AUK Semiconductor

S78DL05F

Low Drop output Voltage Regulator

Descriptions

- Three Terminal Positive Low Dropout Voltage Regulator

Features

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

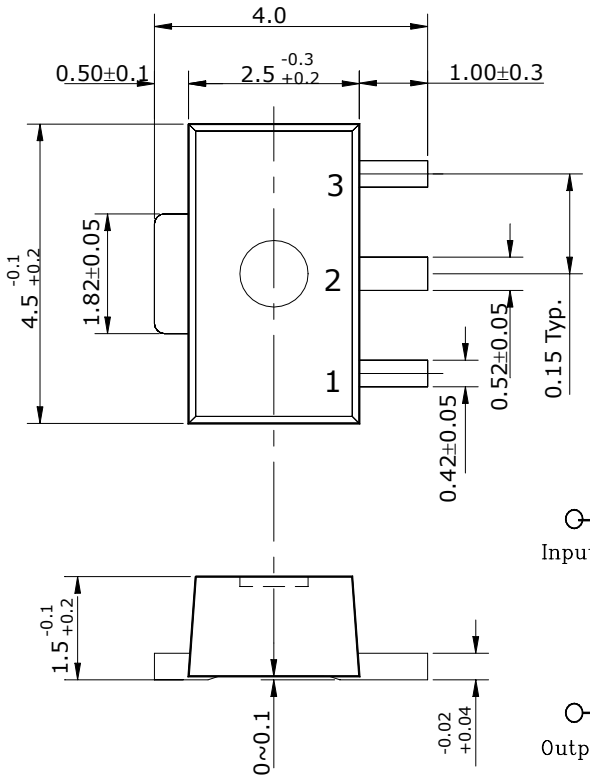
Ordering Information

Type NO.	Marking	Package Code
S78DL05F	85□□	SOT-89

□□: Monthly Code, Weekly Code

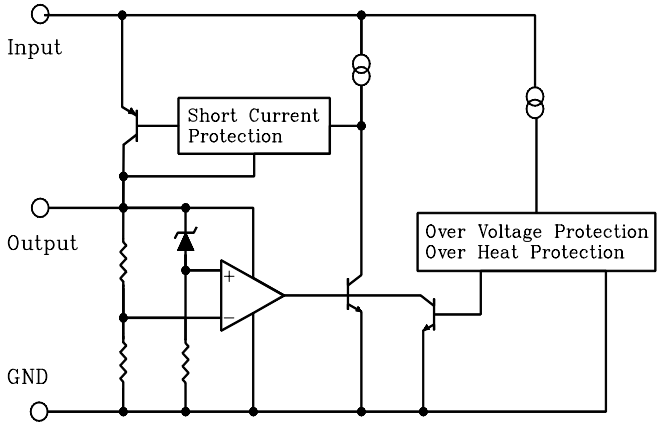
Outline Dimensions

unit : mm



PIN Connections
1. Output
2. GND
3. Input

■Functional Block Diagram



Maximum ratings

Ta=25°C

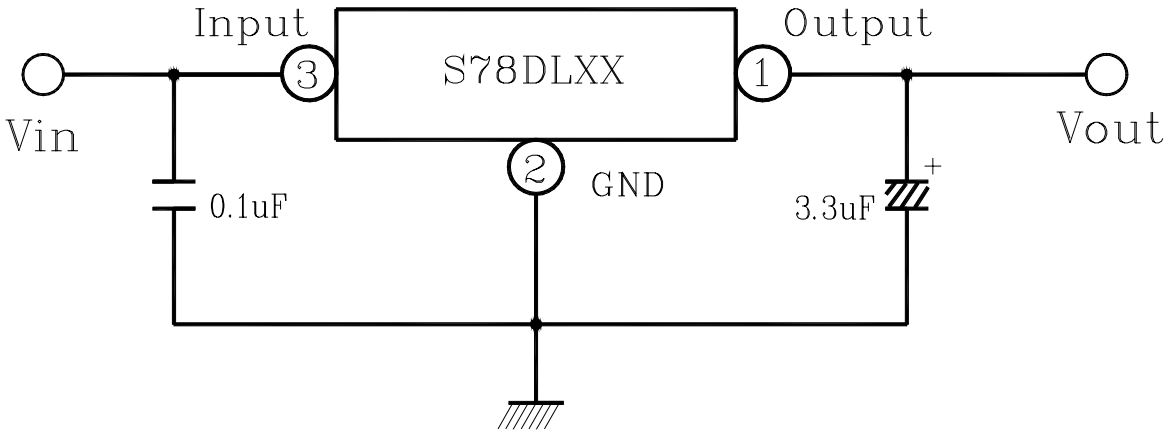
Characteristic	Symbol	Ratings	Unit
Operating Input voltage	V_{IN}	20	V
Power Dissipation	P_D	500	mW
Operating Temperature Range	T_{OPR}	-40~+85	°C
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C
Lead Temperature Time	T_{sol}	260 (10 Sec)	°C

