

**Descriptions**

- Three Terminal Positive Low Dropout Voltage Regulator

**Features**

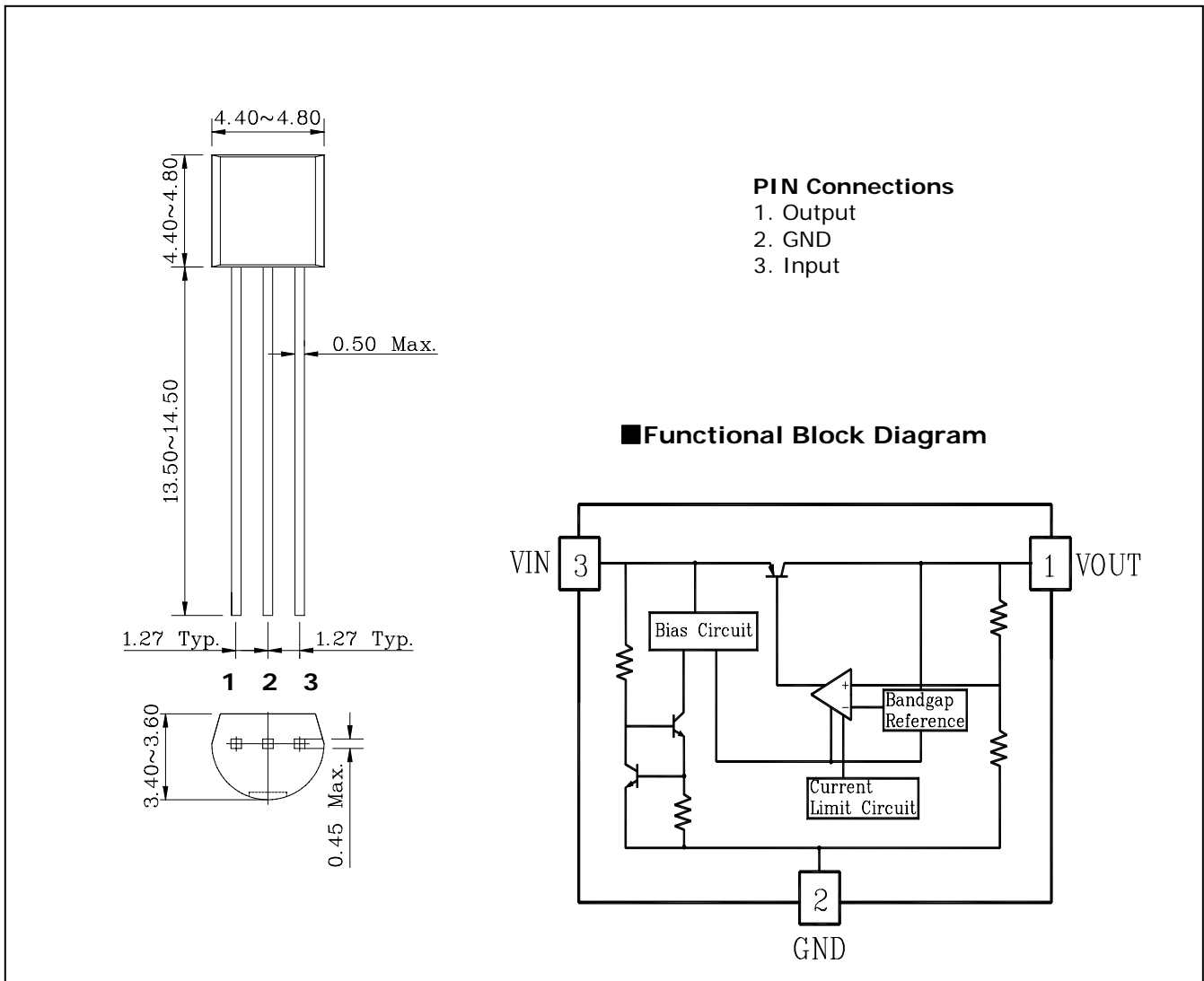
- Low Standby Current Consumption (500  $\mu$ A Typ.)
- Maximum Output Current (180 mA Max.)
- Less I/O voltage Difference (250 mV Max.)

