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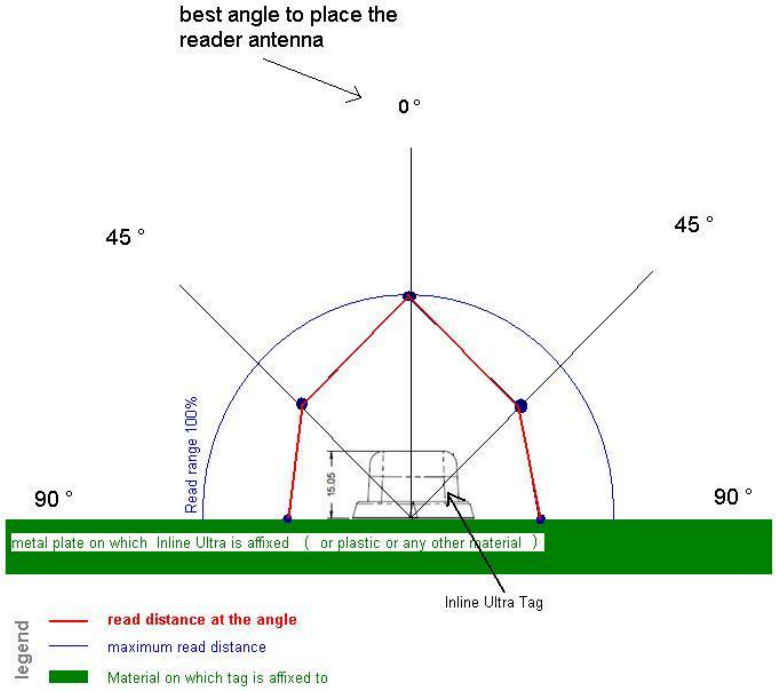
WHITE PAPER

InLine TagÊ Ultra Read Range

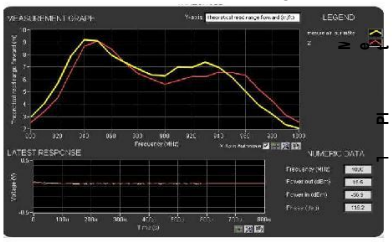
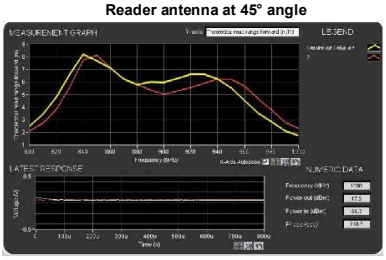
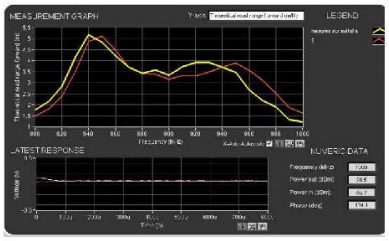
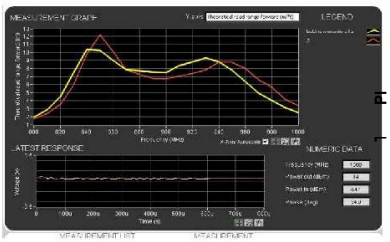
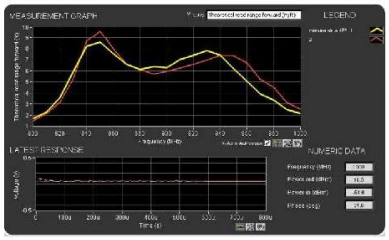
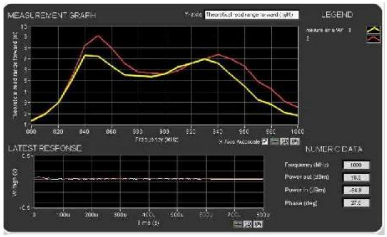
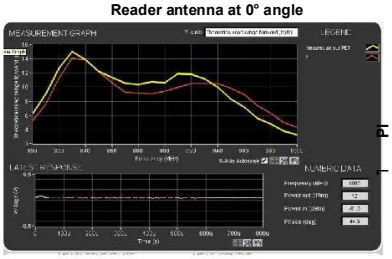
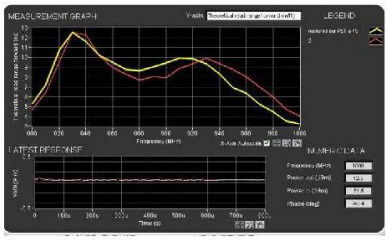
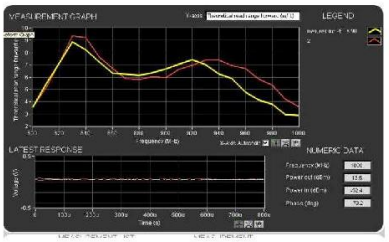
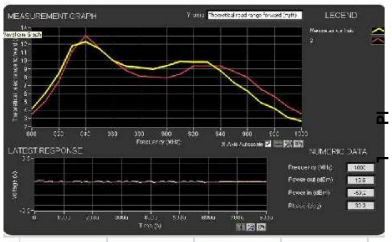
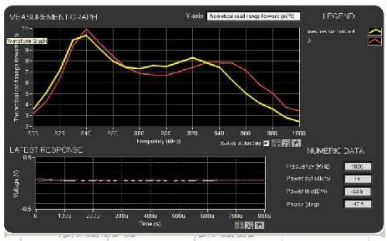
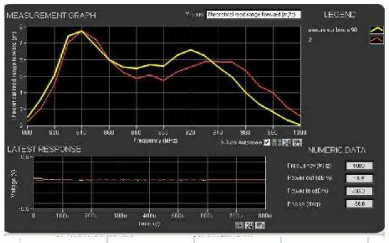
HID Global InLine TagÊ Ultra RFID UHF transponders are among the most advanced general-purpose UHF tags available. They feature a patented HID Global 3D antenna that delivers excellent omnidirectional read ranges on all materials, including metal. The tagsôbroadband capabilities meet worldwide standards for international logistics processes. Built for durability and versatility, all InLine Tag Ultra RFID transponders are compliant with EPC global-certified UHF Class 1 Gen 2 readers and provide 512-bit user memory with 128-bit EPC. All tags are waterproof, provide high resistance to aggressive liquids or physical impact and deliver excellent performance and reading stability across fluctuating temperatures.

This document provides information on theoretical read range of the InLine TagÊ Ultra over the frequency spectrum. The yellow and red lines below show the actual measurements of two tags of the same series.



The graphs below show the tag sensitivity, which is the minimum field strength required by the tag to send a coherent response to the reader. The tag sensitivity value is express into a theoretical read range value that would be achieved by the tag in a free space environment over the frequency band powered by a 2W ERP reader using a linear antenna.

Inline Ultra Monza 4QT characteristics

	Reader antenna at 0° angle	Reader antenna at 45° angle	Reader antenna at 90° angle
Metal Placed			
Air Placed			
PET Placed			
Wood Placed			

InLine Tag Ultra RFID tags include HID Global's patented 3D antenna which is based on a dipole. We recommend circular polarized reader antenna, as this is the best to use when the orientation between dipole tag antenna and reader antenna is unknown.

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