

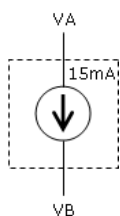
Features

- Wide input voltage range : 8V to 120V
- Constant output current : 15mA±7.5%
- Parallel working for higher currents
- RoHS and green compliant packages

Applications

- Turn signal
- LED traffic light
- Signage or decorative LED lamp
- Constant source or constant sink

Equivalent Block Diagram



General Description

The LD7603 is a cost-effective linear regulator optimized for high input voltage. It regulates to supply a constant current of 15mA±7.5% at input voltage of 8V to 120Vdc. The Device can be used as a constant current source or a constant current sink.

The typical application of LD7603 is to drive a string LED with a constant current 15mA. The parallel connection of LD7603 can be used to provide higher constant current. However, total constant current higher than 100mA is not encouraged.

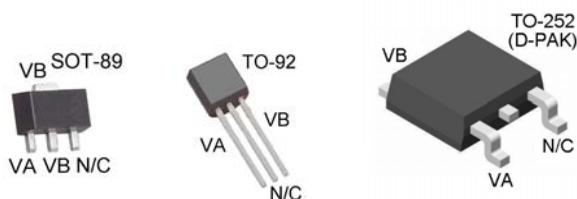
For a wider application, the package is available in TO-92, SOT-89, TO-252.

Ordering Information

Part No.	Package	Packing Options		
		Tube(TU)	Bag(BG)	Tape & Reel(TR)
LD7603	SOT-89-3	N/A	LD7603L5-BG	LD7603L5-TR
	TO-92-3	N/A	LD7603T1-BG	N/A
	TO-252-3	LD7603T6-TU	N/A	LD7603T6-TR

- Package material default is "Green" package.

Package Pin Out



Product Marking

LD8888 SSSSS...	◇ Line 1 – "LD" is a fixed character 8888: product name
●	◇ Line 2 – SSSSS...: lot number

Thermal Characteristics

Package	Power Dissipation @ $T_A=25^{\circ}\text{C}$	θ_{JC} °C/W	θ_{JA} °C/W
SOT-89	1.3W	15	80
TO-92	0.6W	125	180
TO-252	2.0W	8	50

Absolute Maximum Ratings

Parameter	Maximum	Units
Maximum Operating Voltage	130	V
Operating Junction Temperature	-40 to +125	°C
Storage Temperature	-55 to +150	°C

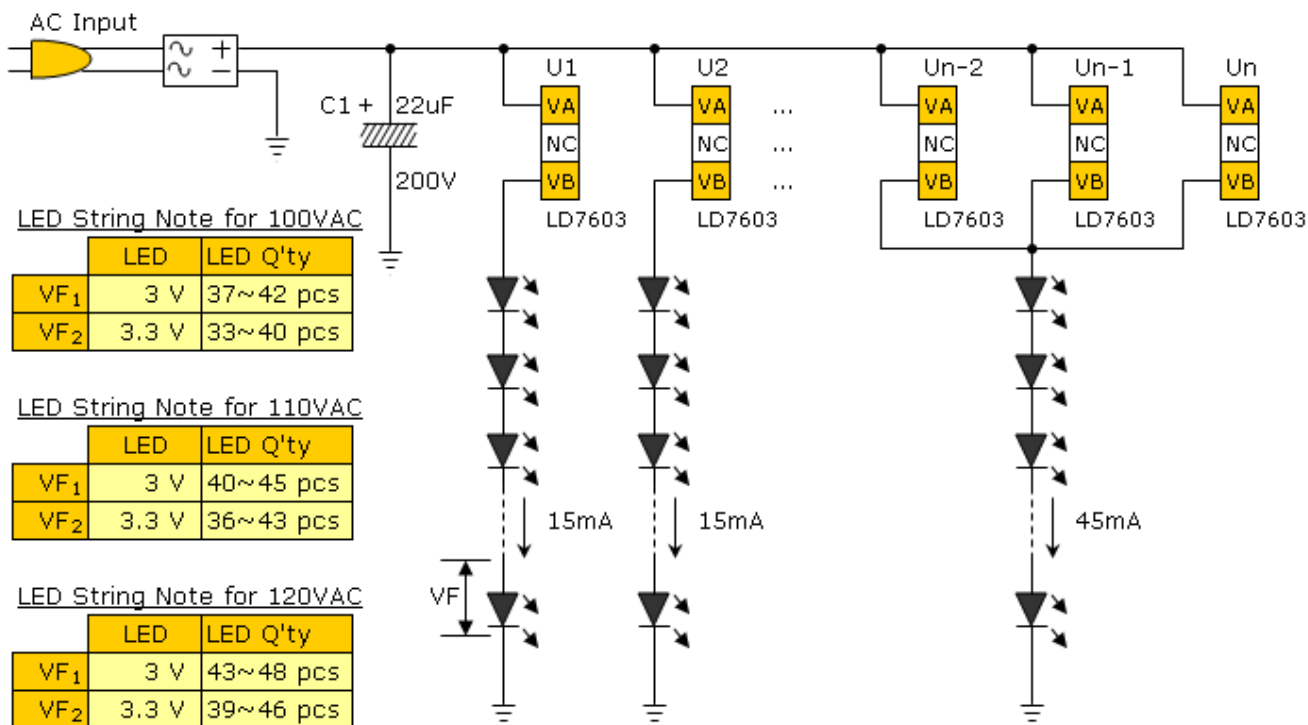
The values beyond the boundaries of absolute maximum rating may cause the damage to the device. Functional operation in this context is not implied. Continuous use of the device at the absolute rating level might influence device reliability. All voltages have their reference to device ground.

