



SIC279

134.2 kHz, Multi-Purpose R/W HDX RFID IC with 192 bits of User Memory
REV 2.1

Features Summary

Highlight Features

- New improvement from its predecessor to fully support
- Industrial application (BDE format)
- Customizable, long read range R/W RFID transponder
- Half duplex FM telegram 124/134 kHz contactless read/write data
- On-chip tunable resonant capacitor controlled by non-volatile memory switch
- Available in VDFN packages, fully compatible with its predecessor

Interface and Peripheral

- Compliant with BDE format (for waste management application)
- Fully compliant with ISO 11784/11785 HDX R/O Animal tag
- ID data protocol/structure
- Fully compliant with mainstream HDX R/W ID format

Applications

- HDX industrial application
- Waste bin tag (BDE)
- HDX ISO 11784/85 Animal Tag, ICAR compliant RFID tags
- Long Read-Range EAS Transponders

Memory

- R/W user memory of 6X32 (192 bits)
- Supporting user access to factory unique ROM ID (UID), preventing chips from cloning
- Direct Access/Write Mode
- Protected Direct Access/Write Mode
- One-time programming (OTP) configuration
- Write endurance > 100,000 R/W cycles
- Memory retention > 20 years

Commands

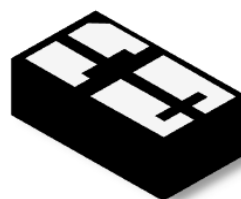
- Proprietary command protocol
- Comprehensive error logging reports
- Support cascade commands

Operating Conditions

- Carrier frequency f_c is 134.2 kHz
- Operating temperature: -25°C to 85°C

Package

- VDFN 1.60 x 2.80 mm



Revision History

Revision	Date	Change/Update Comment
1.0	17 Feb 2016	Official release
2.0	1 Apr 2020	Update Package dimension
2.1	5 Jun 2025	Document format

Ordering information

Part No.	Description	Package	Standard Packing
P29AVDF2T10UT2910C5	SIC279-10, LF HDX IC with RW memory 512 bits and Animal ID DFN 0.85 mm, Canister, IC	VDFN	12,000 pcs/Canister
P29AVDF2T10UT2910T2	SIC279-10, LF HDX IC with RW memory 512 bits and Animal ID DFN 0.85 mm, TnR, IC	VDFN	11,500 pcs/Reel

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Package information

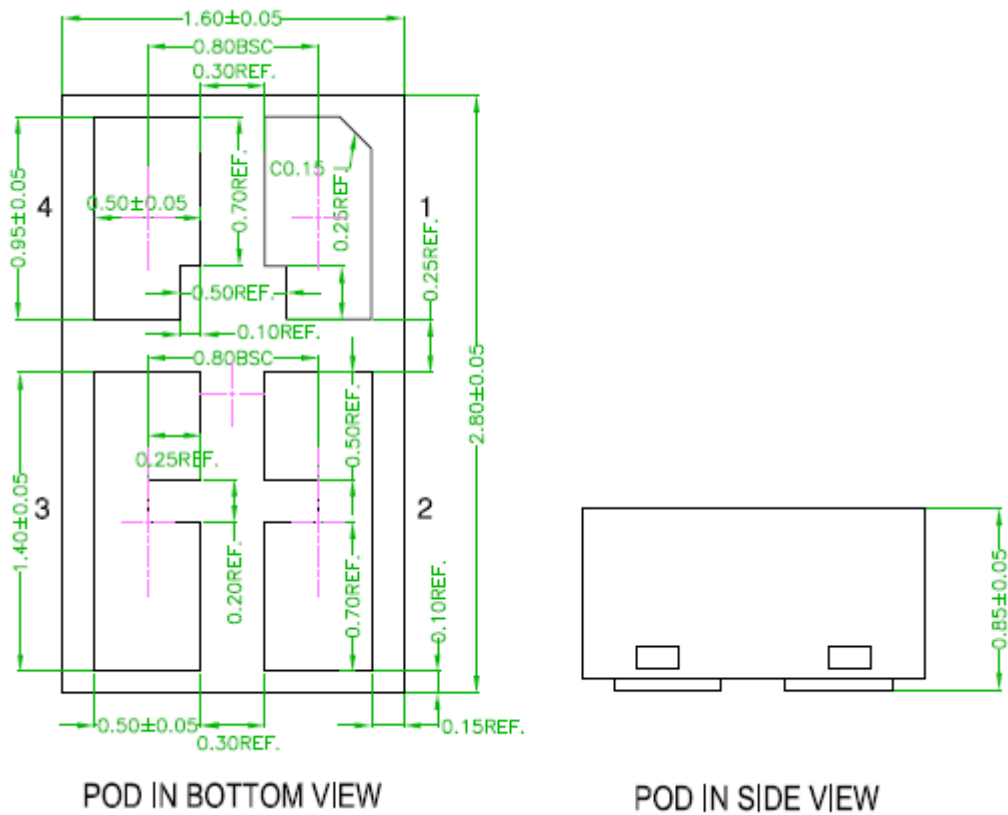


Figure 1: Drawing and dimension

Table 1: Package dimension and information

Item	Parameter	Value	Tolerance	Unit
VDFN	Length	2.80	± 0.05	mm
	Width	1.60	± 0.05	mm
	Thickness	0.85	± 0.05	mm

Table 2: Pin configuration

Pin No.	Pin Name	Remark
1	VDD	Leave unconnected
2	RF1	Connect to coil
3	RF2	Connect to coil
4	GND	Leave unconnected

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