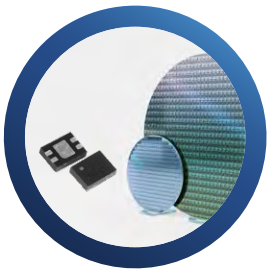
ADVANCED NFC

SIC43NT
SIC43S1



NFC FORUM TYPE 2 TAG ICs
FOR ITEM-LEVEL AUTHENTICATION

SIC43NT and SIC43S1 are passive NFC Forum Type 2 tag ICs, fully compliant with ISO14443A standard. The user memory of both chips supports NDEF updating with a unique value for each tap, enabling app-less NFC authentication.

For enhanced security, the SIC43S1 contains an AES-128 encryption engine designed for use with mutual authentication and encrypted communication schemes.

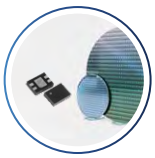
HIGHLIGHT FEATURES

- NFC Forum Type 2 Tag
- Dynamic NDEF Message Containing UID and a Secured Authentication Code (SAC) or Rolling Code for Authentication
- ISO14443A, 106kbps
- 50pF Input Capacitance
- Secured Tamper Detection and Verification via SAC or Rolling Code
- Pin Configuration for RF Field Detection or Tamper Detection (SIC43NT)
- Operating Temperature: -40°C to 85°C

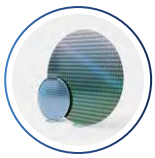
APPLICATIONS

- Item-Level NFC Label or Sticker with Authentication Function
- Smart Packaging
- Vouchers and Coupons
- Access Control Card with Authentication Function

NFC TAG ICs
FOR ITEM-LEVEL AUTHENTICATION



SIC43NT
NFC Forum T2T with Secured Rolling-Code



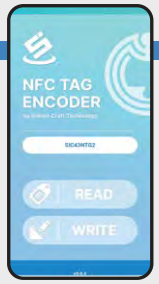
SIC43S1
NFC Forum T2T with AES-128 Encryption

COMPARISON TABLE

SPECIFICATION	SIC43NT	SIC43S1
Standard	NFC Type 2 Tag	
Memory		
User Memory Size [bytes]	144	816
Retention	10 years	
Write Cycle [times]	100k	100k
Memory Protection	32-bit Password Protection	AES-128 Mutual Authentication
Dynamic NDEF		
UID	14 bytes (ASCII)	
Tamper Status	2 bytes (ASCII)	-
Timestamp	8 bytes (ASCII)	
RLC/SAC	8 bytes (ASCII)	32 bytes (ASCII)
Security		
Mutual Authentication	No	Yes, AES-128
Encrypted Communication	No	Yes, AES-128
I/O Function		
RF Detection	Yes	No
Tampering Detection	Yes	No
Others		
On-Chip Capacitor	50 pF	
Packages	Sawn Wafer with Bump, DFN	Sawn Wafer with Bump

DEVELOPMENT KITS
SUPPORT MATERIALS

- Demo Android APP and Source Code
- Reference PCB Design and Schematic Diagram
- Reference Antenna and Antenna Design Tool



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