

Descriptions

CTCO7333T Low dropout linear regulator in a SOT-89 Plastic Package

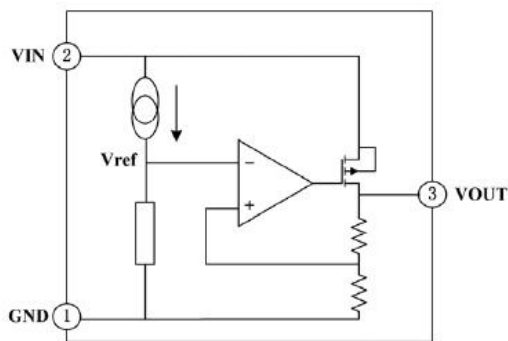
Features

- Low power consumption
- Low voltage drop, Small temperature drift coefficient
- High input voltage up to 20V
- The static current 1.5 μ A
- The output voltage accuracy: $\pm 2\%$
- HF Product

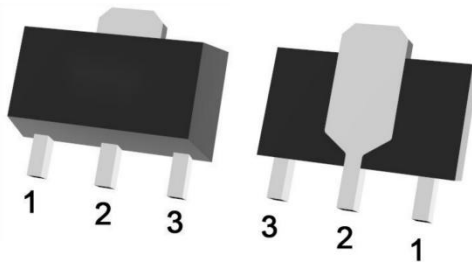
Applications

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

Equivalent Circuit



Pinning



PIN1 : GND PIN 2 : VIN PIN 3 : VOUT

Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Working Voltage	V_{IN}	-0.3~+20	V
Thermal Resistance	$R_{\theta JA}$	200	°C/W
Power Consumption	P_W	500	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.

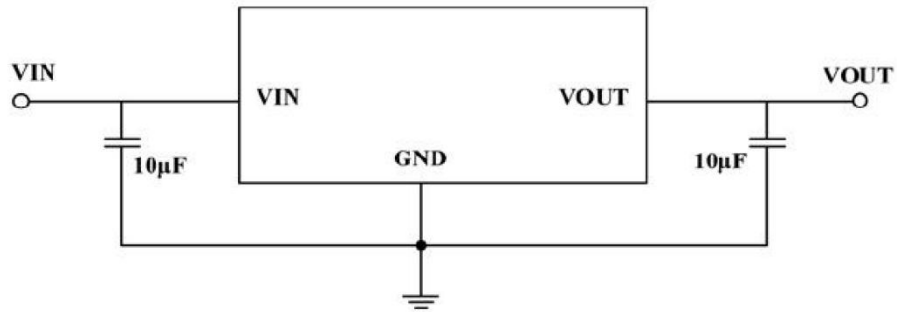
Electrical Characteristics(Ta=25°C)

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}	$V_{IN}=5.3V$	300			mA
Load Regulation	ΔV_{OUT}	$V_{IN}=5.3V$ $1mA \leq I_{OUT} \leq 300mA$		37	100	mV
Low Dropout	V_{DIF}	$I_{OUT}=100mA, \Delta V_{OUT}=2\%$		195	300	mV
Static Power	I_{SS}	$V_{IN}=5.3V$		1.5	3.0	μA
Linear Regulation	$\frac{\Delta V_{OUT}/V_{OUT}^*}{\Delta V_{IN}}$	$4.3V \leq V_{IN} \leq 20V$ $I_{OUT}=1mA$			0.2	%/V
The Input Voltage	V_{IN}				20	V
Temperature Coefficient	$\frac{\Delta V_{OUT}}{\Delta T_A * V_{OUT}}$	$V_{IN}=5.3V, I_{OUT}=10mA -$ $40^\circ C \leq T_A \leq 85^\circ C$		100		ppm/°C

