



# S78DL05L

Low Drop output Voltage Regulator

## Descriptions

- Three Terminal Positive Low Dropout Voltage Regulator

## Features

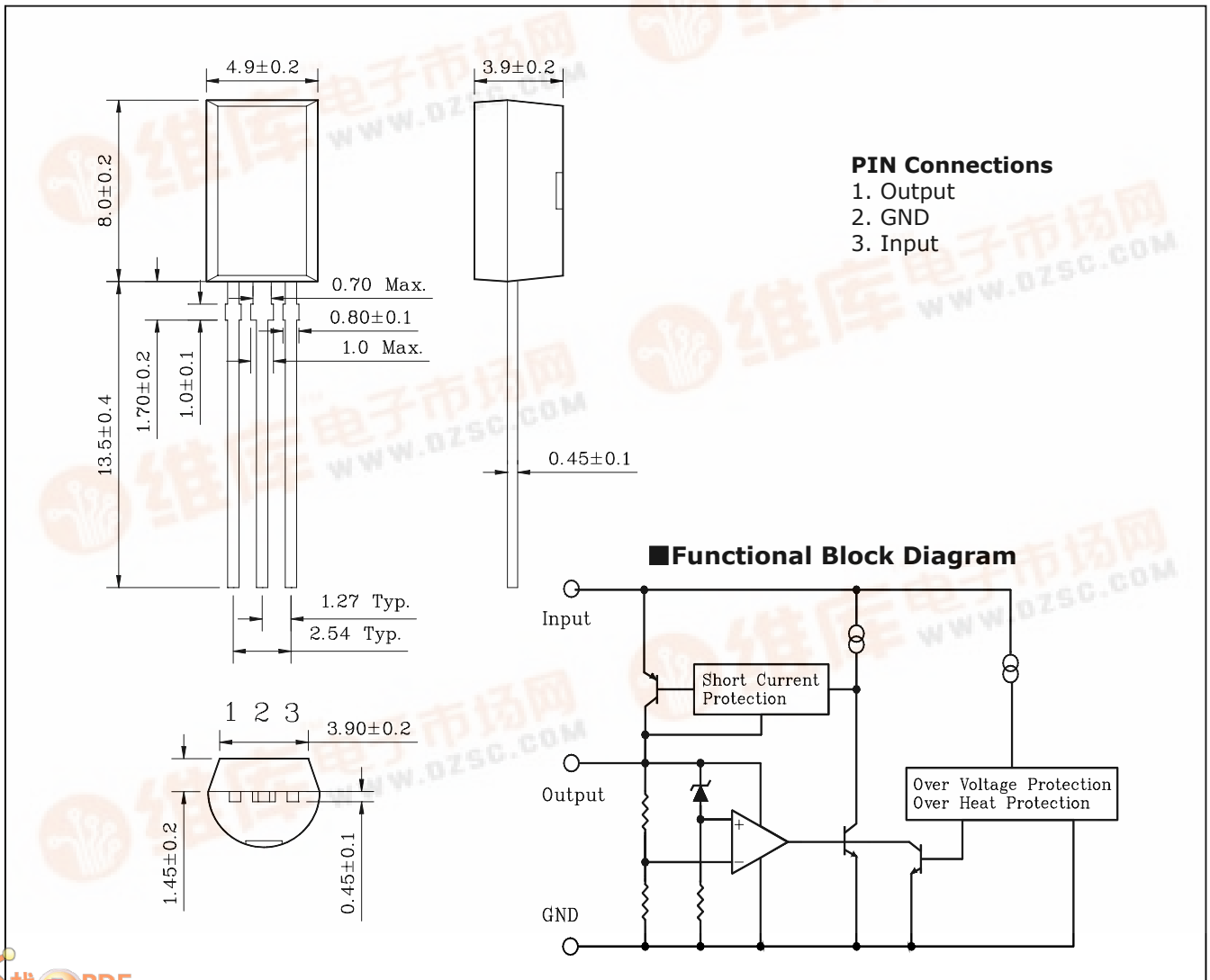
- Low Standby Current Consumption (500  $\mu$ A Typ.)
- Maximum Output Current (150 mA Max.)
- Less I/O voltage Difference (0.7V Max.)

## Ordering Information

Type NO.	Marking	Package Code
S78DL05L	S78DL05L	TO-92L

## Outline Dimensions

unit : mm



# S78DL05L

## Maximum ratings

Ta=25°C

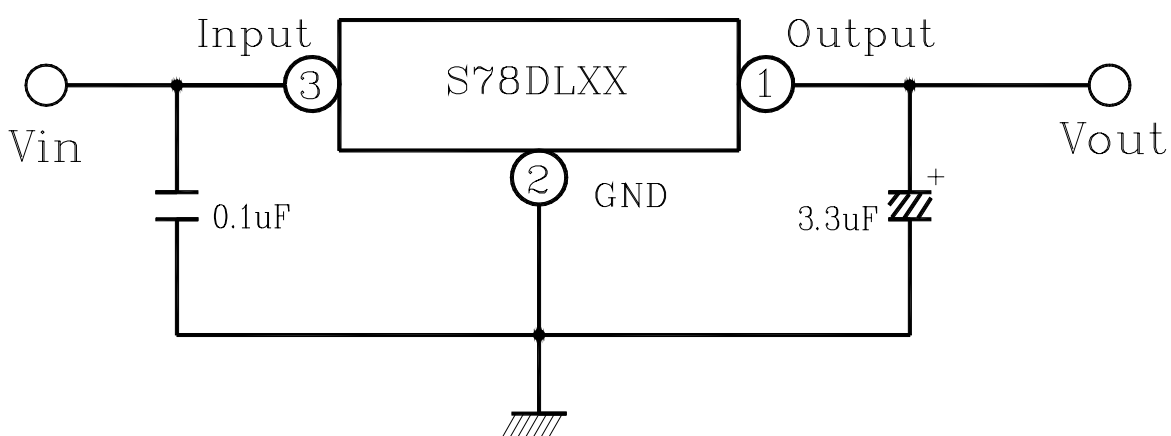
Characteristic	Symbol	Ratings	Unit
Operating Input voltage	V <sub>IN</sub>	20	V
Power Dissipation	P <sub>D</sub>	1	W
Operating Temperature Range	T <sub>OPR</sub>	-40~+85	°C
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55~150	°C
Lead Temperature Time	T <sub>sol</sub>	260 (10 Sec)	°C

