

Adjustable Voltage Regulator

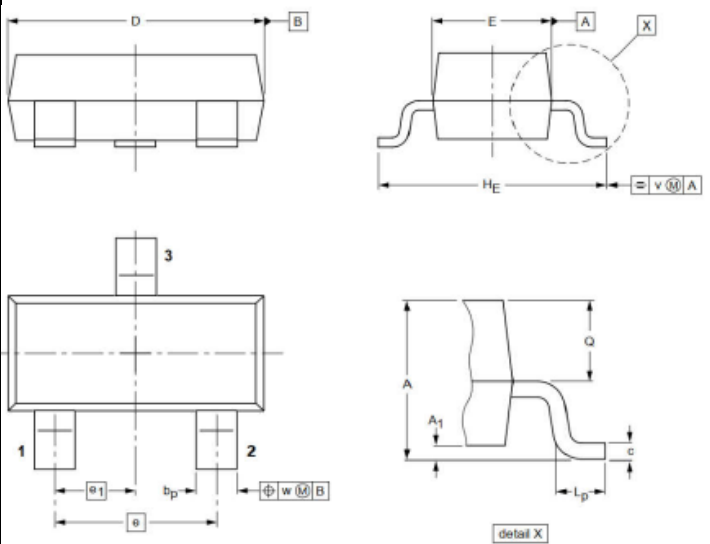
Primary characteristics		
Parameter	Value	Unit
Output voltage	3.3	V
Output current	30	mA

Features

- Pb-free and **RoHS** compliant
- Low power consumption
- Low temperature coefficient
- High input voltage(up to 30V)
- Output voltage accuracy: tolerance $\pm 3\%$

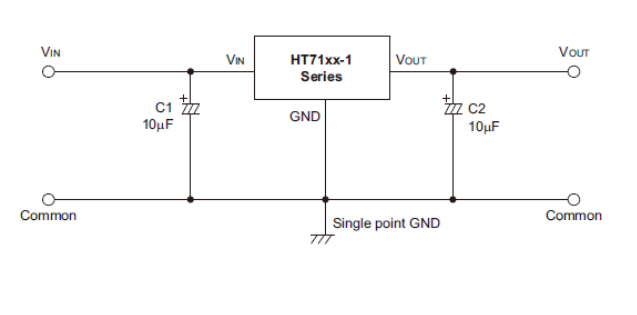
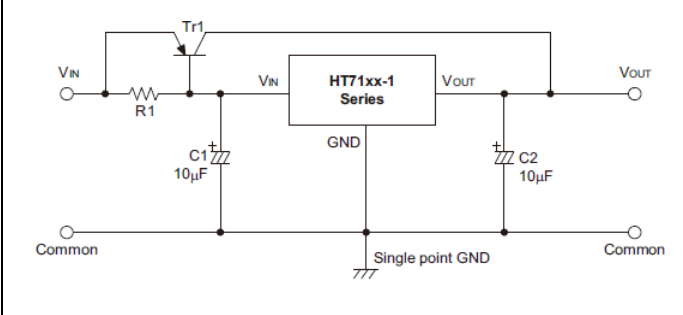
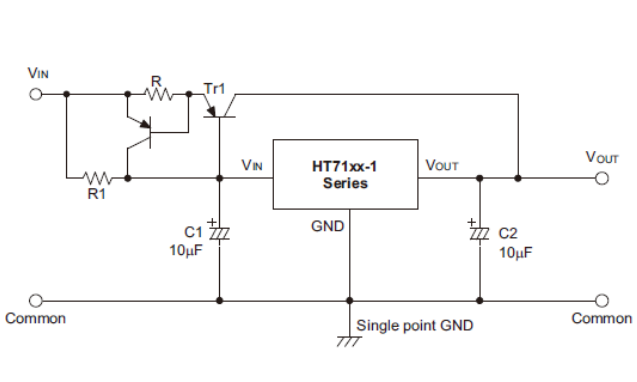
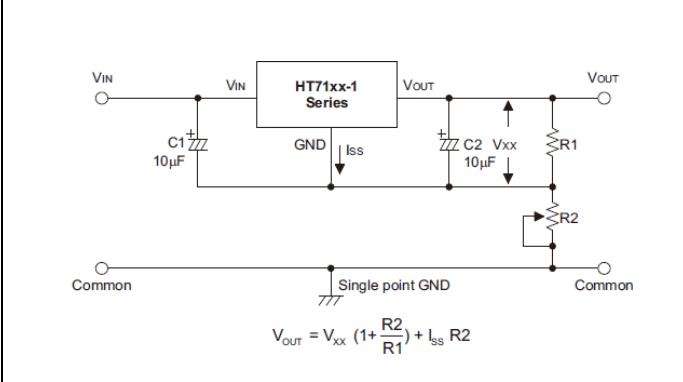
Applications