Electrical Characteristics

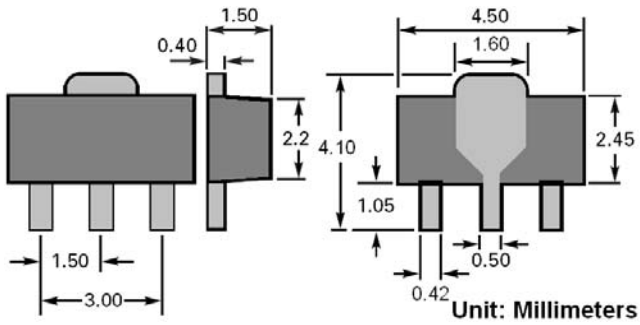
T_A=25°C unless specified, otherwise minimum and maximum values are guaranteed by production testing requirements.

Parameter	Symbol	Condition	Minimum	Typical	Maximum	Units
Input Dc Voltage Range	V _{AB}		10		120	V
Regulated Constant DC Current	I _{AB}	Bin 1 Category	12.8	–	14.3	mA
		Bin 2 Category	13.9	15	16.1	
		Bin 3 Category	15.8	–	17.3	
Operating Junction Temperature	T _J		-40		125	°C
Dynamic Resistance	R _{AB}			TBD		Ω

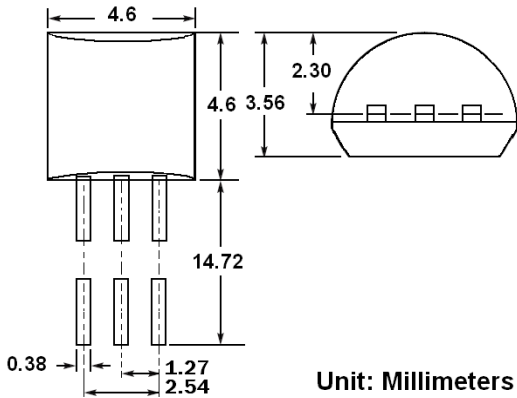
Typical Application Circuit



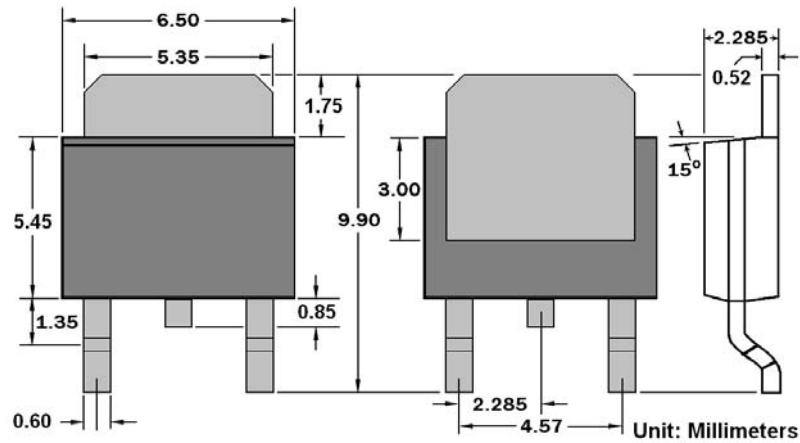
Package Outline
SOT-89:



TO-92:



TO-252:



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