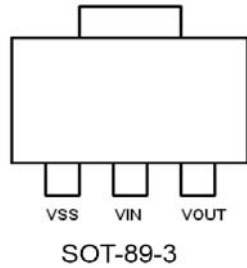


Pin Configuration

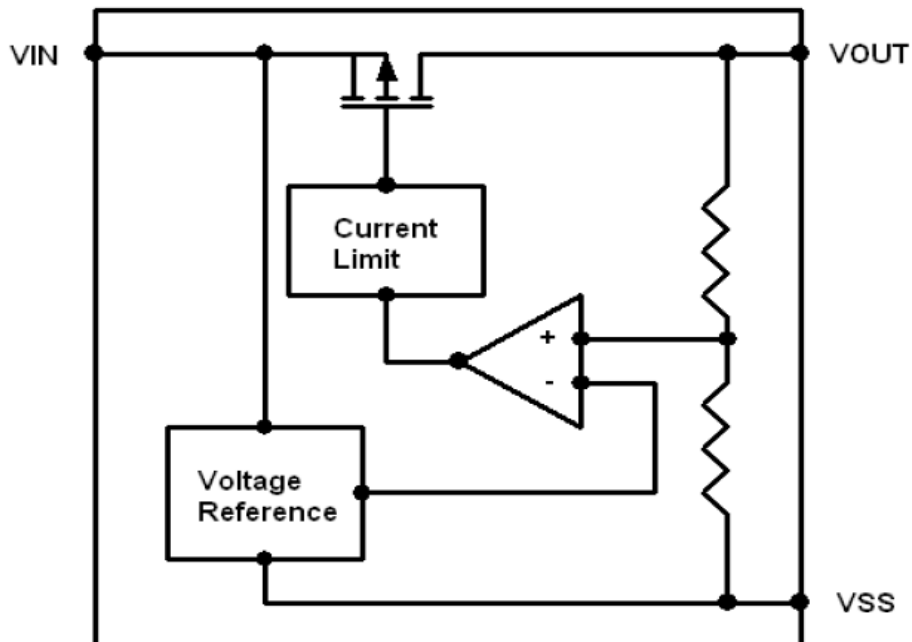


Pin Assignment

FC6203AXX

Pin Number	Pin Name	Functions
1	V _{SS}	Ground
2	V _{IN}	Input
3	V _{OUT}	Output

Block Diagram





FC6203

Absolute Maximum Ratings

Parameter	Symbol	Ratings	Units
Input Voltage	V_{IN}	36	V
Output Voltage	V_{OUT}	$V_{SS}-0.3 \sim V_{IN} +0.3$	V
Power Dissipation	SOT-89 P_D	500	mW
Operating Temperature Range	T_{OPR}	0 ~ +100	°C
Storage Temperature Range	T_{STG}	-40 ~ +150	°C
Lead Temperature	SOT-89	260°C, 10sec	

Electrical Characteristics

FC6203A30

($V_{IN}=7V$, $C_{IN}=C_L=10\mu F$, $T_a=25^\circ C$, unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Output Voltage	$V_{OUT(E)}$ (Note 2)	$I_{OUT}=10mA$, $7V \leq V_{IN} \leq 30V$	X 0.975	$V_{OUT(T)}$ (Note 1)	X 1.025	V
Input Voltage	V_{IN}		7		30	V
Maximum Output Current	I_{OUTMAX}	$V_{IN}=7V$		100		mA
		$V_{IN}=24V$		20		
		$V_{IN}=30V$		15		
Load Regulation	ΔV_{OUT}	$V_{IN}=7V$, $0mA \leq I_{OUT} \leq 100mA$		10	30	mV
Line Regulation	ΔV_{OUT}	$I_{OUT}=10mA$, $7V \leq V_{IN} \leq 30V$		10	35	mV
Temperature Stability	ΔV_{OUT}	$V_{IN}=7V$, $I_{OUT}=10mA$, $0 \sim 100^\circ C$		0.5	1.5	%
Quiescent Current	I_s			13	18	μA
short-circuit current	I_{short}	$V_{IN}=7V$		13	30	mA
Ripple Rejection Rate	PSRR	$V_{IN}=12V+1Vp-pAC$ $I_{OUT}=5mA, 1kHz$		40		dB



