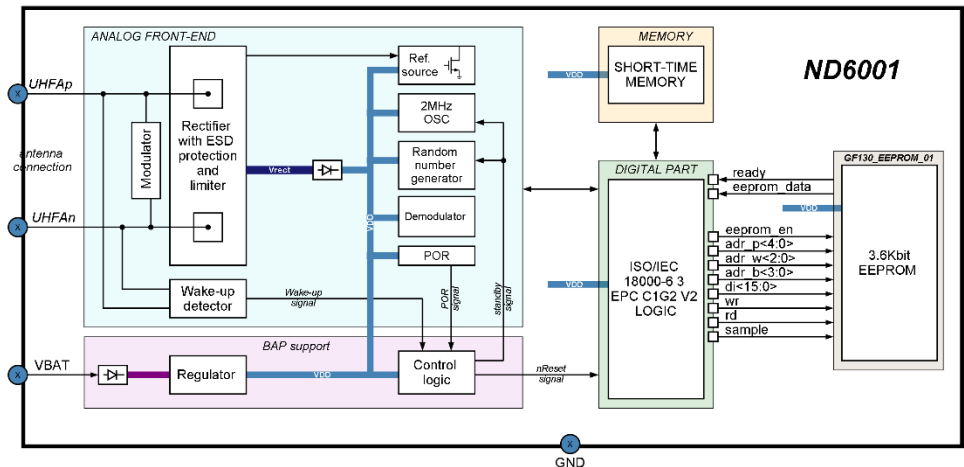


## UHF RFID tag IC with 3.6kBit EEPROM and -19.5dBm sensitivity

### OVERVIEW

ND6001 is intended for use in passive UHF transponder applications. IC derives its operating power from an RF electromagnetic field generated by a reader, which is received and rectified by the chip. The chip sends the answer back to the reader using a backscatter modulation technique. ND6001 chip provides a fast and flexible anti-collision protocol based on internal random number generator according to EPC standard. ND6001 supports all EPC C1G2 mandatory commands. The chip contains an embedded 3.6Kbit EEPROM organized in 4 banks.



IP technology: GF Embedded EEPROM 130 nm.

IP status: pre-silicon verification.

Total area: 520x550mm<sup>2</sup>, 0.286 mm<sup>2</sup>.

### ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Value			Unit
			min	typ.	max	
Operating temperature	T <sub>A</sub>	-	-40	25	+65	°C
Operating carrier frequency	F <sub>c</sub>	-	860	-	960	MHz
EEPROM retention time	t <sub>ret</sub>	-	-	10	-	year
EEPROM write endurance	N <sub>end</sub>	-	-	1M	-	cycle
Read sensitivity	P <sub>rd_min</sub>	T <sub>A</sub> = 25 °C	-	-19.5	-	dBm
Write sensitivity	P <sub>wr_min</sub>	T <sub>A</sub> = 25 °C	-	-17	-	dBm
Sensitivity in BAP mode	P <sub>BAP_min</sub>	T <sub>A</sub> = 25 °C	-	-24	-	dBm
Impedance	Z	F <sub>c</sub> = 915 MHz	-	20-j300	-	Ohms
EEPROM memory size	-	-	-	3.6	-	Kbits
ESD protection	-	-	-	2	-	kV