



S78DL05L

Low Drop output Voltage Regulator

Descriptions

- Three Terminal Positive Low Dropout Voltage Regulator

Features

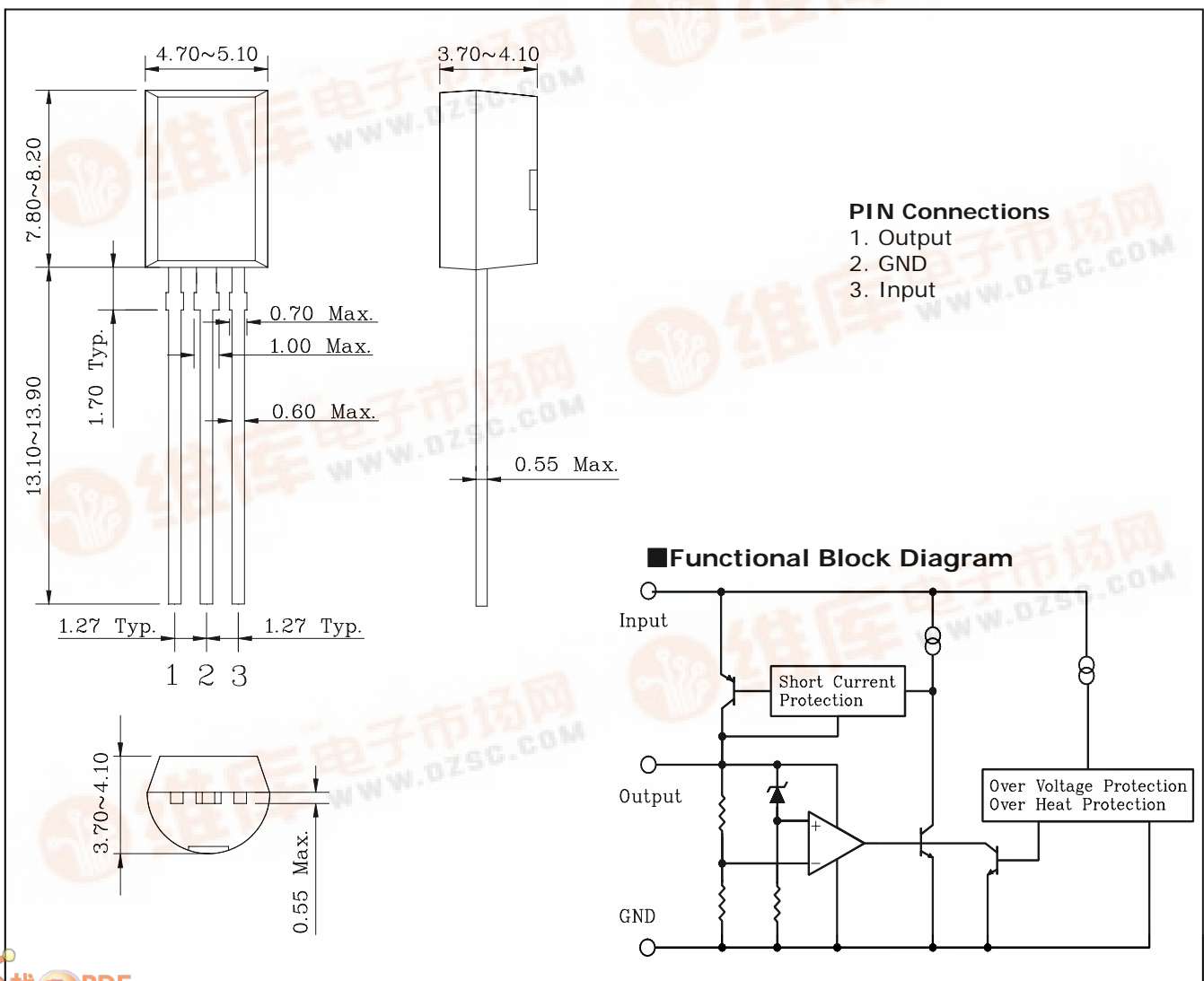
- Low Standby Current Consumption (500 μ A Typ.)
- Maximum Output Current (150 mA Max.)
- Less I/O voltage Difference (0.7V Max.)

Ordering Information

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

Outline Dimensions

unit : mm



Maximum ratings

Ta=25°C

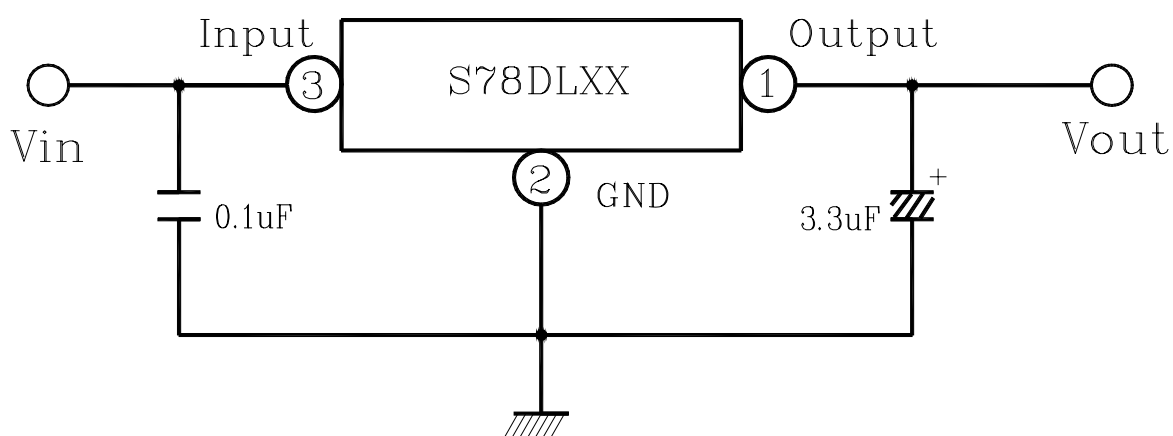
Characteristic	Symbol	Ratings	Unit
Operating Input voltage	V _{IN}	20	V
Power Dissipation	P _D	1	W
Operating Temperature Range	T _{OPR}	-40 ~ +85	°C
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-55 ~ 150	°C
Lead Temperature Time	T _{sol}	260 (10 Sec)	°C