FC6203

FC6203A33

($V_{IN}=7V$, $C_{IN}=C_L=10\mu F$, $T_a=25^{\circ}C$, unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Output Voltage	$V_{OUT(E)}$ (Note 2)	$I_{OUT}=10mA$, $7V \leq V_{IN} \leq 30V$	X 0.975	$V_{OUT(T)}$ (Note 1)	X 1.025	V
Input Voltage	V_{IN}		7		30	V
Maximum Output Current	I_{OUTMAX}	$V_{IN}=7V$		100		mA
		$V_{IN}=24V$		20		
		$V_{IN}=30V$		15		
Load Regulation	ΔV_{OUT}	$V_{IN}=7V$, $0mA \leq I_{OUT} \leq 100mA$		10	30	mV
Line Regulation	ΔV_{OUT}	$I_{OUT}=10mA$, $7V \leq V_{IN} \leq 30V$		10	35	mV
Temperature Stability	ΔV_{OUT}	$V_{IN}=7V$, $I_{OUT}=10mA$, $0 \sim 100^{\circ}C$		0.5	1.5	%
Quiescent Current	I_s			13	18	μA
short-circuit current	I_{short}	$V_{IN}=7V$		13	30	mA
Ripple Rejection Rate	PSRR	$V_{IN}=12V+1Vp-pAC$ $I_{OUT}=5mA, 1kHz$		40		dB

FC6203A50

($V_{IN}=7V$, $C_{IN}=C_L=10\mu F$, $T_a=25^{\circ}C$, unless otherwise noted)

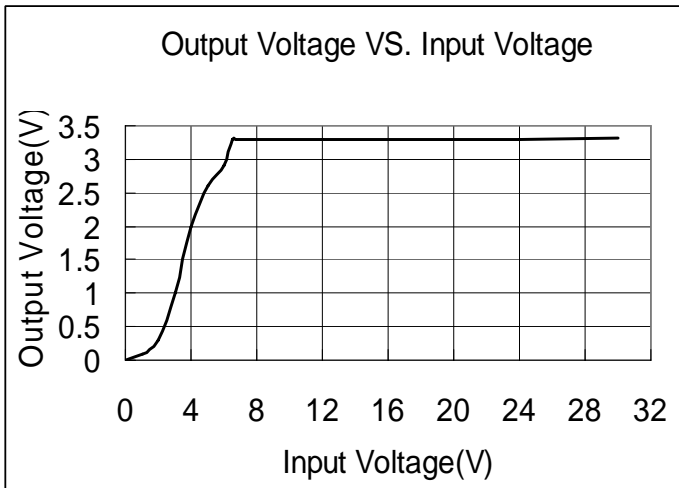
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Output Voltage	$V_{OUT(E)}$ (Note 2)	$I_{OUT}=10mA$, $7V \leq V_{IN} \leq 30V$	X 0.975	$V_{OUT(T)}$ (Note 1)	X 1.025	V
Input Voltage	V_{IN}		7		30	V
Maximum Output Current	I_{OUTMAX}	$V_{IN}=7V$		100		mA
		$V_{IN}=24V$		20		
		$V_{IN}=30V$		15		
Load Regulation	ΔV_{OUT}	$V_{IN}=7V$, $0mA \leq I_{OUT} \leq 100mA$		10	40	mV
Line Regulation	ΔV_{OUT}	$I_{OUT}=10mA$, $7V \leq V_{IN} \leq 30V$		10	45	mV
Temperature Stability	ΔV_{OUT}	$V_{IN}=7V$, $I_{OUT}=10mA$, $0 \sim 100^{\circ}C$		0.5	1.5	%
Quiescent Current	I_s			15	18	μA
short-circuit current	I_{short}	$V_{IN}=7V$		15	30	mA
Ripple Rejection Rate	PSRR	$V_{IN}=12V+1Vp-pAC$ $I_{OUT}=5mA, 1kHz$		40		dB

