

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.

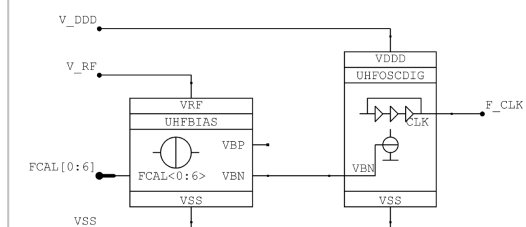
Ratings, Parameters and Conditions

Parameter	Symbol	Min	Typ	Max	Unit	Comment
Bias						
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	
Oscillator						
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



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