



# S78DL05

Low Drop output Voltage Regulator

## Descriptions

- Three Terminal Positive Low Dropout Voltage Regulator

## Features

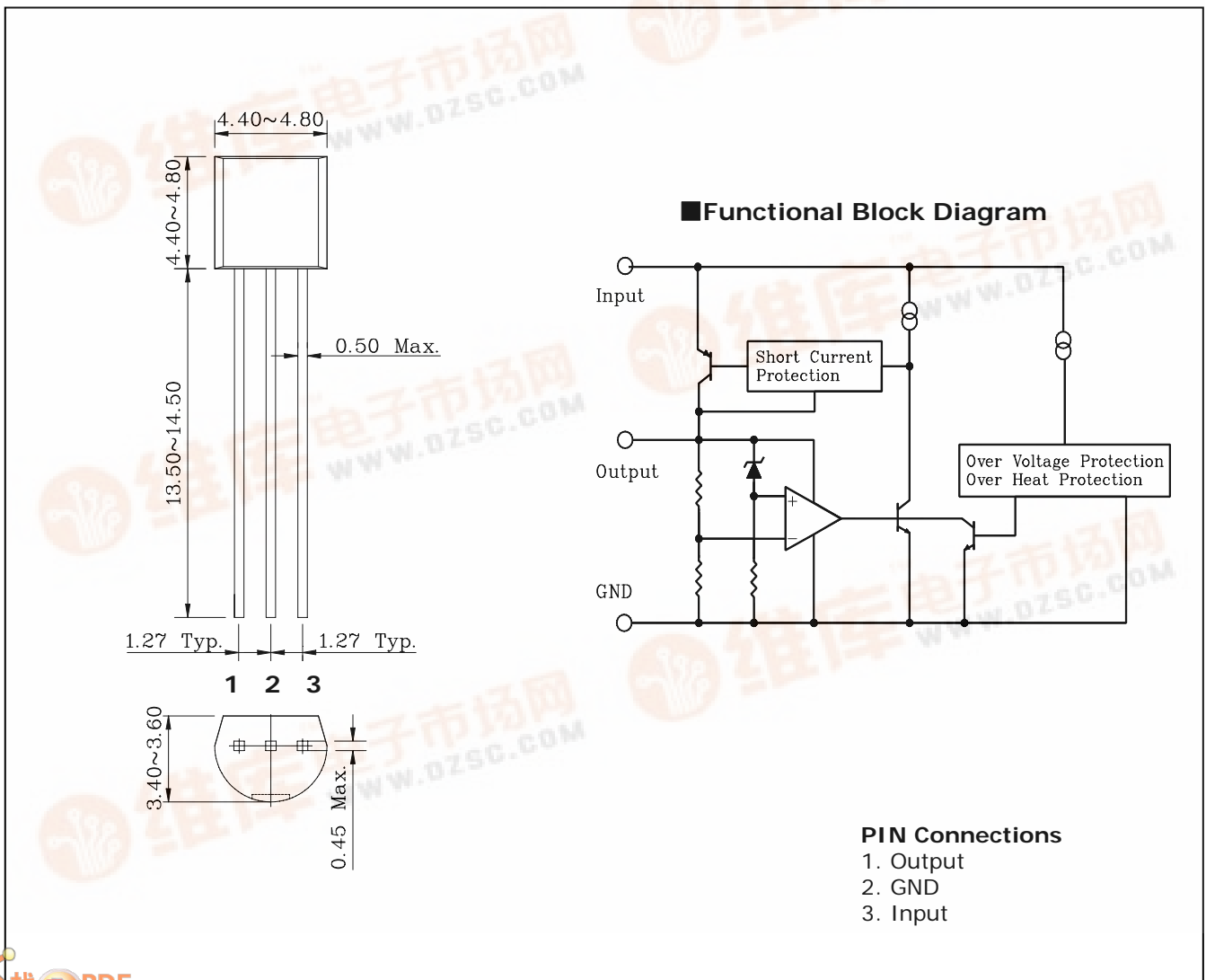
- Low Standby Current Consumption (500  $\mu$ A Typ.)
- Maximum Output Current (150 mA Max.)
- Less I/O voltage Difference (0.7V Max.)

## Ordering Information

Type NO.	Marking	Package Code
S78DL05	S78DL05	TO-92

## Outline Dimensions

unit : mm



## Maximum ratings

T<sub>a</sub>=25°C

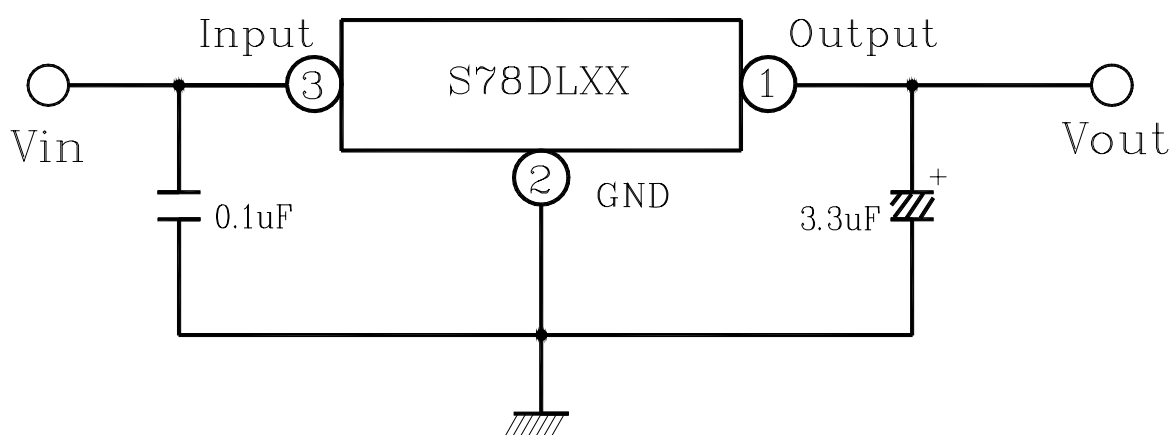
Characteristic	Symbol	Ratings	Unit
Operating Input voltage	V <sub>IN</sub>	20	V
Power Dissipation	P <sub>D</sub>	625	mW
Operating Temperature Range	T <sub>OPR</sub>	-40 ~ +85	°C
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 ~ 150	°C
Lead Temperature Time	T <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, T <sub>a</sub> =-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	

