查询7430供应商

捷多邦,专业PCB打样工厂,24小时加急出货



HT74XX Negative Voltage Regulator

Features

- Low power consumption
- Low voltage drop
- Low temperature coefficient

Applications

- Battery-powered equipment
- Communication equipment

General Description

The HT74XX series is a set of three-terminal high current high voltage regulator implemented in CMOS technology. They can deliver 100mA output current and allow an input voltage as high as -24V. They are available with several fixed output voltages ranging from -2.4V to -15V. CMOS technology ensures low voltage drop and low quiescent current.

Selection Table

٠	High input voltage (up to -24V)
٠	$High \ output \ current: 100 mA \ (P_d \le 250 mW)$

- TO-92 and SOT-89 package
- Audio/Video equipment

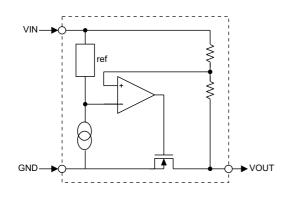
Although designed primarily as fixed voltage regulators, these devices can be used with external components to obtain variable voltages and currents.

Part No.	Output Voltage	Tolerance
HT7430	-3.0V	$\pm 5\%$
HT7450	$-5.0\mathrm{V}$	$\pm 5\%$

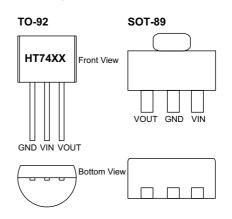




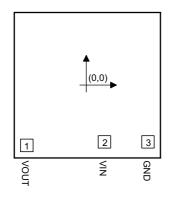
Block Diagram



Pin Assignment



Pad Assignment



Pad Coordi	Unit: µm	
Pad No.	X	Y
1	-571.75	-578.00
2	175.75	-545.50
3	592.25	-545.50

Chip size: $1550 \times 1562 (\mu m)^2$

 \ast The IC substrate should be connected to VDD in the PCB layout artwork.

Absolute Maximum Ratings

Supply Voltage+0.3V to -26V	Storage Temperature50°C to 125°C
Power Consumption	Operating Temperature0°C to 70°C

Note: These are stress ratings only. Stresses exceeding the range specified under "Absolute Maximum Ratings" may cause substantial damage to the device. Functional operation of this device at other conditions beyond those listed in the specification is not implied and prolonged exposure to extreme conditions may affect device reliability.



Ta=25°C

Electrical Characteristics

HT7430, -3.0V output type

	Parameter	Test Conditions			m	7	TT • 4
Symbol		$\mathbf{V}_{\mathbf{IN}}$	Conditions	Min.	Тур.	Max.	Unit
V _{OUT}	Output Voltage Tolerance	-5V	I _{OUT} =10mA	-2.85	-3.0	-3.15	V
I _{OUT}	Output Current	-5V		60	100	_	mA
ΔV_{OUT}	Load Regulation	-5V	$1mA \le I_{OUT} \le 50mA$		60	120	mV
V _{DIF}	Voltage Drop	_	I _{OUT} =1mA	_	100	_	mV
I _{SS}	Current Consumption	-5V	No load	_	200	350	μΑ
$\frac{\Delta V_{\text{out}}}{\Delta V_{\text{in}} \times V_{\text{out}}}$	Line Regulation		$\begin{array}{c} -4V \leq \!$		0.2		%/V
V _{IN}	Input Voltage	_		_		-24	V
$\frac{\Delta V_{\rm OUT}}{\Delta T_{\rm a}}$	Temperature Coefficient	-5V	I _{OUT} =10mA 0°C <ta<70°c< td=""><td></td><td>± 0.45</td><td></td><td>mV/°C</td></ta<70°c<>		± 0.45		mV/°C

HT7450, -5.0V output type

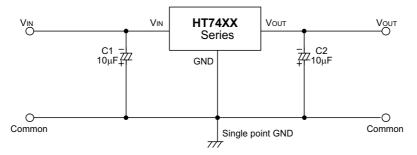
$Ta=25^{\circ}C$

Shal	Parameter	Test Conditions		M:	—	Ъ.	TT-24
Symbol		VIN	Conditions	Min.	Тур.	Max.	Unit
V _{OUT}	Output Voltage	-7V	I _{OUT} =10mA	-4.75	-5.0	-5.25	V
I _{OUT}	Output Current	-7V		100	150		mA
ΔV_{OUT}	Load Regulation	-7V	1mA≤I _{OUT} ≤30mA		60	150	mV
V _{DIF}	Voltage Drop	_	I _{OUT} =1mA	_	100	_	mV
I _{SS}	Current Consumption	-7V	No load		330	500	μΑ
$\frac{\Delta V_{\rm out}}{\Delta V_{\rm in} \times V_{\rm out}}$	Line Regulation	_	$\begin{array}{c} -6V \leq V_{IN} \leq -15V \\ I_{OUT} = 1mA \end{array}$		0.2		%/V
V _{IN}	Input Voltage					-24	V
$\frac{\Delta V_{\rm OUT}}{\Delta T_{\rm a}}$	Temperature Coefficient	-7V	I _{OUT} =10mA 0°C <ta<70°c< td=""><td></td><td>±0.75</td><td></td><td>mV/°C</td></ta<70°c<>		±0.75		mV/°C

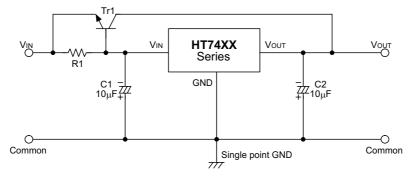


Application Circuits

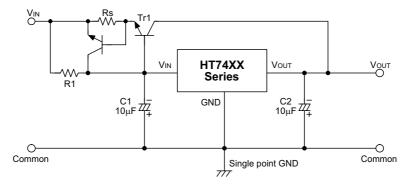
Basic circuit



High output current positive voltage regulator

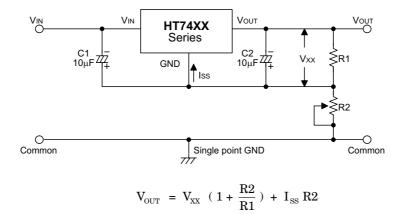


Short-Circuit protection by Tr1

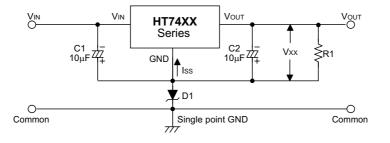




Circuit for increasing output voltage

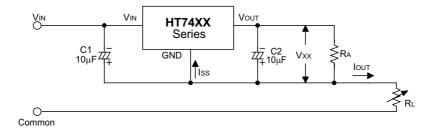


Circuit for increasing output voltage



$$V_{OUT} = V_{XX} + V_{D1}$$

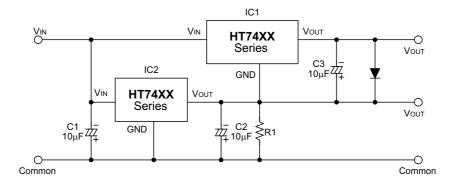
Constant current regulator



$$I_{\rm OUT} = \frac{V_{\rm XX}}{R_{\rm A}} + I_{\rm SS}$$



Dual supply





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