

Descriptions

- Three Terminal Positive Low Dropout Voltage Regulator

Features

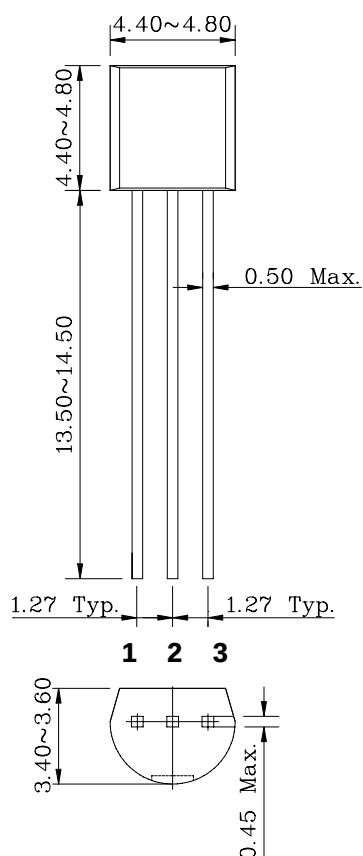
- Low Standby Current Consumption (500 μ A Typ.)
- Maximum Output Current (150 mA Max.)
- Less I/O voltage Difference (0.7V Max.)

Ordering Information

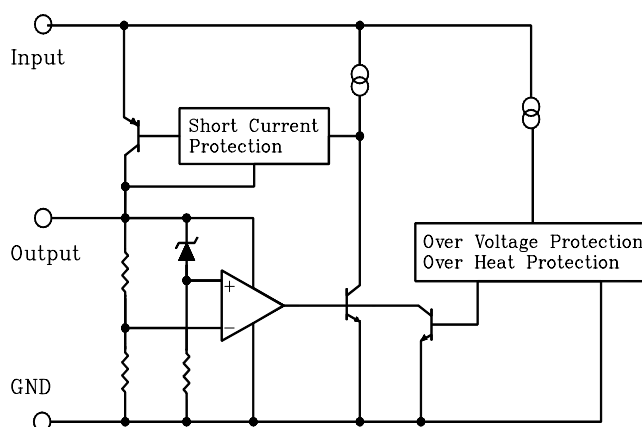
Type NO.	Marking	Package Code
S78DL05	S78DL05	TO-92

Outline Dimensions

unit : mm



Functional Block Diagram



PIN Connections

1. Output
2. GND
3. Input

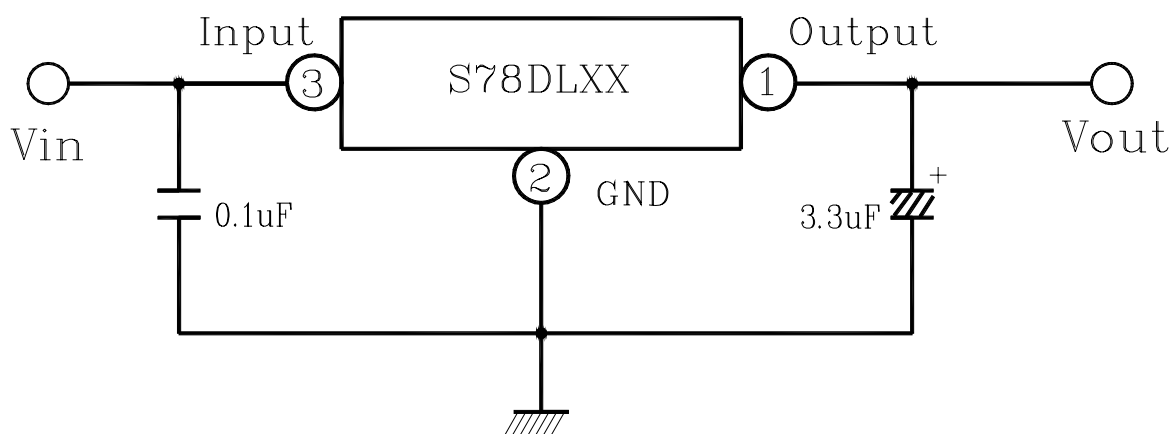
Maximum ratings

Ta=25°C

Characteristic	Symbol	Ratings	Unit
Operating Input voltage	V_{IN}	20	V
Power Dissipation	P_D	625	mW
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(※ $V_{IN}=10V$, $I_{OUT}=10\text{ mA}$, $T_j=25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output voltage	V_{OUT}	$V_{IN}=5.35V \sim 20V$, $T_a = -40 \sim 85^\circ\text{C}$	4.8	5	5.2	V
Voltage Regulation	$\Delta V_{OUT(1)}$	$V_{IN}=6V \sim 16V$	-	10	30	mV
Load Regulation	$\Delta V_{OUT(2)}$	$I_{OUT}=10 \sim 100\text{ mA}$	-	12	50	mV
Quiescent Current	I_{CC}	$I_{OUT} \leq 10\text{ mA}$, $V_{IN}=6V \sim 20V$	-	0.5	1	mA
Dropout Voltage	V_{DROP}	$I_{OUT}=50\text{ mA}$	-	0.3	0.5	V
		$I_{OUT}=100\text{ mA}$	-	0.5	0.7	

