EM MICROELECTRONIC

A COMPANY OF THE **SWATCH GROUP**

ISO 18000-63 / EPC™ Gen2 RFID IC

General Description

EM4124 is a certified EPC™ Gen2 IC and compliant with ISO/IEC 18000-63 (formerly known as 18000-6 Type C).

Each chip is manufactured with a 64-bit Unique Identifier to ensure full traceability. The EM4124 has 176 bits of non-volatile memory (16 bit PC Word, 96 bit EPC Code, 32 bit Kill Password, and 32 bit Access Password), enabling the support of ISO or EPC data structures.
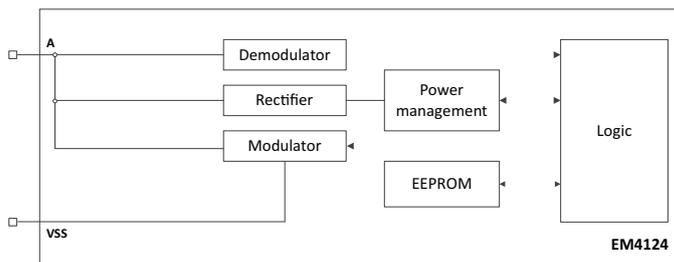
EM4124 achieves a typical read sensitivity of -19 dBm at the chip level, which translates into a typical -21 dBm sensitivity at the tag level for a dipole-like antenna with 2 dBi gain (25us TARI, 250 kHz BLF).

EPC is a trademark of EPCglobal Inc.

Features

l ISO 18000-63 compliant

l EPC Class-1 Geneneration-2 certified

l 96-bit EPC / UII encodings are supported

l 64-bit manufacturer-programmed & locked Unique Identifier (TID / UID)

l -19 dBm (-21 dBm) typical IC (tag) read sensitivity

l 32-bit password-protected Kill command

l 32-bit password-protected Access command

l Optional deactivate function to address privacy concerns for retail applications
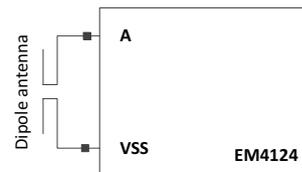
l Extended temperature range (–40°C to +85°C)

Applications

l Supply chain management

l Tracking and tracing

l Container identification

l Access control

l Asset control

IC Block Diagram

Typical Configuration

Ordering Information

The versions below are considered standards and should be readily available. For other versions or other delivery form, please contact EM Microelectronic-Marin S.A. For samples, please, order exclusively from the standard version.

Part Number	Protocol	Package / Die Form	Delivery Form	Comment
EM4124WS6U	EPC Gen2/ ISO 18000-63	Sawn wafer / bumped die - 6 mils thickness	Wafer sawn on frame	Certified version
EM4124WS6U-201	EPC Gen2/ ISO 18000-63	Sawn wafer / bumped die - 6 mils thickness	Wafer sawn on frame	Mute version
EM4124VXYYY-%%%	Custom	Custom	Custom	