- 0.5
D	Tag to Tag Pitch	33.87	+/- 1.5
E	Web edge to label	3.00	+/- 1.5
F	Antenna to side label	2.00	+/- 1.5
G	Antenna to top label	1.00	+/- 1.5

Delivery and Packaging Specifications

RFID labels per roll	500
Rolls in package	1
Winding	RFID labels out
Inspection and delivered tags	100% inspected, 500 good RFID labels per roll
Bad Tags Marked	Yes

Label Performance

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Total (excluding liner)	0.0126 inch (0.32 mm)
Adhesion to: -Polypropylene	ASTM D 1000 20 minute dwell 24 hour dwell	92 N/100mm (84 oz/inch) 88 N/100mm (81 oz/inch)

Performance properties tested on samples printed with the Brady Series R4300 ribbons. Printed samples were adhered on cables with diameters 2mm and 4.4mm, and allowed to dwell 24 hours before exposure to the indicated environments. Abrasion resistance was tested flat.

PERFORMANCE PROPERTIES		ENVIRONMENTAL RESISTANCE		
PERFORMANCE PROPERTIES	TEST METHODS	EFFECT TO LABEL ADHESION	EFFECT TO PRINT IMAGE	EFFECT TO CHIP
High Service Temperature	30 days at temperatures 50°C	No visible effect	No visible effect	Readable
Low Service Temperature	30 days at temperatures -40°C	No visible effect	No visible effect	Readable
Humidity Resistance	30 days at 37°C, 95% relative humidity	No visible effect	No visible effect	Readable
UV Light Resistance	30 days in Xenon Test Chamber	No visible effect	No visible effect	Readable
Abrasion Resistance	Taber Abraser, CS10 grinding wheels, 250 g/arm (Fed. Std. 191A, Method 5306), 50 cycles	No visible effect	Appearance to print after 50 cycles: Moderate to severe print removal; print barely legible.	No effect to chip. Chip still readable after 50 cycles

PERFORMANCE PROPERTIES		CHEMICAL RESISTANCE		
Samples were printed with the Brady Series R4300. Samples were laminated to glass panels and allowed to dwell 24 hours prior to testing. Testing was conducted at room temperature and consisted of 30 minutes immersions in the specified test fluid. After immersion, the samples were removed from the test fluid and the printed image rubbed 10 times with a cotton swab saturated with the test fluid. The rating scale below shows the effect to the quality of the print for each sample.				
CHEMICAL REAGENT	EFFECT TO PRINT/TOPCOAT WITHOUT RUB	EFFECT TO PRINT/TOPCOAT WITH RUB	EFFECT TO ADHESIVE	EFFECT TO CHIP
Ethanol	1	1	1	Readable
Toluene	1	2	1	Readable
Isopropyl Alcohol	1	1	1	Readable
DOT 4 Brake Fluid	1	1	1	Readable
Skydrol® 500B-4	1	1	1	Readable
Hydrochloric Acid 37%	1	1	1	Readable
Sodium Hvdrooxide 10%	1	1	1	Readable

Rating Scale:

- 1= no visible effect
- 2= slight smear or print removal, detectable but minimal smear
- 3= moderate smear or print removal (print still legible)
- 4= severe smear or print removal (print illegible or just barely legible)
- 5= complete print and/or topcoat removal

Shelf Life:

Shelf life is two years from the date of receipt for this product as long as this product is stored in its original packaging in an environment below 80° F (27° C) and 60% RH. It remains the responsibility of the user to assess the risk of using this product. We encourage customers to develop testing protocols that will qualify a product's fitness for use in their actual application.

References:

Skydrol® is a registered trademark of the Monsanto Company

ASTM: American Society for Testing and Materials (U.S.A.)

All S.I. Units (metric) are mathematically derived from the U.S. Conventional Units

Note: All values shown are averages and should not be used for specification purposes.

Test data and test results contained in this document are for general information only and shall not be relied upon by Brady customers for designs and specifications, or be relied on as meeting specified performance criteria. Customers desiring to develop specifications or performance criteria for specific product applications should contact Brady for further information.

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