**Ordering Information**

Type NO.	Marking	Package Code
S78DL33	S78DL33	TO-92

**Outline Dimensions**

unit : mm



## Maximum ratings

Ta=25°C

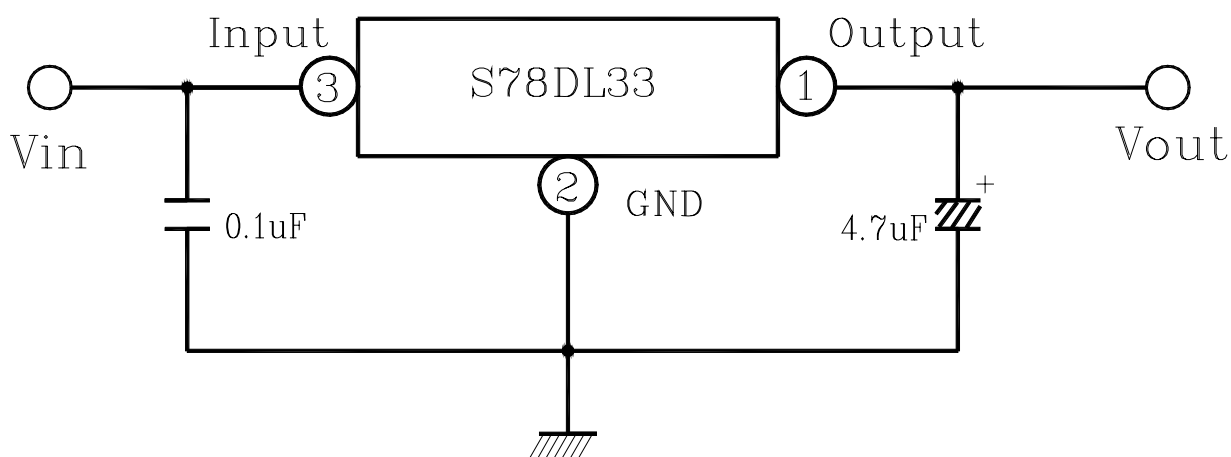
Characteristic	Symbol	Ratings	Unit
Operating Input voltage	V <sub>IN</sub>	16	V
Power Dissipation	P <sub>D</sub>	625	mW
Operating Temperature Range	T <sub>OPR</sub>	-40 ~ +85	°C
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 ~ 150	°C
Lead Temperature Time	T <sub>sol</sub>	260 (10 Sec)	°C

## Electrical Characteristics

(※ V<sub>IN</sub>=4.3V, I<sub>OUT</sub>=100uA, T<sub>j</sub>=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output voltage	V <sub>OUT</sub>	V <sub>IN</sub> =4.3V, I <sub>OUT</sub> =100uA	3.168	3.3	3.432	V
Voltage Regulation	Δ V <sub>OUT</sub> (1)	V <sub>IN</sub> =4.3V ~ 10V, I <sub>OUT</sub> =100uA	-	2	15	mV
Load Regulation	Δ V <sub>OUT</sub> (2)	V <sub>IN</sub> =4.3V, I <sub>OUT</sub> =1 ~ 100mA	-	7	28	mV
Dropout Voltage	V <sub>DROP</sub>	I <sub>OUT</sub> =50mA	-	110	230	mV
		I <sub>OUT</sub> =100mA	-	150	300	
Ripple Rejection Ratio	RR	f=100Hz, I <sub>OUT</sub> =100uA	-	75	-	dB
Ground pin Current	I <sub>GND</sub>	V <sub>IN</sub> =4.3V, I <sub>OUT</sub> =100uA		200	400	uA
		V <sub>IN</sub> =4.3V, I <sub>OUT</sub> =50mA		0.9	1.8	mA
		V <sub>IN</sub> =4.3V, I <sub>OUT</sub> =100mA		2.1	4	mA

