RFID Frequency Chart

DANISH TECHNOLOGICAL INSTITUTE

Frequency RFID Technology	Low Frequency 125 - 135 kHz	High Frequency 13,56 MHz	Ultra High Frequency 400 - 960 MHz	Microwave 2,45 - 5,8 GHz
Availability	*> 30 years*	*> 10 years*	*US > 3 years, EU relatively new*	*> 10 years*
Standardisation	*ISO 11784/5 ISO 14223, ISO 18000-2*	*ISO 14443 ISO 15693, ISO 18000-3*	*ISO 18000-6, EPCGen1 and2*	*ISO 18000-4*
Subsurface (except metal)	*No impact*	*Low impact*	*Depends on material*	*No impact*
Fluids	*No impact*	*Low impact*	*High impact*	*High impact*
Readability on metal	*Limited*	*Bad, special tags available*	*Limited*	*Good*
Bulk reading	*Limited*	*Up to 50 tags/sec*	*Up to 150 tags/sec*	*N/A*
Reading distance	*~ 0 - 100 cm*	*~ 0 - 50 cm*	*US ~ 0 - 500 cm, EU ~ 0 - 300 cm*	*~ 0 - 500 meters, active tags*
Data transmission rate	*Low*	*Medium*	*Fast*	*Very fast*
Interference resistance	*High*	*High Frequency*	*Depends on environment*	*Susceptible to electronic noise*
Typical application	*Animal ID, Beer kegs, Car anti theft, Access control, Personal ID*	*Track and tracing, Cooling chain control, Person ID, Item level tagging*	*Supply chain management (SCM), Pallet and container tracking, Trailer tracking in shipyards, Pallet and case tagging*	*Toll collection, Real time location systems, Long range access control vehicles, Aircraft part maintenance*
Industrial sectors	*Farming, Slaughterhouse, Brewery*	*Airport, Slaughterhouse, Pharmaceutical, Healthcare, Production, SCM product level*	*Production, SCM on pallet and colli level*	*Army, Shipping, Airlines and Government*
Other	*Oct. 2004 FDA approved a 134 kHz from VeryChip that can be implanted in humans*			
Market developers			*EPCglobal, US: Wal-Mart, DOD, FDA, EU: Metro, Tesco, Carrefour*	*Governments, Boeing, Security and safety companies*