Note :

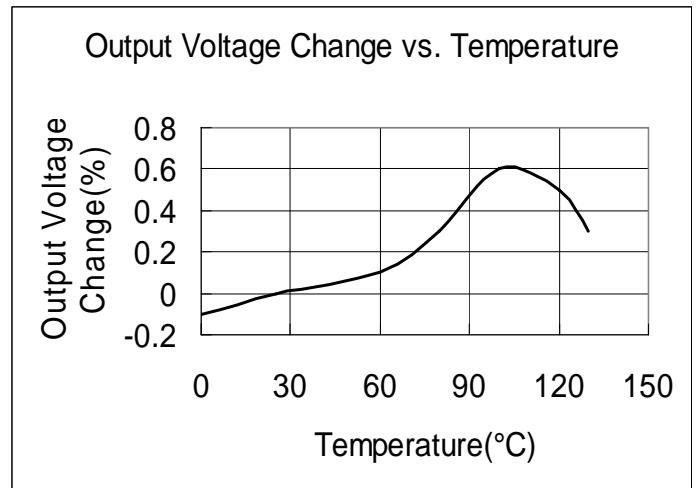
1. $V_{OUT(T)}$: Specified Output Voltage
2. $V_{OUT(E)}$: Effective Output Voltage

Type Characteristics

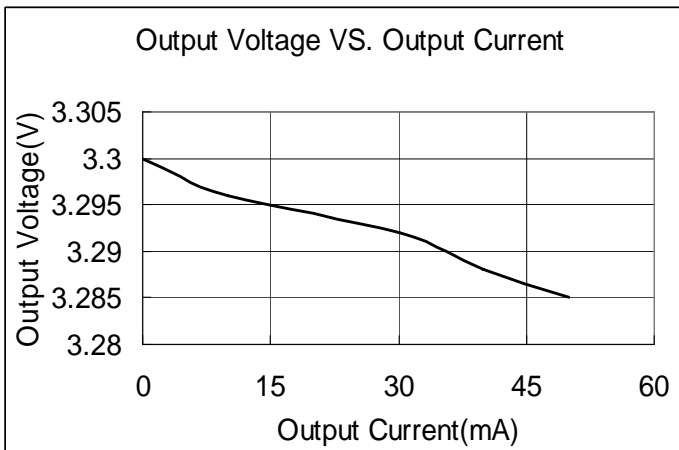
(1) Output Voltage VS. Input Voltage
($I_{OUT}=10mA$, $T_a = 25\text{ }^\circ\text{C}$)



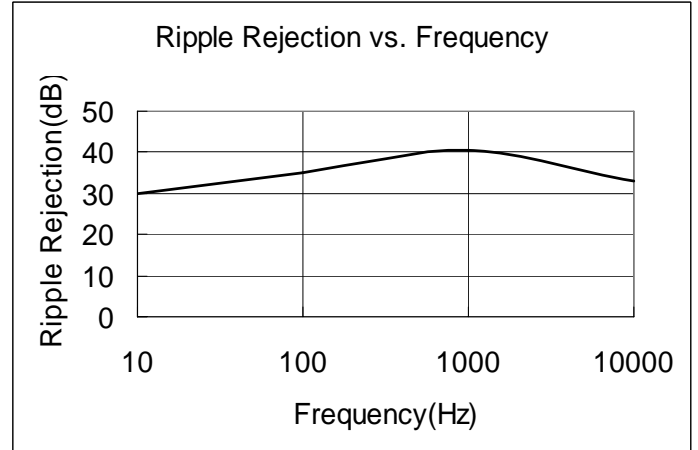
(2) Output Voltage Change vs. Temperature
($V_{IN}=7V$, $I_{OUT}=10mA$)



