

Descriptions

This is Low dropout linear regulator in a SOT23-3 Plastic Package .

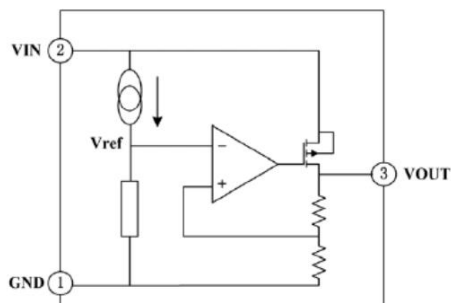
Features

- Low power consumption,
- Low voltage drop,
- Small temperature drift coefficient,
- High input voltage up to 30V,
- The static current 2.5 μ A,
- The output voltage accuracy: $\pm 2\%$.
- HF Product.

Applications

- For use in power equipment,
- Communication equipment,
- Audio and video equipment.

Equivalent Circuit & Pinning



Pinning



PIN1: GND PIN 2: VOUT PIN 3: VIN

Marking

See Marking Instructions.

Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Working Voltage	V_{IN}	-0.3~33	V
Thermal Resistance	$R_{\theta JA}$	250	°C/W
Power Consumption	P_D	400	mW
Storage Temperature	T_{STG}	-50~+125	°C
Working Temperature	T_A	-40~+85	°C

Notes: If the device operating conditions over the maximum rating of the above-mentioned conditions, may cause permanent damage to the device. The above parameters is only part of the operating conditions the maximum, we do not recommend the device running outside the scope of this specification. If the device to work long hours under the condition of absolute maximum limit, its stability may be affected.

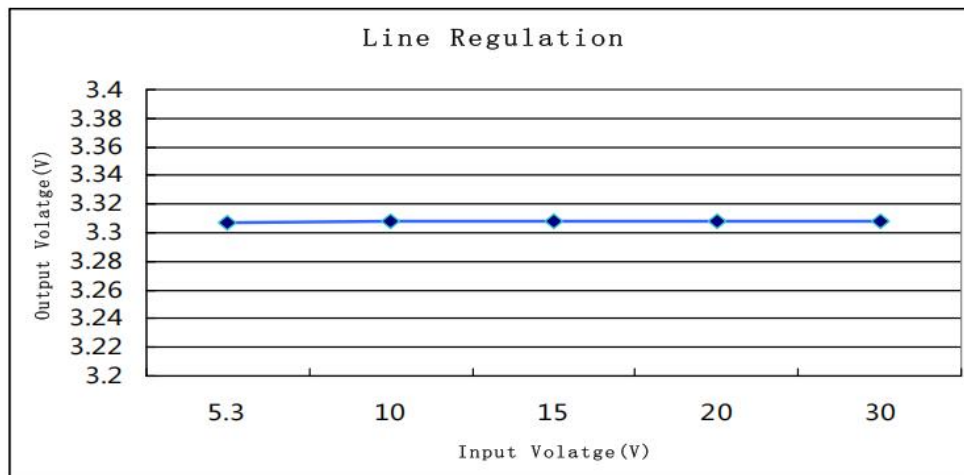
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
The Output Voltage	V_{OUT}	$V_{IN}=5.3V, I_{OUT}=10mA$	3.234	3.30	3.366	V
The Output Current	I_{OUT}	$V_{IN}=5.3V$	100	150		mA
Load Regulation	ΔV_{OUT}	$V_{IN}=5.3V$ $1mA \leq I_{OUT} \leq 150mA$		25	60	mV
Low Dropout	V_{DIF}	$I_{OUT}=1mA, \Delta V_{OUT}=2\%$		25	55	mV
Static Power	I_{SS}	$V_{IN}=5.3V$		2.5	4.0	μA
Linear Regulation	$\frac{\Delta V_{OUT}/V_{OUT}}{\Delta V_{IN}}$	$5.3 \leq V_{IN} \leq 30V$ $I_{OUT}=10mA$			0.2	%/V
The Input Voltage	V_{IN}				30	V
Temperature Coefficient	$\frac{\Delta V_{OUT}}{\Delta T_A \cdot V_{OUT}}$	$V_{IN}=7.0V, I_{OUT}=10mA$ $-40^\circ C \leq T_A \leq 85^\circ C$		100		ppm/°C