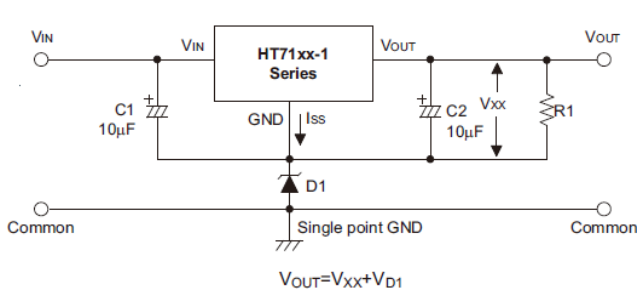
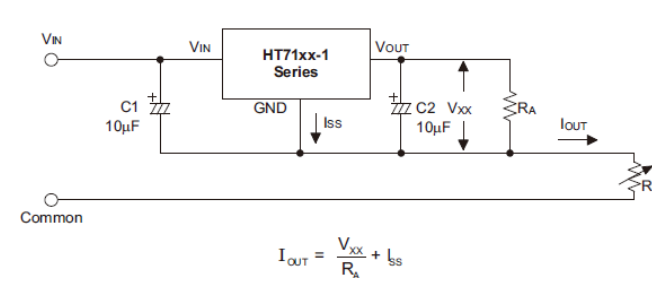
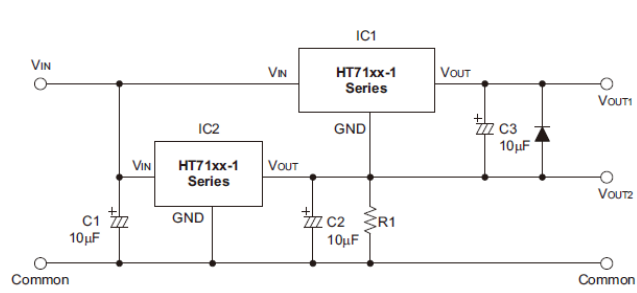
- Battery-powered equipment
- Communication equipment
- Audio/Video equipment

Case dimensions													
													
SOT-23													
	A	A1	bp	C	D	E	e	e1	HE	Lp	Q	V	W
Min	0.9	0.1	0.38	0.09	2.8	1.2	1.9	0.95	2.1	0.15	0.45	0.2	0.1
Max	1.15		0.48	0.15	3.0	1.4			2.55	0.45	0.55		

Absolute maximum ratings			
Parameter	Symbol	Rating	Unit
Supply voltage	V_{in}	-3 to +30	V
Power dissipation	P_{tot}	500	mW
Operating temperature	T_{OPR}	-40 ~ +85	°C
Storage Temperature	T_{STG}	-50 ~ +125	°C

Electrical characteristics						
Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Output Voltage	V_{OUT}	$I_{OUT} = 10\text{mA} / 5.5\text{V}$	3.201	3.3	3.399	V
Output Current	I_{OUT}	-	20	30	-	mA
Load Regulation	ΔV_{OUT}	$1\text{mA} \leq I_{OUT} \leq 30\text{mA}$	-	60	100	mV
Voltage Drop	V_{DIF}	$I_{OUT} = 1\text{mA}, \Delta V_{OUT} = 2\%$	-	100	-	mV
Current Consumption	I_{SS}	No load	-	2.5	4.0	mA
Line Regulation	$\frac{\Delta V_{OUT}}{\Delta V_{IN} \times V_{OUT}}$	$4.5\text{V} \leq V_{IN} \leq 24\text{V} / I_{OUT} = 1\text{mA}$	-	0.2	-	%/V
Input Voltage	V_{in}	-	-	-	28	V
Temperature Coefficient	$\frac{\Delta V_{OUT}}{\Delta T_a}$	$I_{OUT} = 10\text{mA}$ $-40^\circ\text{C} \leq T_a \leq 85^\circ\text{C}$	-	-/+0.5	-	mV/°C

Typical characteristics	
Basic 	High Output Current Positive Voltage Regulator 
Short-Circuit Protection by Tr1 	Circuit for Increasing Output Voltage  $V_{OUT} = V_{xx} \left(1 + \frac{R_2}{R_1}\right) + I_{SS} R_2$

Typical characteristics	
Circuit for Increasing Output Voltage  <p>$V_{OUT} = V_{XX} + V_{D1}$</p>	Constant Current Regulator  <p>$I_{OUT} = \frac{V_{XX}}{R_A} + I_{SS}$</p>
Dual Supply 	

Ordering information			
Part Number	Package	Shipping Quantity	Dimensions
HT7133-1	SOT-23	3000 / reel 24 000 / box 120 000 / cartoon	---

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