

### Features

- Low power consumption
- Low voltage drop
- Low temperature coefficient
- High input voltage (up to 24V)
- High output current : 100mA
- Output voltage accuracy: tolerance  $\pm 3\%$
- TO92, SOT89 and SOT23-5 package

### Applications

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

### General Description

The HT75xx-1 series is a set of three-terminal high current low 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

2.1V to 12.0V. CMOS technology ensures low voltage drop and low quiescent current.

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

### Selection Table

Part No.	Output Voltage	Package	Marking
HT7521-1	2.1V	TO92 SOT89 SOT23-5	75xx-1 (for TO92) 75xx-1 (for SOT89) 75xx-1# (for SOT89) 75xx-1+ (for SOT89) 5xx1 (for SOT23-5) 5xx1# (for SOT23-5) 5xx1+ (for SOT23-5)
HT7523-1	2.3V		
HT7525-1	2.5V		
HT7527-1	2.7V		
HT7530-1	3.0V		
HT7533-1	3.3V		
HT7536-1	3.6V		
HT7540-1	4.0V		
HT7544-1	4.4V		
HT7550-1	5.0V		
HT7560-1	6.0V		
HT7570-1	7.0V		
HT7580-1	8.0V		
HT7590-1	9.0V		
HT75A0-1	10.0V		
HT75C0-1	12.0V		

Note: "xx" stands for output voltages.

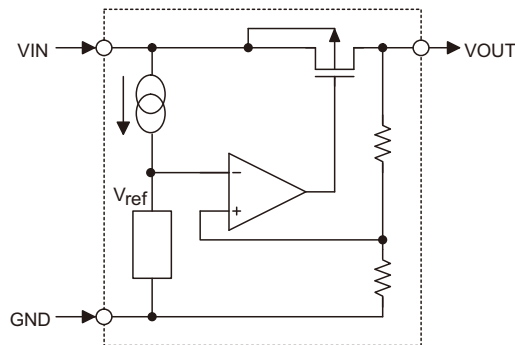
Both lead free and green compound devices are available. Note the symbol marks below:

"#" stands for lead free devices.

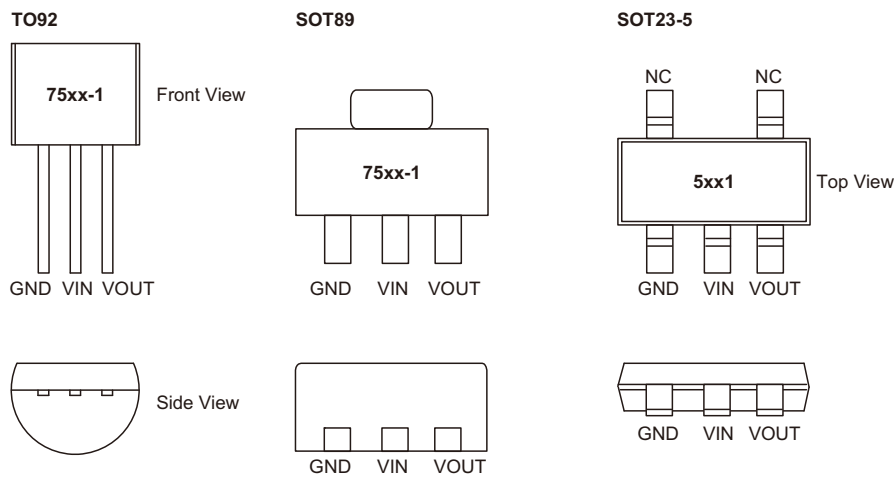
Blank and "+" stands for green compound devices, which are Lead-free and Halogen-free.

For the TO92 package, the symbol mark will be at the end of the date code. Whereas for the SOT89 and SOT23-5, the symbol mark will be located at the end of IC marking.

**Block Diagram**



**Pin Assignment**



**Absolute Maximum Ratings**

Supply Voltage .....-0.3V to 26V      Storage Temperature .....-50°C to 125°C  
 Operating Temperature .....-40°C to 85°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.

**Thermal Information**

Symbol	Parameter	Package	Max.	Unit
$\theta_{JA}$	Thermal Resistance (Junction to Ambient) (Assume no ambient airflow, no heat sink)	SOT23-5	500	°C/W
		SOT89	200	°C/W
		TO92	200	°C/W
$P_D$	Power Dissipation	SOT23-5	0.20	W
		SOT89	0.50	W
		TO92	0.50	W

Note:  $P_D$  is measured at  $T_a = 25^\circ\text{C}$