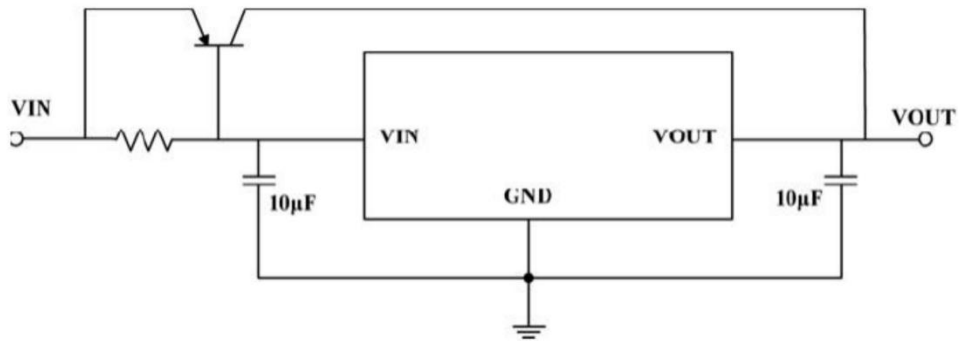
Note: V_{DIF} is defined as the input voltage minus the output voltage that produces a 2% change in the output voltage from the value at $V_{IN}=5.3V$ with a fixed load.