## Electrical Characteristics

(※ V<sub>IN</sub>=10V, I<sub>OUT</sub>=10 mA, T<sub>j</sub>=25°C)

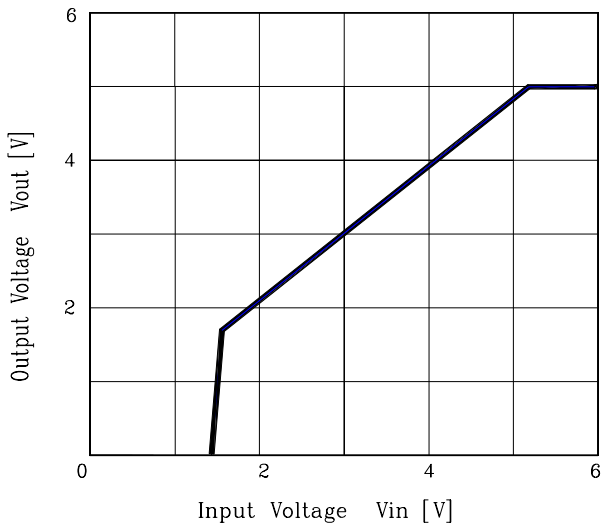
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output voltage	V <sub>OUT</sub>	V <sub>IN</sub> =5.35V~20V, Ta=-40~85°C	4.8	5	5.2	V
Voltage Regulation	Δ V <sub>OUT</sub> (1)	V <sub>IN</sub> =6V~16V	-	10	30	mV
Load Regulation	Δ V <sub>OUT</sub> (2)	I <sub>OUT</sub> =10~100mA	-	12	50	mV
Quiescent Current	I <sub>CC</sub>	I <sub>OUT</sub> ≤ 10mA, V <sub>IN</sub> =6V~20V	-	0.5	1	mA
Dropout Voltage	V <sub>DROP</sub>	I <sub>OUT</sub> =50mA	-	0.3	0.5	V
		I <sub>OUT</sub> =100mA	-	0.5	0.7	
Maximum Operating Input Voltage	V <sub>IN</sub>		20	29	-	V

## Test circuit

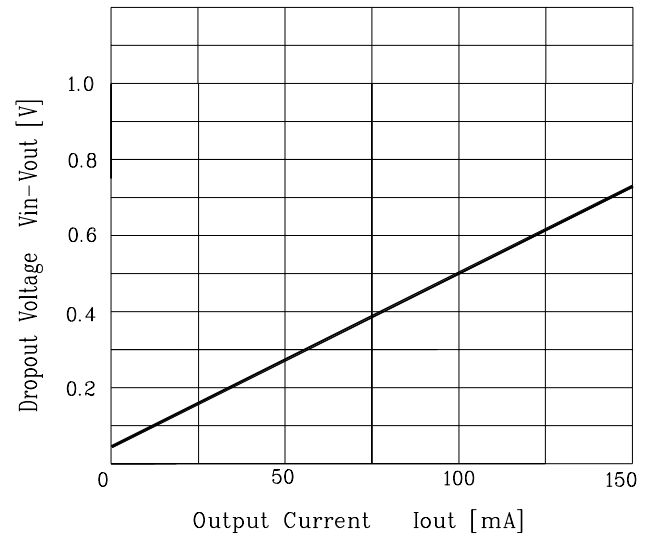


## Electrical Characteristic Curves

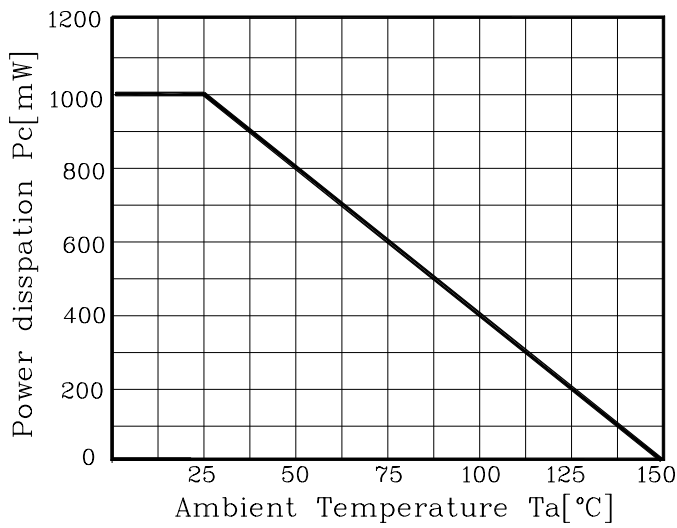
**Fig. 1.  $V_{in} - V_{out}$**



**Fig. 2.  $|V_{out} - V_{in}| - I_C$**



**Fig. 3.  $P_d - T_a$**



**Fig. 4.  $I_{cc} - V_{out}$**

