Analog IP Cell
Internal VDD Regulator
VoltReg XC06

General Description

The internal Vdd regulator is a linear series voltage regulator having low power consumption, low drop out voltage and a wide supply voltage range of 7VDC to 25VDC. Based on a reference voltage generated by a trimmed Bandgap reference source, it supplies connected circuits with a very precise voltage of 5VDC at a maximum load current of 2.5mA.

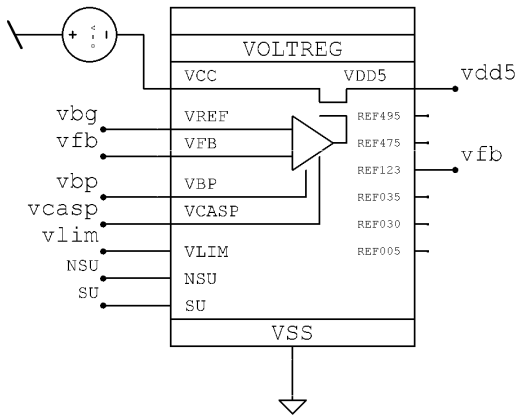
Ratings, Parameters and Conditions

Parameter / Condition	Symbol	Min	Typ.	Max	Unit	Comment
Electrical Parameters:						
Supply Voltage	V_{dd}	7	12	25	V	
Active Supply Current	I_{dd}		500	750	nA	no lad connected
Load Current	I_{load}			2.5	mA	
Reference Voltage	V_{ref}		1.22		V	
Output Voltage	V_{Out}		4.95		V	@ nominal reference voltage
Supply Voltage Rejection Ratio	PSRR V_{out}				dB	
Absolute Maximum Ratings:						
Operating Temperature	T_{range}	-40		140	℃	
Supply Voltage	V_{dd}	-0.3		25	V	
Input Voltage	V_{in}	-0.3		V_{dd}+0.7		
Output Voltage	V_{out}	-0.3		V_{dd}+0.7		
Operating Conditions:						
Ambient Temperature	T_{amb}	-20	27	80	℃	

IO-Description

Interface	I/O	Function	Comment
VSS	input	Supply	
VCC	Input	Supply	
VDD5	Output	Regulated Voltage	
VREF	Input	Reference Voltage	
VFB	Input	Feedback	
VBP	Input	Bias	
VCASP	Input	Bias	
VLIM	Input	Limit Voltage	
NSU	Input	Startup Signal	
SU	Input		
REF495	Output	Divided output voltage for other reference purposes	
REF475			
REF123			
REF035			
REF030			
REF005			

Block schematic, ext. component diagram



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