SIC7150/SIC7151/SIC7152

FDX-B, 512-bit High-Performance R/W RFID IC

REV 1.2

Features Summary

Highlight Features

- Frequency range 100 – 150 kHz
- 3 Integrated resonant capacitor versions SIC7150: 330pF, SIC7151: 210pF, and SIC7152: 250pF
- On-chip tuneable resonant capacitor ±5% of resonance capacitor 330pF
- Full-Duplex contactless read/write data transmission
- Long reading range
- Extremely low power consumption in read mode
- Mega pads (200x400 um) for direct coil connection

Supported Protocol

- Fully compliant with ISO 11784/11785 FDX-B Animal tag ID data protocol/structure
- Compatible command with mainstream FDX product in the market
- Downlink; 100% ASK modulation
- Uplink; Bi-phase and Manchester modulation
- Selectable uplink data rate 8, 16, 32, and 64 RF clocks
- Reader Talk First feature (RTF)

Memory

- Factory programmed 32 bits UID
- 512 bits (16 x 32) EEPROM
- 320 bits (10 x 32) in user memory area
- 100,000 erase/write cycles
- 10 years non-volatile data retention
- Secure memory lock functionality

Operating Conditions

- Carrier frequency f_c is 134.2 kHz for animal tag, 125 kHz for access control
- Operating temperature: -40°C to 85°C

Package

- Tested wafer
- Sawn wafer
- UDFN (1.15x1.40 mm)

Applications

- FDX-B ISO11784/85 Animal Tag, ICAR Compliant Tags
- Pigeon races standard
- Waste management standard (BDE)
- Access Control
- Industrial

Ordering information

Part No.	Description	Package	Standard Packing
P53BDQ60DB0HN5310R2	SIC7150-10, FDX-B, 512-bit High Performance R/W RFID IC, 330 pF, DOWTMB, 6 mils, Wafer ring, Dice	Sawn wafer	Wafer on Film Frame (Ring size 275 mm)
P53BDQ11DB0HN5310R2	SIC7150-10, FDX-B, 512-bit High Performance R/W RFID IC, 330 pF, DOWTMB, 11 mils, Wafer ring, Dice	Sawn wafer	Wafer on Film Frame (Ring size 275 mm)
P53BUDT8P50UT5310C4	SIC7150-10, FDX-B, 512-bit High Performance R/W RFID IC, 330 pF, DFN 0.5 mm, Canister, IC	UDFN (1.15x1.40)	10,000 pcs/Canister
P52ADS9BSI0HN5210W0	SIC7152-10, FDX-B, 512-bit High Performance R/W RFID IC, 250 pF, Tested wafer, Dice	Tested wafer 8"	25 wafers/Wafer cassette

Contact Information: For inquiries, email info@sic.co.th or call +66-2-589-9991.

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