

## RFID PRODUCT CUSTOMIZATION

RFID TAG/READER/SECONDARY MOLDING/PRODUCT SOLUTION

Nanometer waterproof (soaked in seawater for 2 weeks)

Temperature resistance -50°C~200°C

Permeability 260



# FPC NFC Tags

## N180120 (Ntag213)

## 1. Product Overview

### 1.1 Introduction

N120180 NFC tag is an electronic tag made of FPC material. It is composed of NFC chip, antenna and substrate. It complies with the international standard 14443A protocol of non-contact card, and the working frequency is 13.56MHz. FPC material label can be bent, good consistency and stability, high temperature resistance and other excellent performance.

It does not carry a power source. It works by obtaining the energy from the reader through the antenna, and the communication between the reader and the reader is realized by radio frequency technology.

### 1.2 Features

#### 1.2.1 RF Interface

- ISO/IEC14443A
- Contactless transmission of data and supply energy (no battery needed)
- Operating frequency: 13.56 MHz
- Fast data transfer: 106 Kbit/s
- High data integrity: 16-bit CRC, parity, bit coding, bit counting
- 7 byte UID (cascade level 2 according to ISO/IEC 14443-3)

- UID ASCII mirror for automatic serialization of NDEF messages
- Automatic NFC counter triggered at read command
- NFC counter ASCII mirror for automatic adding the NFC counter value to the NDEF message
- ECC based originality signature
- Fast read command
- True anticollision

### 1.2.2 EEPROM

- user memory: 144 bytes (36 pages)
- 4 bytes initialized capability container with one time programmable access bits
- Field programmable read-only locking function per page for the first 16 pages
- Field programmable read-only locking function above the first 16 pages per double page for NTAG213 or per 16 pages for NTAG215 and NTAG216
- Configurable password protection with optional limit of unsuccessful attempts
- Anti-tearing support for capability container (CC) and lock bits
- ECC supported originality check
- Data retention time of 10 years
- Write endurance 100.000 cycles

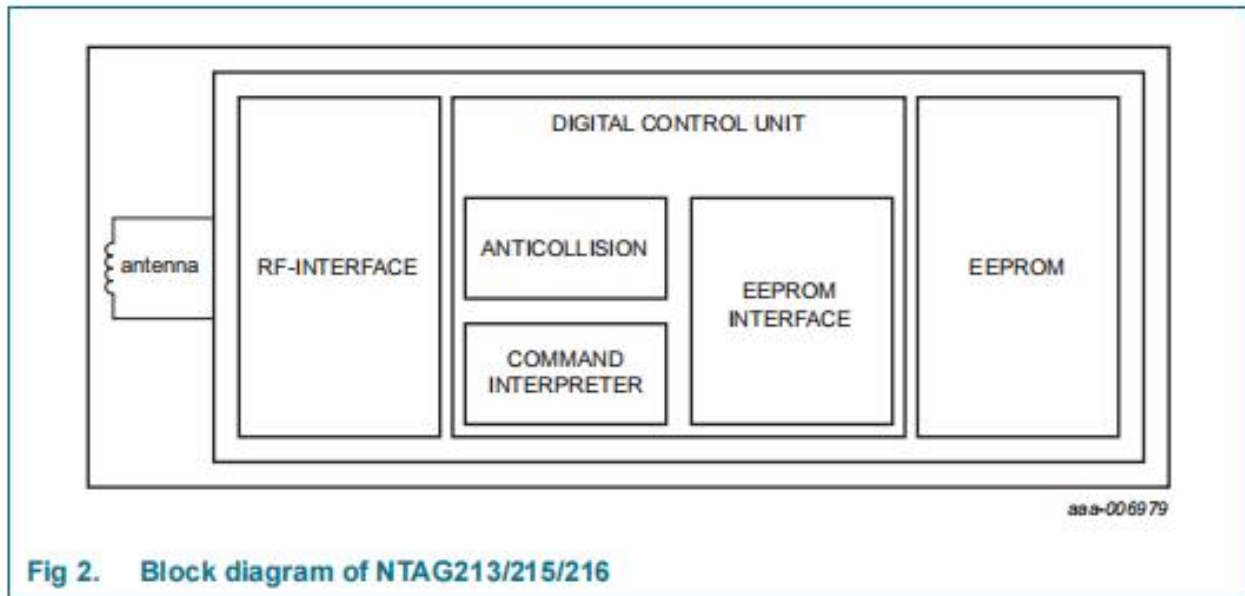
### 1.2.3 NFC Forum Tag 2 Type compliance

provides full compliance to the NFC Forum Type 2 Tag technical specification and enables NDEF data structure configuration.

