AUK Semiconductor

S78DL33F

Low Drop output Voltage Regulator

Descriptions

- Three Terminal Positive Low Dropout Voltage Regulator

Features

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

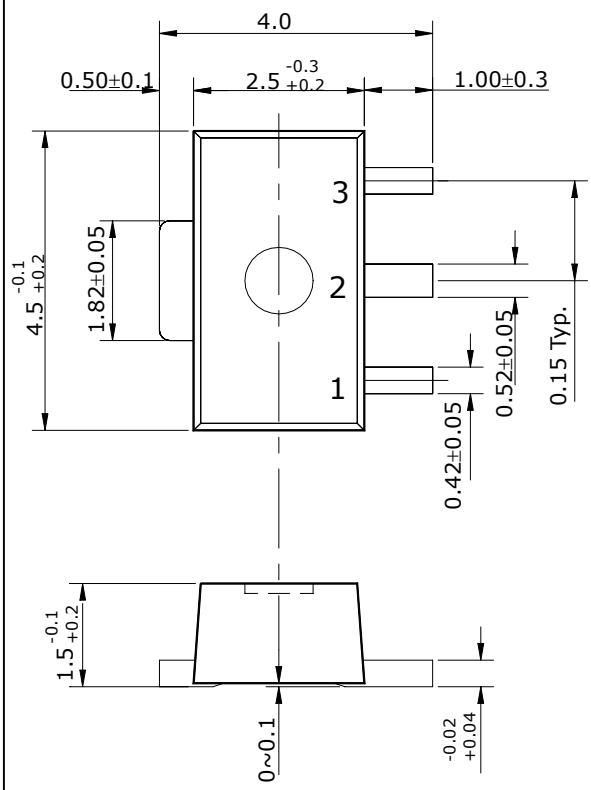
Ordering Information

Type NO.	Marking	Package Code
S78DL33F	33□□	SOT-89

□□: Monthly Code, Weekly Code

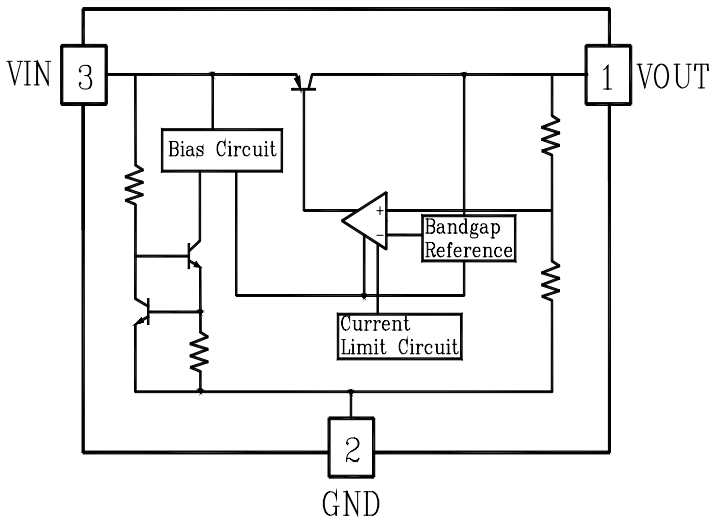
Outline Dimensions

unit : mm



PIN Connections
1. Output
2. GND
3. Input

■Functional Block Diagram



Maximum ratings

Ta=25°C

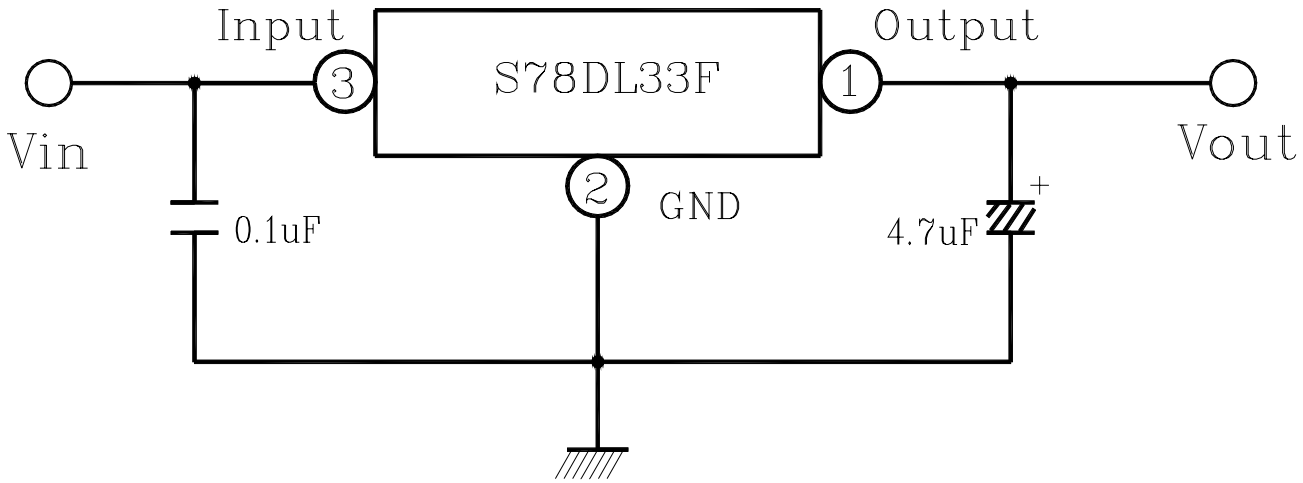
Characteristic	Symbol	Ratings	Unit
Operating Input voltage	V_{IN}	16	V
Power Dissipation	P_D	500	mW
Operating Temperature Range	T_{OPR}	-40~+85	°C
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C
Lead Temperature Time	T_{sol}	260 (10 Sec)	°C

