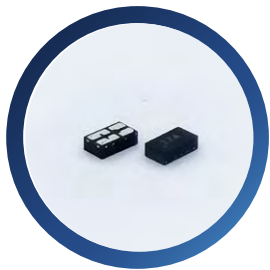




SIC7150  
SIC7151  
SIC7152  
SIC278  
SIC479



## LF RFID TRANSPONDER & ICs FOR ANIMAL IDENTIFICATION

SIC7150, SIC7151, SIC7152, SIC278, and SIC479 are low-frequency (LF) RFID transponder & ICs designed for a broad range of applications in animal identification. They operate at 134.2 kHz RFID, fully compliant with ISO 11784 and ISO 11785.

Low-frequency (LF) transponder & ICs streamline animal handling, elevating the standard of livestock management while mitigating the risk of disease transmission. These transponder & ICs also play a crucial role in the identification of pets and laboratory animals.

Silicon Craft's specialized chip design, integrated with proprietary intellectual properties (IPs), provides best-in-class read range performance. It also includes on-chip resonant capacitance tuning, which optimizes transponder communication capabilities and greatly enhances operational efficiency.

### HIGHLIGHT FEATURES

- Meets ISO 11784/11785 and ICAR Standard for Animal Identification
- Support LF Transponders Used in Industrial Applications
- On-Chip Tunable Resonant Capacitor (SIC7150, SIC278 and SIC479)
- Best-in-Class Communication Distance

### APPLICATIONS

- Livestock Identification
- Pet Identification
- Fish Identification
- Pigeon Identification
- Laboratory Animal Identification

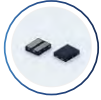
# LF TRANSPONDER & ICs

FOR ANIMAL IDENTIFICATION APPLICATIONS



## SIC7150 / SIC7151 / SIC7152

Transponder ICs with Full-Duplex (FDX-B)



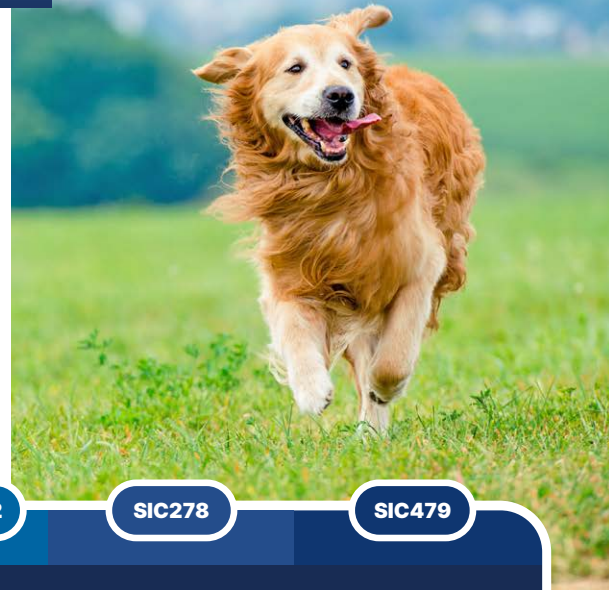
## SIC278

Transponder IC with Full-Duplex (FDX-A/FDX-B)



## SIC479

Transponder & IC with Half-Duplex (HDX R/O)



SPECIFICATION	SIC7150	SIC7151	SIC7152	SIC278	SIC479	
<b>Communication</b>						
Protocol	ISO 11784/11785 (FDX-B)		ISO 11784/11785 (FDX-B), FSK FECAVA (FDX-A)	ISO 11784/11785 (HDX R/O)		
Reader Talk First [RTF]	Yes		Yes	N/A		
<b>Memory</b>						
User Memory Size [bits]	320		1,184	192		
Data Retention [years]	10		10	10		
Write Cycles [times]	100,000					
Security	Read and Write 32-bit Password Authorization					
<b>Resonant Capacitor</b>						
On-Chip Resonant Capacitor [pF]	330	210	250	230	330	
On-Chip Tunable Resonant Capacitor	Yes	No		Yes		
Tunable Resonant Capacitance Range [%]	±5%	-		±5%	±10%	
Tunable Resonant Capacitance Data [steps]	32	-		32	128	
<b>Others</b>						
Form Factors	<ul style="list-style-type: none"> <li>• UDFN</li> <li>• Tested Wafer</li> <li>• Sawn Wafer</li> </ul>	<ul style="list-style-type: none"> <li>• Sawn Wafer with Bump</li> <li>• Bump Die in Tape and Reel</li> </ul>	<ul style="list-style-type: none"> <li>• WDFN</li> <li>• Sawn Wafer</li> <li>• Sawn Wafer with Bump</li> </ul>	<ul style="list-style-type: none"> <li>• VDFN</li> <li>• Glass Transponder: 23,32 mm</li> </ul>		
Megapad for Direct Connection of Coil on Die	Yes		Yes	Yes	No	

## SUPPORT MATERIALS

- Silicon Craft Universal LF Reader
- PC Software for Tuning On-Chip Resonant Capacitance