Electrical Characteristics

(※ V_{IN}=10V, I_{OUT}=10 mA, T_j=25°C)

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

Test circuit



Electrical Characteristic Curves

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

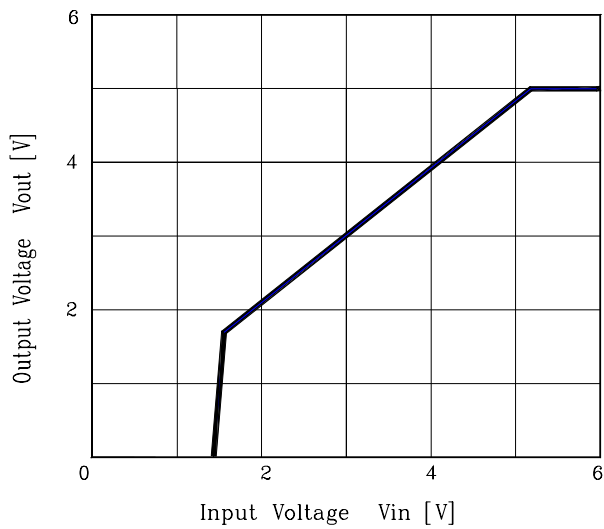


Fig. 2. $|V_{out} - V_{in}| - I_C$

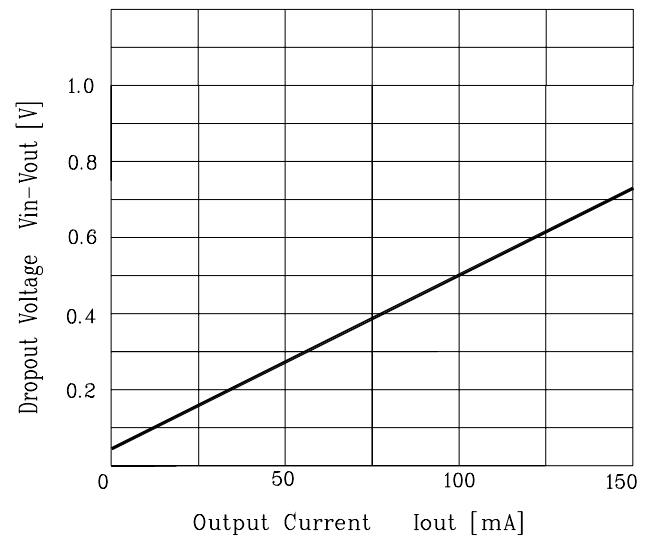


Fig. 3. $P_d - T_a$

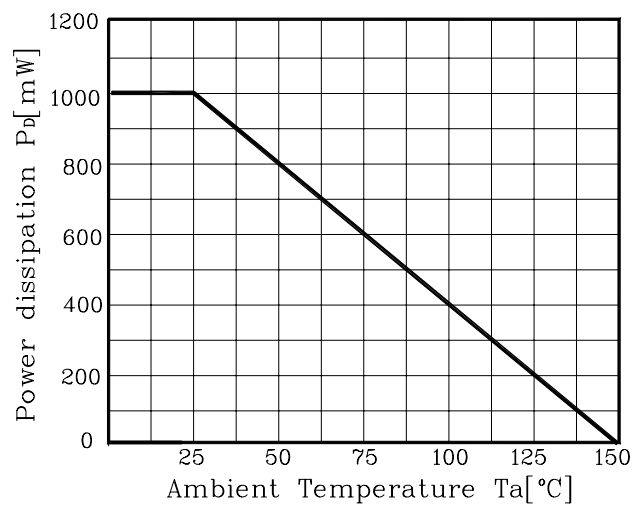
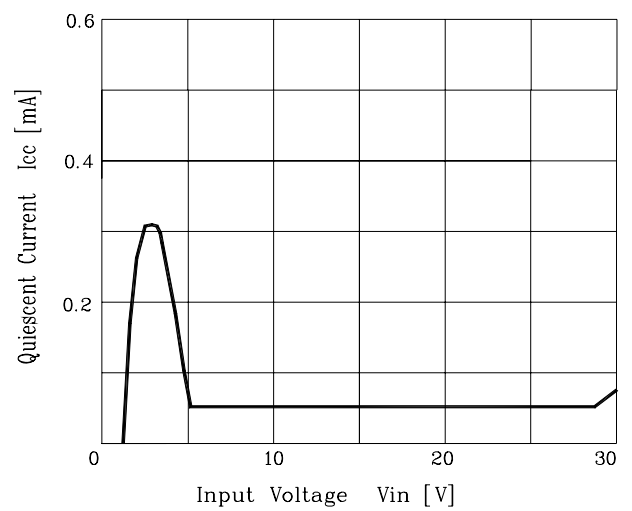


Fig. 4. $I_{cc} - V_{out}$



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