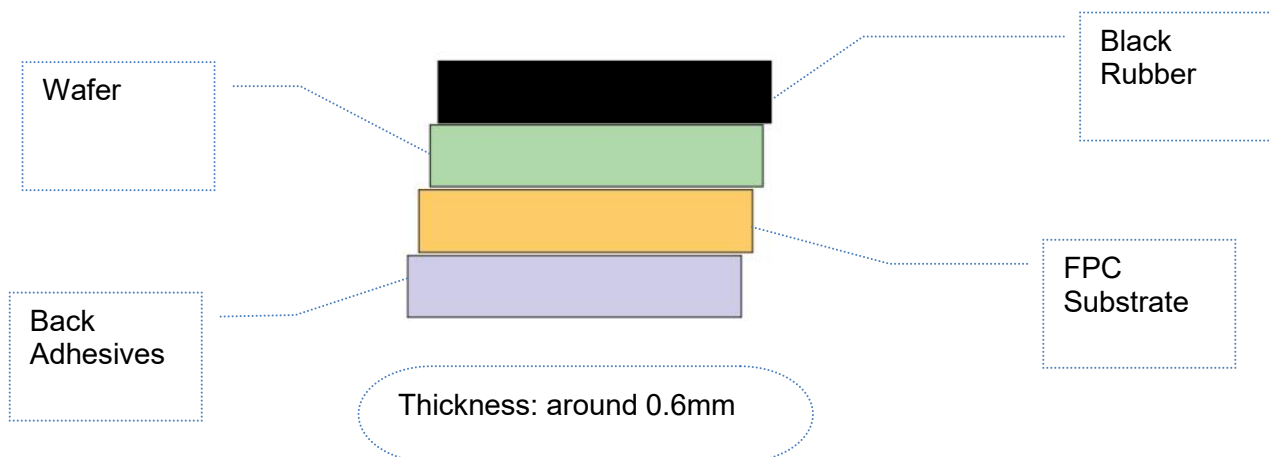
### 1.2.4 Physical Parameters:

- Read Range :20mm (NFC Mobail) , 30-50mm (NFC Reader)
- Size: 18\*12mm
- Junction temperature: -40°C to 100°C
- Maximum tolerable temperature: 260°C
- Storage temperature: -40°C to 150°C
- Water resistance class: IP68
- Certification: Reach ,RoHS ,CE

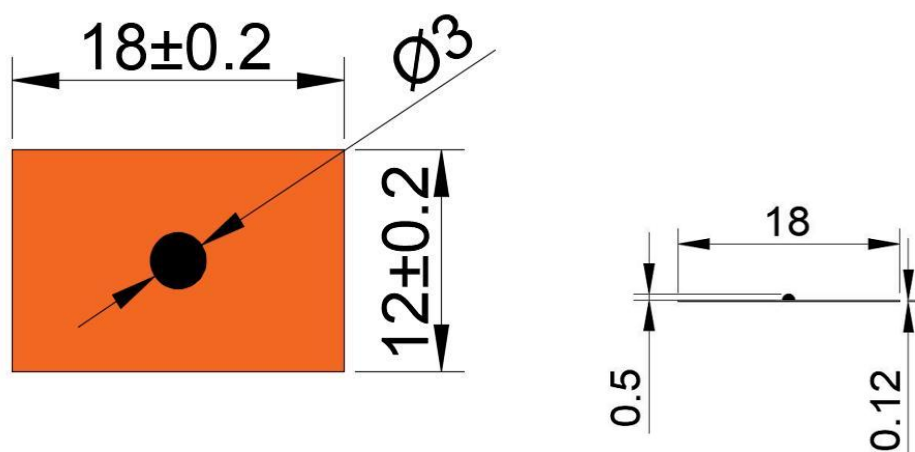
## 2. Block diagram



### 3. Structure chart



#### 4. Size (mm)



#### 5. Physical picture:



All measurements were performed radiated and therefore additional antenna gain documentation is not required.