## Test circuit



Electrical Characteristic Curves

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

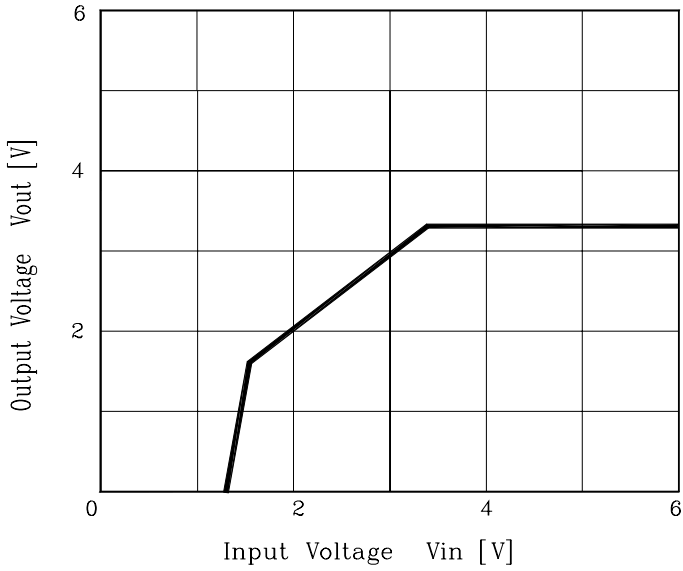


Fig. 2.  $|V_{out} - V_{in}| - I_{OUT}$

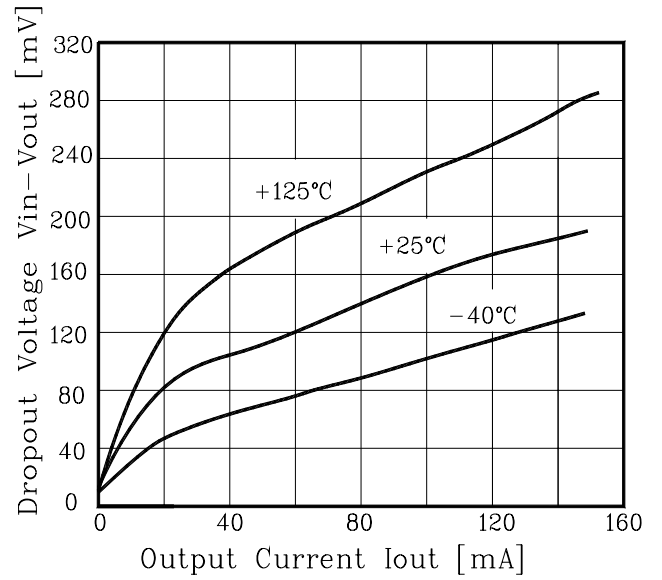


Fig. 3.  $P_d - T_a$

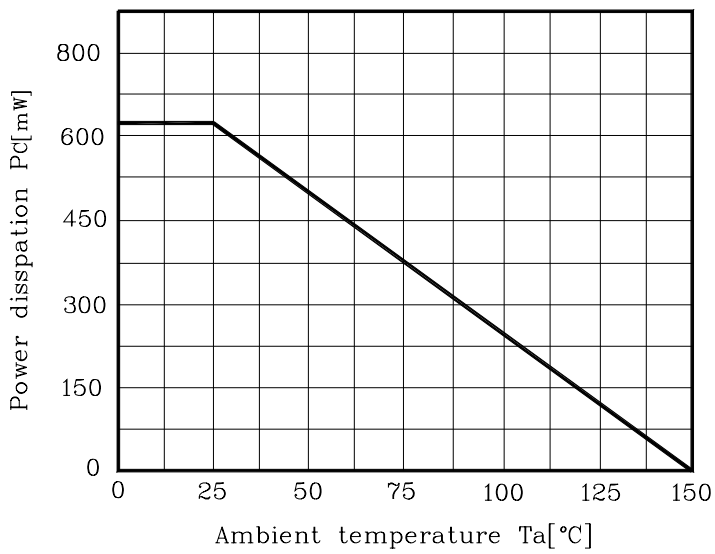
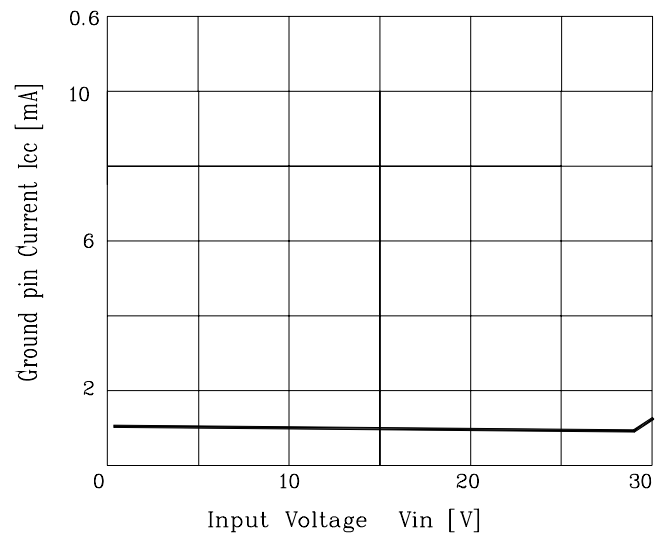


Fig. 4. Input voltage – Ground pin Current



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