Avery Dennison
Smartrac
Product Data Sheet

AD-164 U9

Overview

Frequency Band
UHF 860 - 960 MHz

Chip
NXP UCODE 9

Chip Attachment Technology
Direct Chip Attach

Antenna Dimensions
60 x 4 mm / 2.362 x 0.157 in

International Standard
ISO/IEC 18000-63 Type C

Industry Segments
Beauty and Personal Care
Healthcare

Applications
Home Essentials

RoHS
EU Directive 2011/65/EU and
2015/863 Compliant

Optimum read ranges in challenging environments

AD-164 U9 inlays from Avery Dennison are designed for tagging a wide range of items, particularly housewares, beauty & personal care, and pharmaceuticals.

Built for the UHF frequency band, the inlays feature a 60 x 4 mm antenna with a global design. It ensures excellent broadband performance (860-930 MHz) that can achieve up to 7 meters read distance on high dielectric materials such as glass, plastics and near liquid (results may vary).

The slender form factor and rectangular shape further contributes to the versatile use in retail oriented applications to increase inventory accuracy, improve supply chain agility, and enhance visibility across all channels. AD-164u U9 features the UCODE 9 chip that is equipped with 96 bits of EPC memory, including a 96-bit Tag IDentifier (TID) with a 48-bit unique serial number factory-encoded into the TID. The IC offers a Self Adjust feature to maximize product performance in challenging environments and has an improved read and write sensitivity and faster encoding speed compared to NXP UCODE 8. Delivery formats include dry, wet and label.

Like all RFID products from Avery Dennison, AD-164 U9 inlays are manufactured according to the industry's highest quality standards, as confirmed by the RFID Lab at Auburn University: The inspection body awarded Avery Dennison its first comprehensive and significant ARC accreditation for quality.

Our inlays and tags are compliant with ISO 9001:2015 Quality Management and ISO 14001:2015 Environmental Management. This ensures a reliable and state-of-the-art product that meets a variety of application needs, where high performance is a critical parameter.
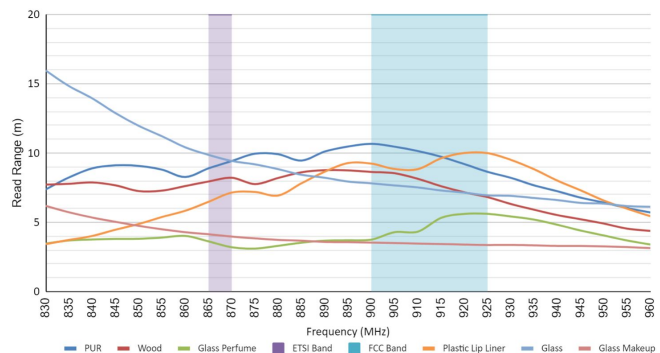
Avery Dennison

rfid.averydennison.com

Technical features

Chip	NXP UCODE 9		
Chip Attachment Technology	Direct Chip Attach		
EPC and User Memory	96-bit and n/a		
TID Memory	96-bit		
Product Code*	3008611	3008613	3008612
Delivery Format	Dry inlay	Wet inlay	Label
Die-Cut Dimension	-	64 x 6 mm / 2.520 x 0.236 in	64 x 6 mm / 2.520 x 0.236 in
Inlay Substrate	38um PET substrate	38um PET substrate	38um PET substrate
Face Sheet	-	-	BW0053
Thickness of the IC	120 µm	120 µm	120 µm
Standard Pitch	25.4 mm / 1.0 in	25.4 mm / 1.0 in	25.4 mm / 1.0 in
Web Width	70.36 mm / 2.770 in	70.35 mm / 2.770	70.35 mm / 2.770
Core Size	76 mm / 3 in	76 mm / 3 in	76 mm / 3 in
Quantity / Reel	20,000 pcs/reel	10,000 pcs/reel	5,000 pcs/reel
Size of Roll	MAX OD: 15.5”	MAX OD: 13”	MAX OD: 8”
Operating Temperature	-40 °C to 85 °C / -40 °F to 185 °F		
On-Metal	Non metal		

*Other product codes available upon request.

Orientation sensitivity
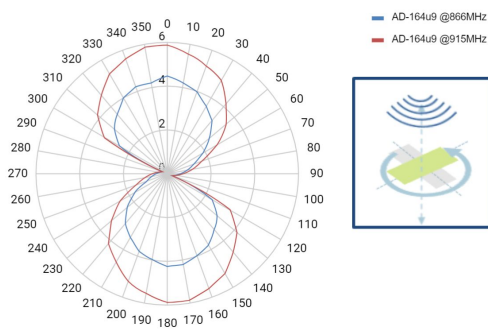
Read range

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

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