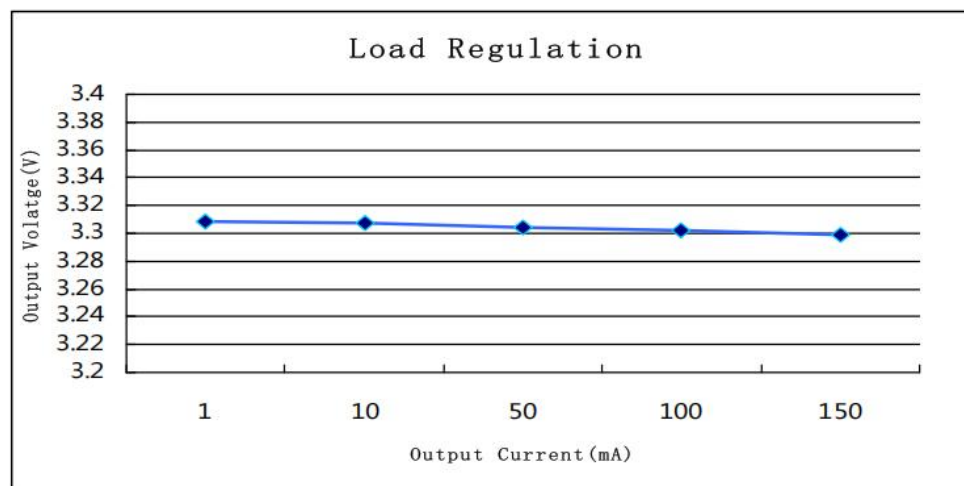
Note: VDIF is defined as the input voltage minus the output voltage that produces a 2% change in the output voltage from the value at $V_{IN}=5.3V$ with a fixed load.

Electrical Characteristic Curve

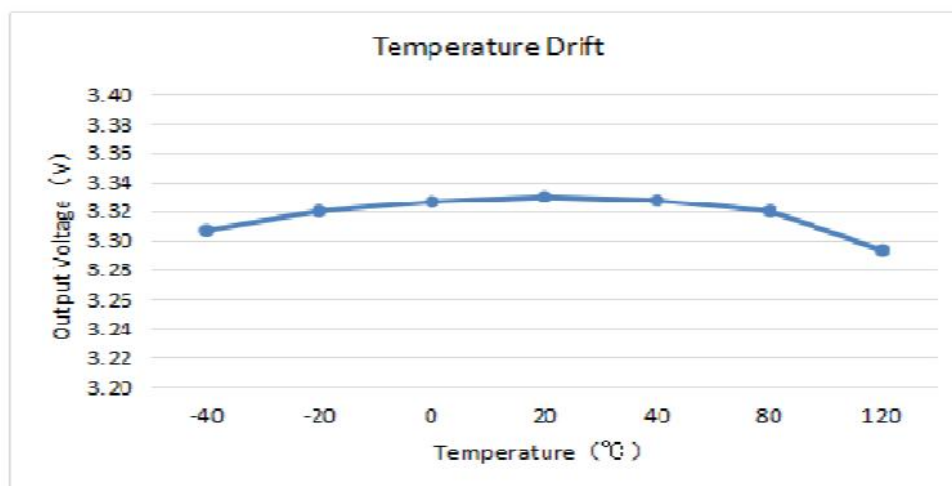
The input voltage and output voltage ($I_{OUT}=10mA$)



The output voltage and load current ($V_{IN}=5.3V$)

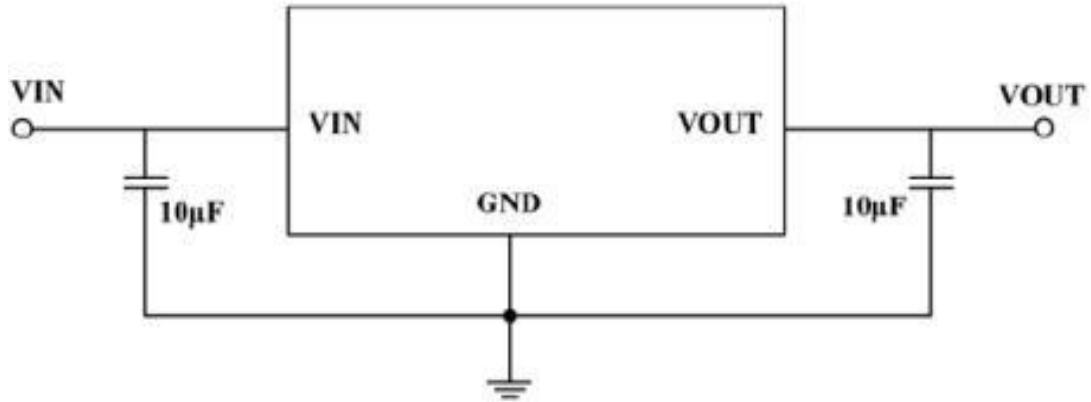


The output voltage and temperature ($I_{OUT}=10mA$)