Typical Application Circuit

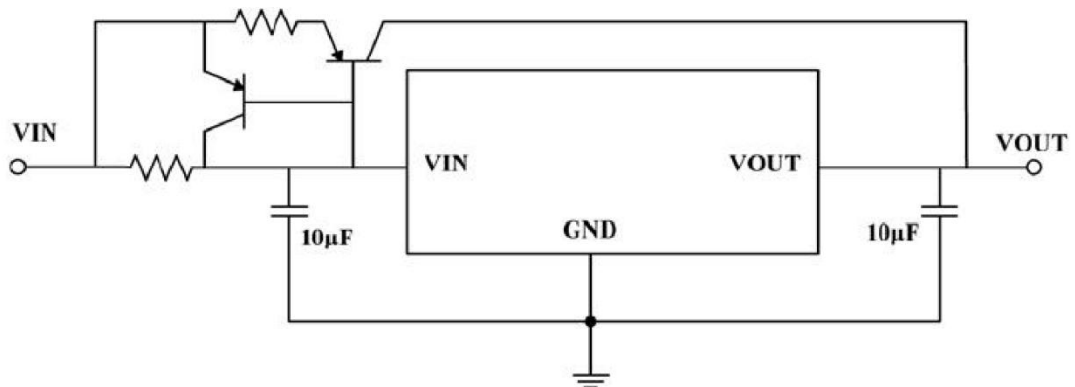
Basic Application



High Output Current Voltage Regulator

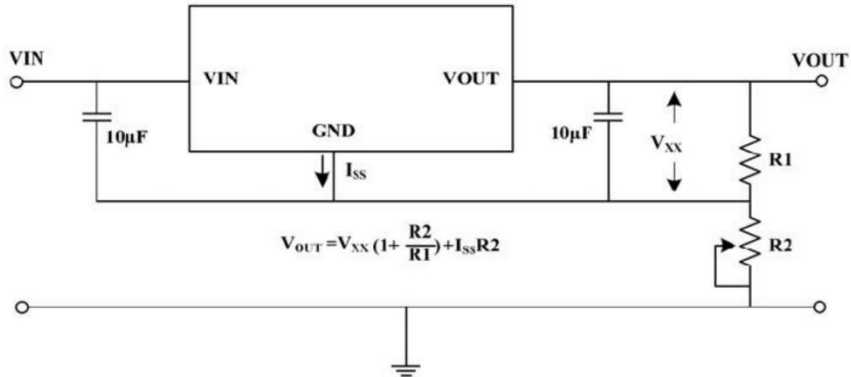


Short-Circuit Protection

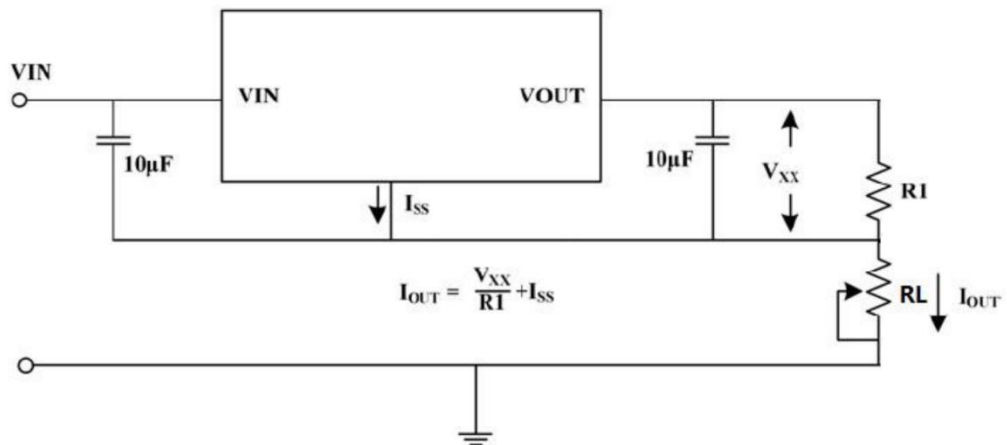


Typical Application Circuit

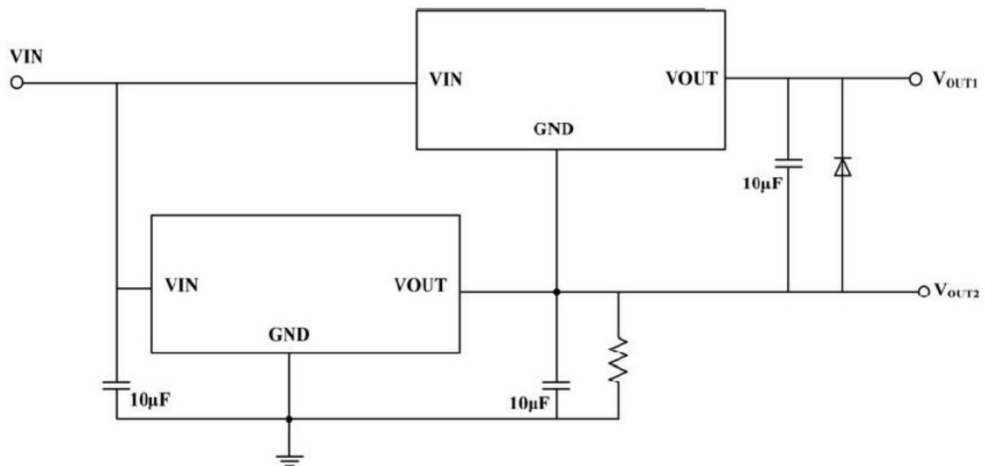
Circuit for Increasing Output Voltage



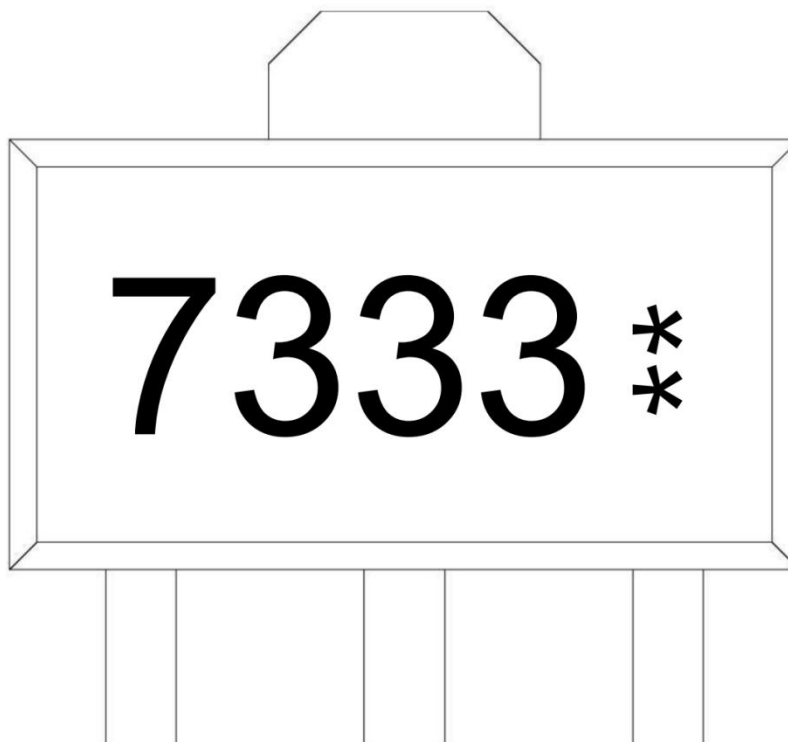
Constant Current Regulator



Double Output Circuit



Marking Instructions



Note:

7333: Product Type

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

Packaging SPEC.

Package Type	Units					Dimension(unit: mm)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-89	1,000	7	7,000	6	42,000	7" ×12	180×120×180	390×385×205

Package Dimensions

SOT-89

单位: mm