(3) Output Voltage VS. Output Current
($V_{IN}=7V$, $T_a = 25\text{ }^\circ\text{C}$)



(4) Ripple Rejection vs. Frequency
($V_{IN} = 12V + 1Vp-pAC$, $I_{OUT}=5mA$, $T_a = 25\text{ }^\circ\text{C}$)

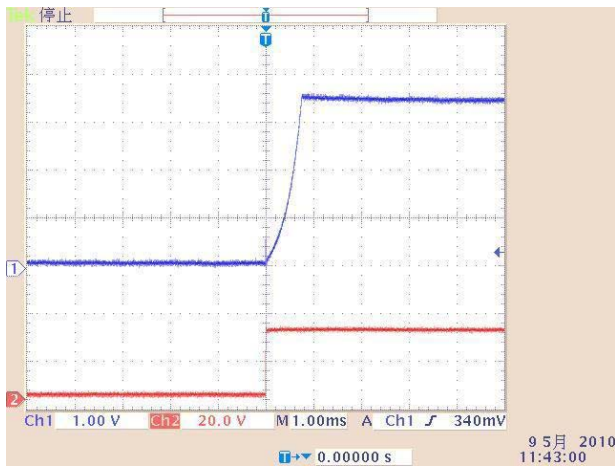


(5) Line Transient Response

FC6203A33

Ch1: Output Voltage Ch2: Input Voltage

$V_{IN}=30V, I_{OUT}=0mA, T_a = 25^\circ C$

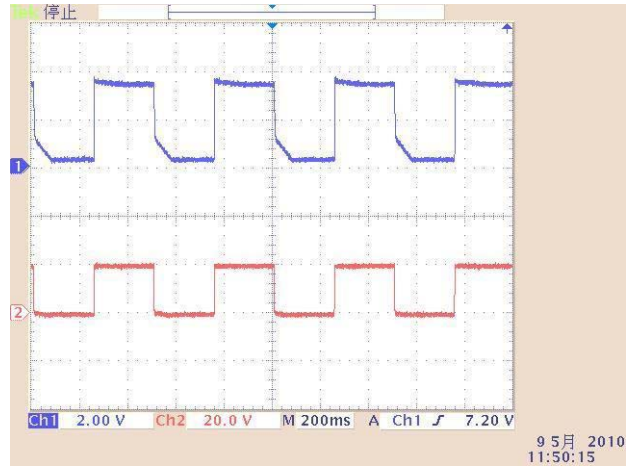


(6) rectangle wave Transient Response

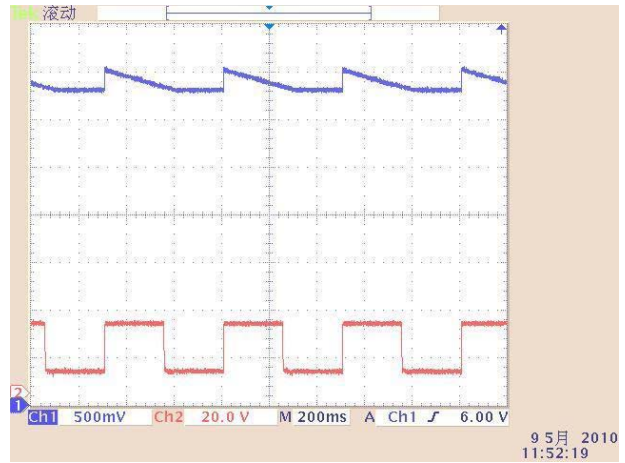
FC6203A33

Ch1: Output Voltage Ch2: Input Voltage

$V_{IN}:0V\sim 20V, T_a = 25^\circ C$



$V_{IN}:10V\sim 30V, T_a = 25^\circ C$



Packaging Information:

SOT-89-3

