

## General Description

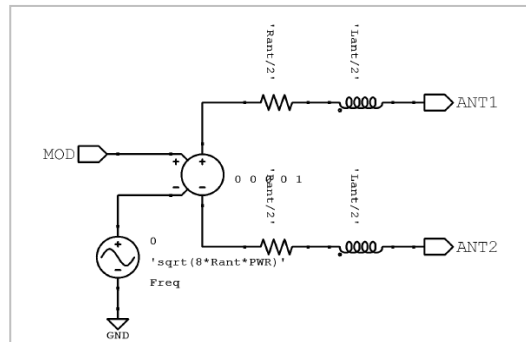
The rectifier is an analog standard cell for RFID applications in the 868 - 915MHz ISM band. The cell rectifies and amplifies an incoming antenna signal broadcasted by any UHF RFID reader. The output voltage can be used as supply voltage for internal circuitry within the RFID Tag chip. The antenna signal can be model for different antenna parameters like link frequency, transmission power, inductance and resistance.

The output voltage depends on the resistive load and the input power from the antenna.

## Behavior Rectifier

P <sub>ANT</sub> [uW]	Resistive load [Ohm]	V <sub>RF</sub> [V]	P <sub>VRF</sub> [uW]	Efficiency factor [%]
100	20k	0,34	5,8	5,8
100	120k	1,30	14,1	14,1
100	220k	1,82	15,1	15,1
100	320k	2,12	14,0	14,0
100	420k	2,33	12,9	12,9
350	20k	0,98	48,5	13,9
350	120k	3,68	113,1	32,3
350	220k	5,03	114,8	32,8
350	320k	5,89	108,5	31,0
350	420k	6,43	98,5	28,1
600	20k	1,44	103,4	17,2
600	120k	5,45	247,2	41,2
600	220k	7,42	250,5	41,8
600	320k	8,56	229,1	38,2
600	420k	9,29	205,4	34,2
850	20k	1,83	166,6	19,6
850	120k	6,82	387,4	45,6
850	220k	9,22	386,8	45,5
850	320k	10,61	351,8	41,4
850	420k	11,53	316,4	37,2

## Antenna Model and Parameters

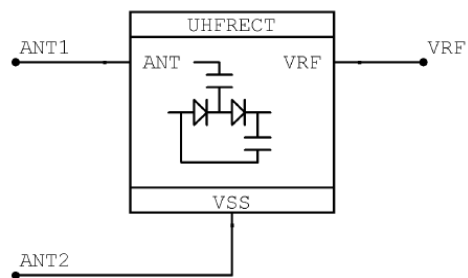


Parameters	
Frequency	860 MHz
Power [uW]	Look table aside
Inductance	30 nH
Resistance	30 Ohm

## IO-Description

Interface	I/O	Function	Comment
ANT1	Input	Antenna	Signal
ANT2	Input	Antenna	Ground
VRF	Output	Analog	Rectified voltage

## Symbol / external schematic



For more information please contact  
PE GmbH at:  
info@pe-gmbh.com

or visit our web site at:  
www.pe-gmbh.com



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