## Test circuit



Electrical Characteristic Curves

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

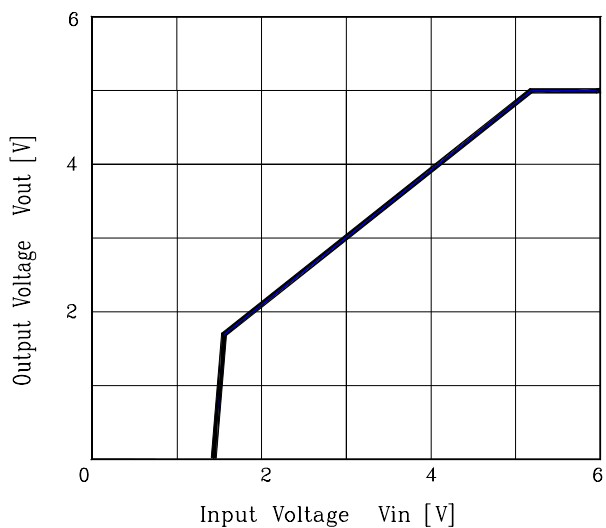


Fig. 2.  $|V_{out} - V_{in}| - I_C$

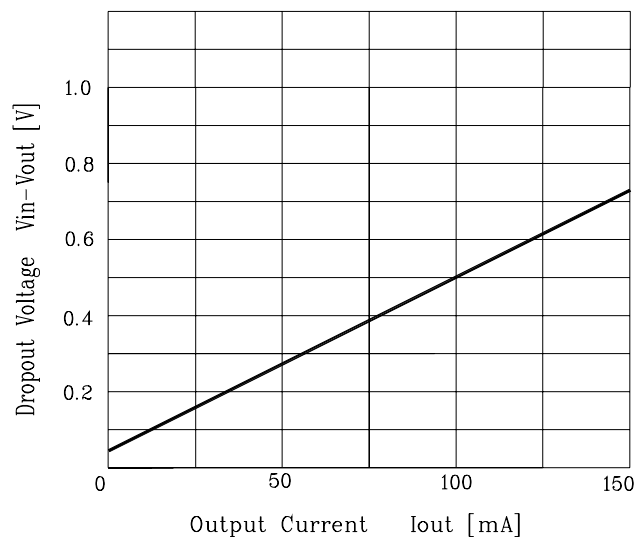


Fig. 3.  $P_d - T_a$

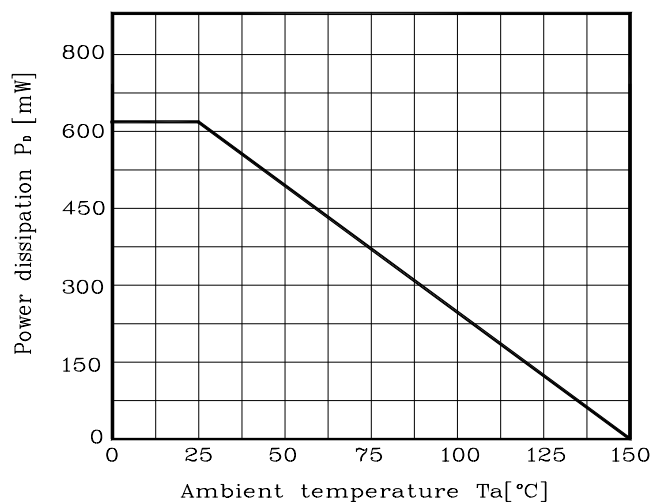
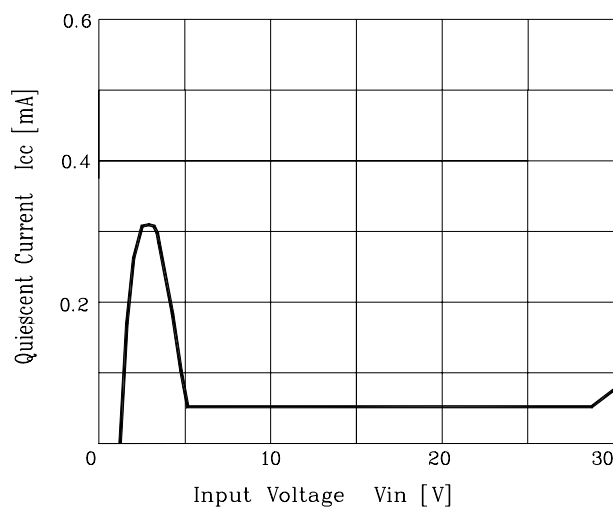


Fig. 4.  $I_{cc} - V_{out}$



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