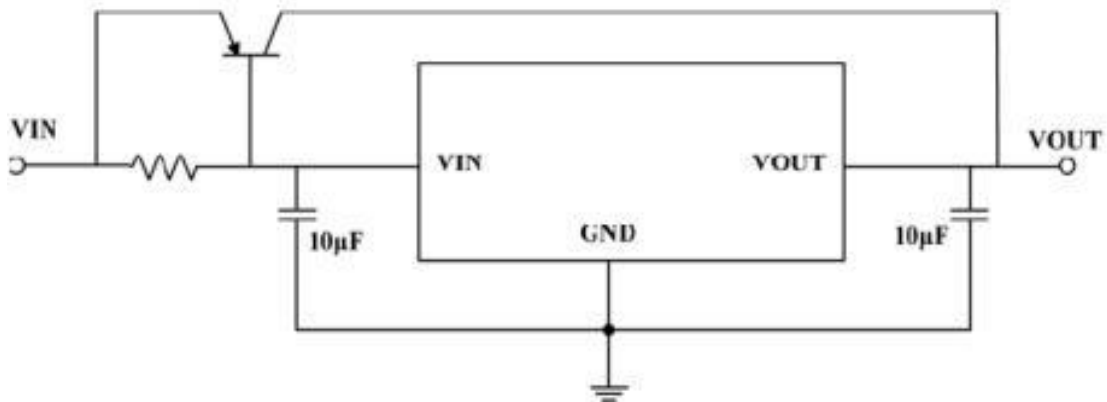


Electrical Characteristic Curve

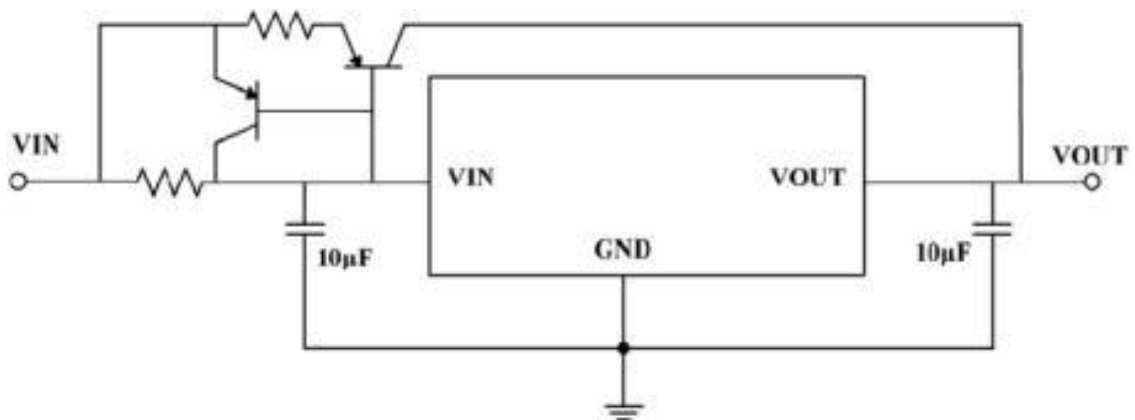
Basic Application



High Output Current Voltage Regulator

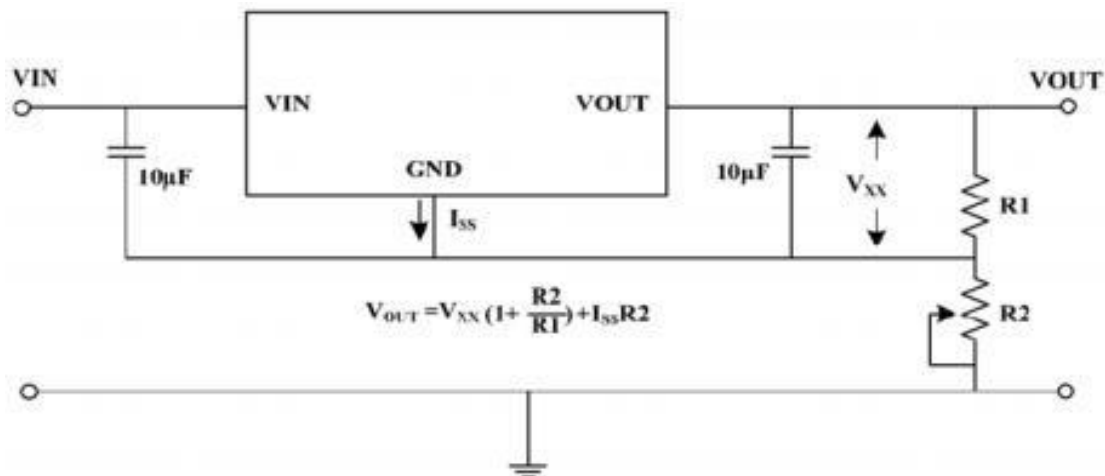


Short-Circuit Protection

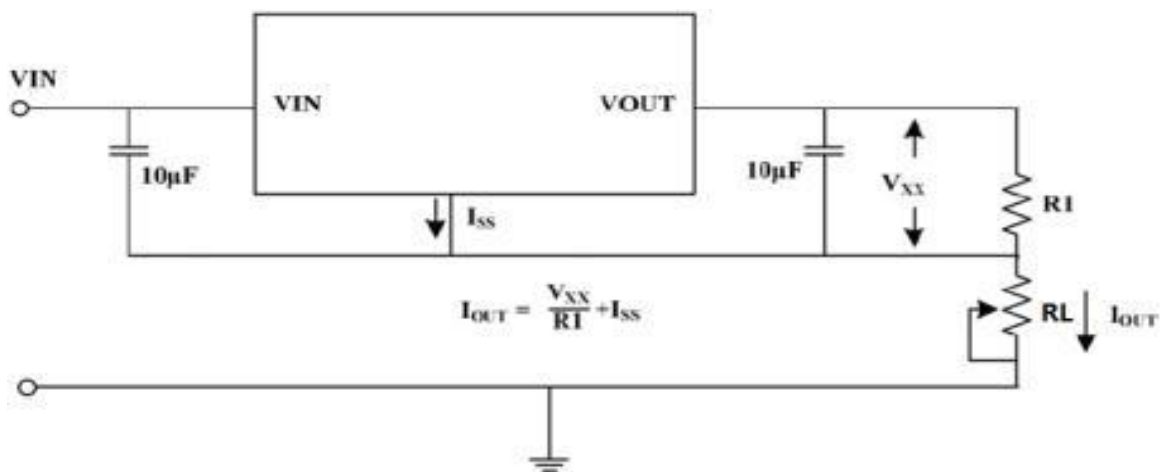


Electrical Characteristic Curve

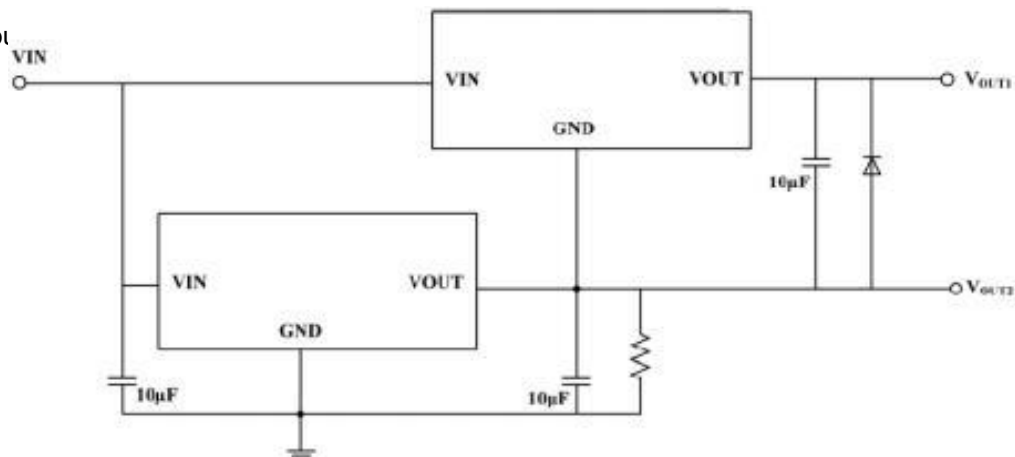
Circuit for Increasing Output Voltage



