

General Description

The rectifier is an analog IP Cell for 13,56MHz RFID applications. It is used to rectify the coupled magnetic power from a reader to a tag. In this case the rectifier has to be used with a limiter circuit to protect the circuitry against over voltage. The output voltage can be used to supply internal circuits. The rectifier provides a stable output voltage at different resistive loads. At the output of this IP Cell there is a capacitor to bridge voltage drops (e.g. ASK modulation).

Ratings, Parameters and Condition

Parameter	Symbol	Min	Typ	Max	Unit	Comment
Antenna voltage	V_{ANT}			5,5	V	max. for internal transistors
Capacitor	C_{RECT}		200		pF	
Operating temperature	T_{op}	-40	27	80	°C	

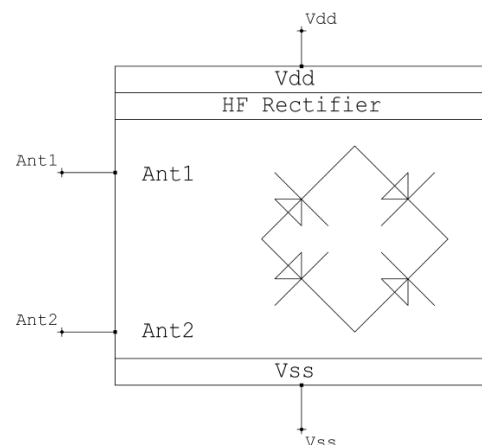
Behaviour Rectifier

Antenna voltage (V)	Resistive load (Ohm)	Rectifier voltage (V)
2,0	10k	0,96
2,0	100k	1,04
2,0	1Meg	1,17
3,0	10k	1,95
3,0	100k	2,00
3,0	1Meg	2,13
4,0	10k	2,95
4,0	100k	2,98
4,0	1Meg	3,10
5,0	10k	3,95
5,0	100k	3,96
5,0	1Meg	4,07

IO-Description

Interface	I/O	Function	Comment
ANT1	Input	Antenna	Signal
ANT2	Input	Antenna	Signal
Vdd	In-/Output	Supply	
Vss	In-/Output	Supply	Ground

Symbol / external schematic



Dieses Projekt wird mit Mitteln des Europäischen Sozialfonds (ESF) gefördert. Es erzeugt einen gemeinschaftlichen Mehrwert „Investition in Ihre Zukunft“.