

VC-SF-T8004 Specification

Release History

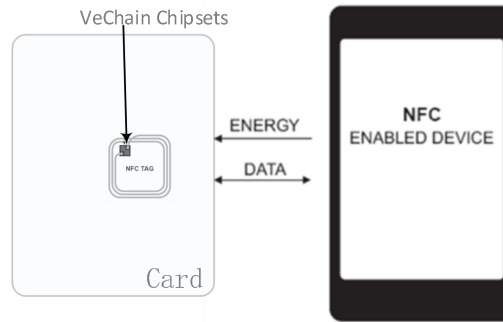
Version	Change history	Date
V1.0	Initial Release	26/11, 2018
V1.1	Change naming rule: change specification number from VC-SFTG-C8005 to VC-SF-T8004. Modify the chip naming rule : add a bit identification chip type at the end	23/04, 2019

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General Description

VC-SF-T8004 Series is a passive NFC tag product, which is compliant with the ISO/IEC14443A /NFC Forum Standard. It can communicate with NFC device (e.g. mobile phone) contactless to transfer data as below picture shows.



a. Contactless System



b. Product Pic



c. Package Pic

The tag is pre-programmed with VeChain IDs and cryptographic keys, which can be used in VeChain Blockchain solutions, such as anti-counterfeiting, traceability and inventory in logistics supply chain management and consumer engagement.

The product dimension is $\varnothing 24\text{mm}(\pm 0.5\text{mm}) \times 2.5\text{mm}$, the compact size fits for most scenarios, with good RF performance. In addition, we can also provide size, hole or color customized service according to your goods. The product can be packaged by plastic bag, packing volume number is 100 pcs/bag, please refer figure C.

Product Features

- Substrate Material: PPS plastic
- Surface Material: PPS plastic
- Memory capacity: 144bytes
- Characteristics: Soak resistance, waterproof, sunblock, High temperature resistant
- Washing times: 100~500 times
- Operating Frequency: 13.56Mhz
- Protocol: ISO/IEC14443-A /NFC NDEF
- Read and write range: 0~15mm (Determinate by reader and use environment)
- Programming Cycle: 1,000,000 cycles
- Color: Black/White/Blue, etc
- Weight: 1.50 (± 0.1) g
- Dimension: $\varnothing 20 \times 2.5\text{mm}$, $\varnothing 21 \times 2.5\text{mm}$, $\varnothing 24 \times 2.5\text{mm}$
- Hole: Single or Double
- Temperature resisting: 220°C
- Specific: Safe, non-toxic and environmentally friendly

Environment Parameter

- Data Retention: above 10 years
- Operating Temperature: -3°C~100°C
- Storage Temperature: -10°C~220°C

Key Application

- Goods and device authentication
- Product information
- Loyalty (vouchers, coupons)
- Logistic management

It can be used in the production management, anti-counterfeiting and logistics management of laundry, advanced clothing, school uniforms, special clothing. It can not only be washed and soaked, but also be repeatedly rub and directly ironed. It can be normally used in many poor conditions. Besides, it can be used in situations such as production track, warehouse inventory, automobile engine maintenance identification, and chemical raw material management.

Applicable Documents

- | | |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [ISO/IEC 14443-2] | <ul style="list-style-type: none">• ISO/IEC 14443-2 Type A Identification Cards- Contactless Integrated circuit(s) cards- Proximity Cards- Part 2: Radio frequency power and signal interface |
| [ISO/IEC 14443-3] | <ul style="list-style-type: none">• ISO/IEC14443-3 Type A Identification Cards- Contactless Integrated circuit(s) cards- Proximity Cards- Part 3: Initialization and Anti-collision |

[NDEF]

- “NFC Data Exchange Format (NDEF)”, NFC Forum™, Technical Specification, May 2006.

Ordering information

Part number	Antenna Description	Product Description	Package Description
VC-SF-T8004-010	copper	Dimension $\phi 20$ mm*2.5mm /color white/ hole numbers (single or double) Chip IC: - NXP (NFC)	By piece and packaged by plastic bag
VC-SF-T8004-020	copper	Dimension $\phi 20$ mm*2.5mm/color black/ hole numbers (single or double) Chip IC: - NXP (NFC)	By piece and packaged by plastic bag
VC-SF-T8004-030	copper	Dimension $\phi 20$ mm*2.5mm/color blue/ hole numbers (single or double) Chip IC: - NXP (NFC)	By piece and packaged by plastic bag
VC-SF-T8004-040	copper	Dimension $\phi 21$ mm*2.5mm/color white/ hole numbers (single or double)	By piece and packaged by plastic bag

		Chip IC: - NXP (NFC)	
VC-SF-T8004-050	copper	Dimension φ21mm*2.5mm/color black/ hole numbers (single or double) Chip IC: - NXP (NFC)	By piece and packaged by plastic bag
VC-SF-T8004-060	copper	Dimension φ21mm*2.5mm/color blue/ hole numbers (single or double) Chip IC: - NXP (NFC)	By piece and packaged by plastic bag
VC-SF-T8004-070	copper	Dimension φ24mm*2.5mm/color white/ hole numbers (single or double) Chip IC: - NXP (NFC)	By piece and packaged by plastic bag
VC-SF-T8004-080	copper	Dimension φ24 mm*2.5mm/color black/ hole numbers (single or double) Chip IC: - NXP (NFC)	By piece and packaged by plastic bag
VC-SF-T8004-090	copper	Dimension φ24mm*2.5mm/color blue/ hole numbers (single or double)	By piece and packaged by plastic bag

		Chip IC: - NXP (NFC)	
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Legal Information



Contact information



For more information, please visit: <https://www.vechain.com>

For sales office addresses, please send an email to: bd@vechain.com