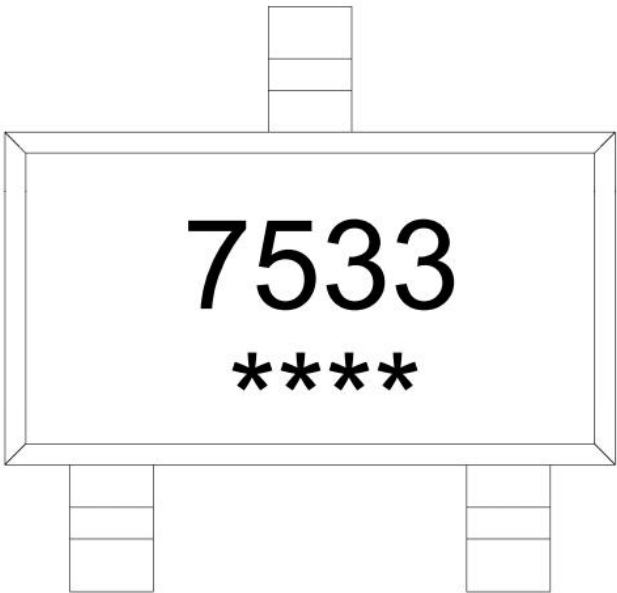
Constant Current Regulator



Double Output



Marking Instructions



Note:

7533: Product Type.

****: Lot No. Code, code change with Lot No.

Packaging SPEC

Package Type	Units					Dimension (unit: mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT23-3	3,000	10	30,000	4	120,000	7" ×8	210 ×205 ×205	435 ×225 ×420

Package Outline Dimensions