■ Test circuit

Electrical Characteristic Curves

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

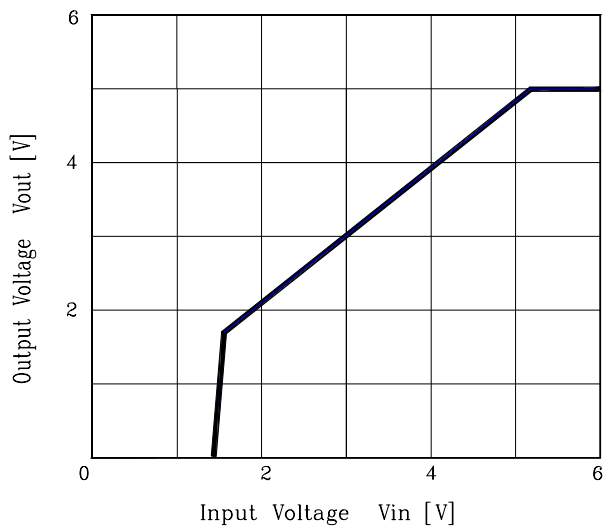


Fig. 2. $|V_{out} - V_{in}| - I_C$

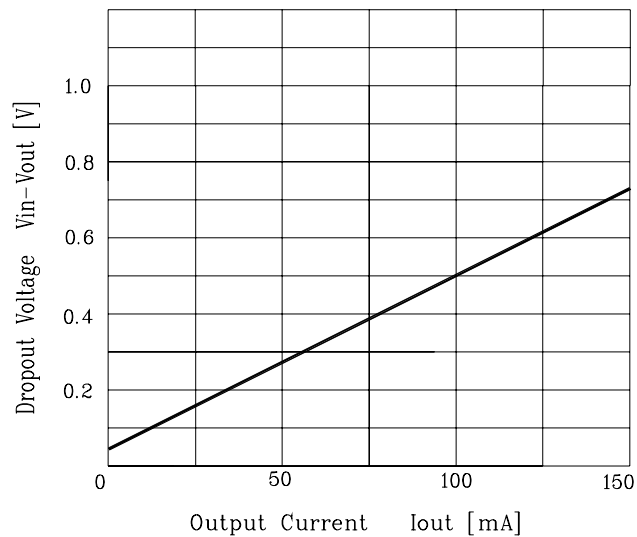


Fig. 3. $P_d - T_a$

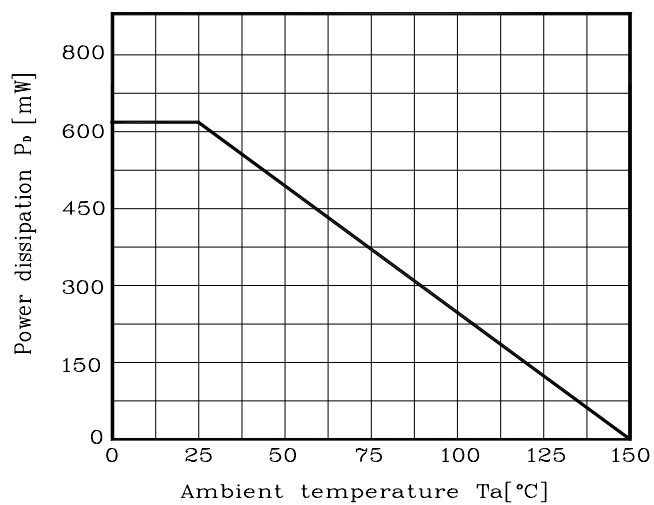
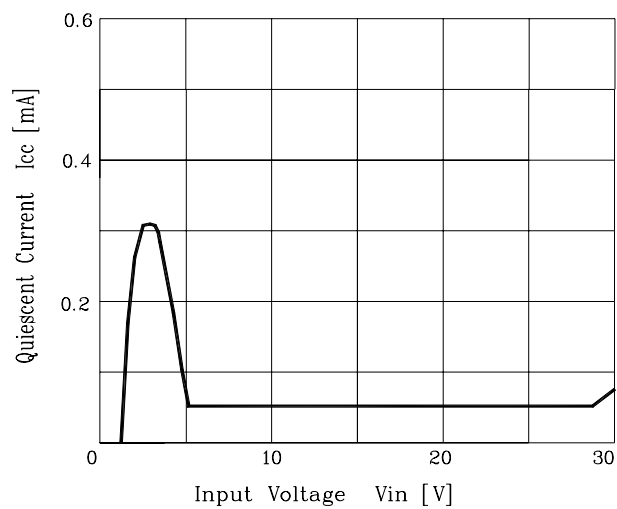


Fig. 4. $I_{cc} - V_{out}$



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