

## General Description

The BIASOSC is an analog standard cell for RFID applications with low power and wide voltage range. The cell consists of a programmable bias reference and an oscillator. The bias provides the oscillator with a constant current. This current can be trimmed via a 7Bit trim port. The output frequency of the oscillator depends on the current from bias reference. This cell is primary intended to be used as clock source for a digital core circuitry.

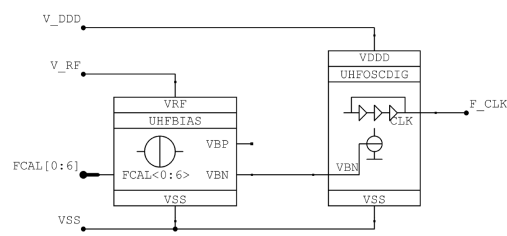
## Ratings, Parameters and Conditions

Parameter	Symbol	Min	Typ	Max	Unit	Comment
<b>Bias</b>						
Supply Voltage	$V_{RF}$	1,5		3,5	V	
Temperature	Temp	-40	27	80	°C	
Trimm Port	FCAL	00		7F	Hex	7Bit
Bias Current (n-channel)	$I_{BN}$	12		87	nA	
Bias Voltage (n-channel)	$V_{BN}$	0,38		0,57	V	
Bias Voltage (p-channel)	$V_{PN}$	0,85		3,10	V	
<b>Oscillator</b>						
Supply Voltage	$V_{DDD}$		1,2		V	
Supply Current	$I_{DDD}$	17		350	nA	Steady state
Temperature	Temp	-40	27	80	°C	
Bias Current (n-channel)	$I_{BN}$	Look at bias				
Bias Voltage (n-channel)	$V_{BN}$	Look at bias				
Output Frequency	$F_{CLK}$	0,48		2,78	MHz	Depends on FCAL
Power Up Time	$T_{PU}$		100		µs	

## IO-Description

Interface	I/O	Function
$V_{DDD}$	Input	Supply
$V_{SS}$	Input	Supply
$V_{RF}$	Input	Supply
FCAL[0:6]	Input	programmable Bits
$V_{BN}$	Output	Bias Output (n-channel)
$V_{BP}$	Output	Bias Output (p-channel)
$F_{CLK}$	Output	Clock Output

## Symbol / external schematic



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