Electrical Characteristics

(※ V_{IN}=10V, I_{OUT}=10 ㎃, 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	$\Delta V_{OUT}(1)$	V_{IN}=6V~16V	-	10	30	mV
Load Regulation	$\Delta V_{OUT}(2)$	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. Vin - Vout

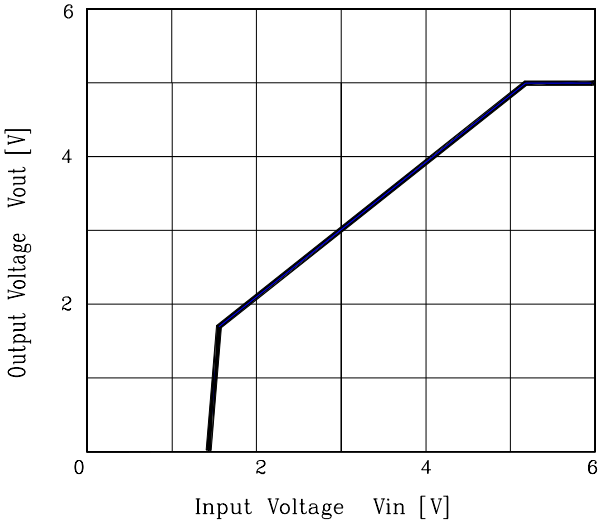


Fig. 2 |Vout - Vin| -I_C

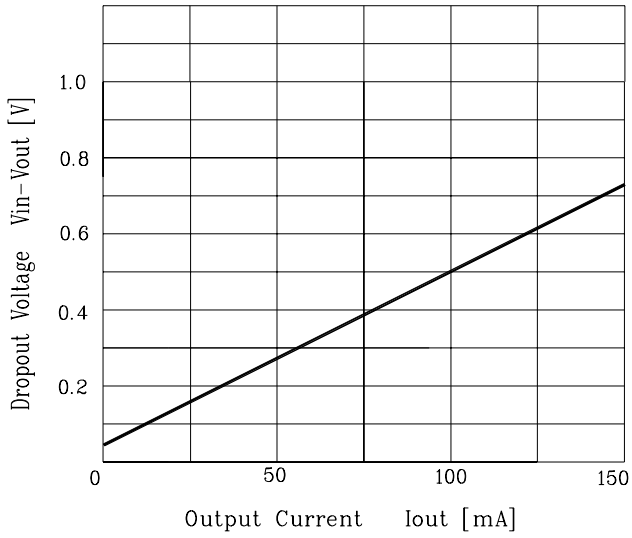


Fig. 3. Pd - Ta

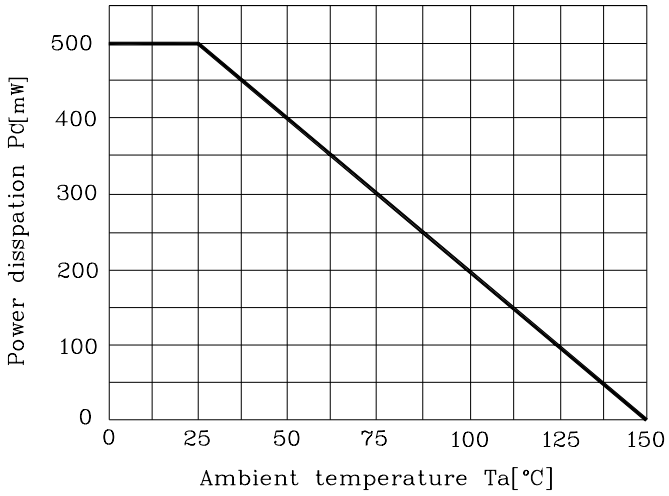


Fig. 4. Icc - Vout