Electrical Characteristics

(※ V_{IN}=4.3V, I_{OUT}=100uA, T_j =25°C)

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

■Test circuit



Electrical Characteristic Curves

Fig. 1. Vin - Vout

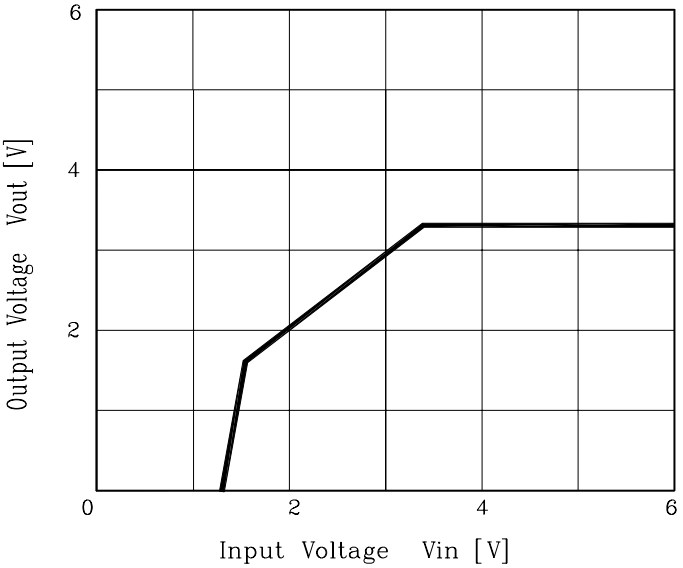


Fig. 2 |Vout - Vin| -I $_{OUT}$

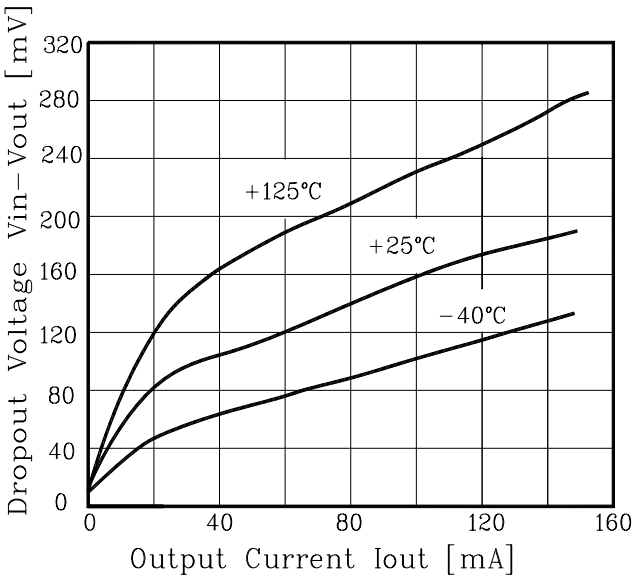


Fig. 3. Pd - Ta

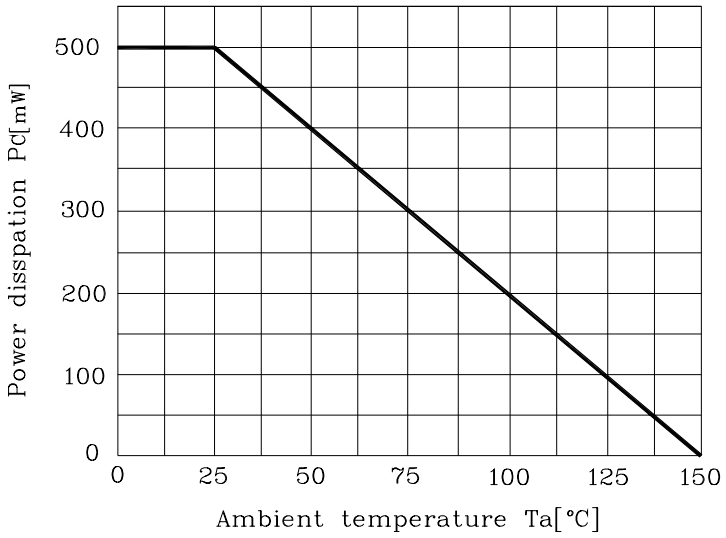


Fig. 4. Input voltage – Ground pin Current