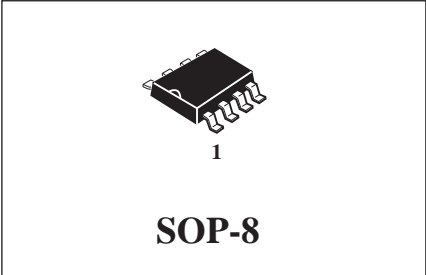


Positive Voltage Regulator

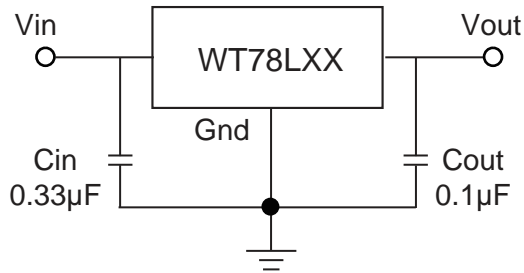
 Lead(Pb)-Free



Features:

- * Maximum Output current I_o : 0.1 A
- * Output voltage V_o : 5V~8V
- * Continuous total dissipation: P_D : 0.625 W ($T_a = 25^\circ\text{C}$)

Typical Application



Absolute Maximum Ratings

Parameter	Ratings	Unit
Input Voltage	25	V
Output Current	100	mA
Power Dissipation	625	mW
Operating Junction Temperature Range	-20 ~ +120	°C
Storage temperature range	-65 ~ +150	°C

Electrical Characteristics at Specified Virtual Junction Temperature

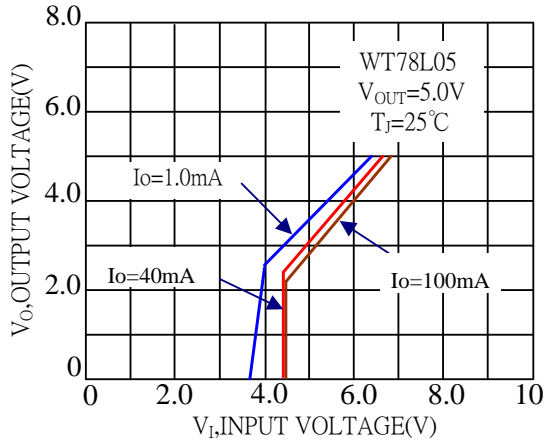
WT78L05 (Refer to the test circuits, $T_j=0\sim 125^\circ\text{C}$, $I_O=40\text{mA}$, $V_{in}=10\text{V}$, $C_{in}=0.33\mu\text{F}$, $C_O=0.1\mu\text{F}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit
Output Voltage $T_j=25^\circ\text{C}$	V_O	4.8	5.0	5.2	V
Load Regulation $I_O=1\sim 100\text{mA}$, $T_j=25^\circ\text{C}$ $I_O=1\sim 40\text{mA}$, $T_j=25^\circ\text{C}$	ΔV_O	- -	11 5.0	60 30	mV
Line Regulation $7\text{V}\leq V_{in}\leq 20\text{V}$ $8\text{V}\leq V_{in}\leq 20\text{V}$, $T_j=25^\circ\text{C}$	ΔV_O	- -	55 45	150 100	mV
Quiescent Current $T_j=25^\circ\text{C}$ $T_j=125^\circ\text{C}$	I_Q	- -	3.8 -	6.0 5.5	mA
Quiescent Current Change $8\text{V}\leq V_{in}\leq 20\text{V}$ $1\text{mA}\leq I_O\leq 40\text{mA}$	ΔI_Q	- -	- -	1.5 0.1	mA
Output Noise Voltage $10\text{Hz}\leq f\leq 100\text{KHz}$, $T=25^\circ\text{C}$	V_n	-	40	-	μV
Ripple Rejection $8\text{V}\leq V_{in}\leq 18\text{V}$, $f=120\text{Hz}$, $T_j=25^\circ\text{C}$	RR	41	49	-	dB
Dropout Voltage $T=25^\circ\text{C}$	V_D	-	1.7	-	V

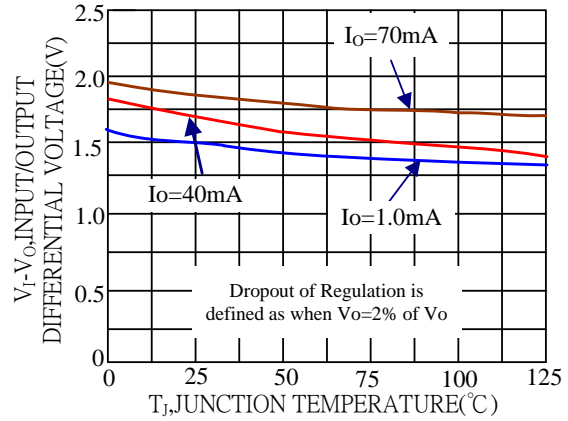
WT78L08 (Refer to the test circuits, $T_j=0\sim 125^\circ\text{C}$, $I_O=40\text{mA}$, $V_{in}=14\text{V}$, $C_{in}=0.33\mu\text{F}$, $C_O=0.1\mu\text{F}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit
Output Voltage $T_j=25^\circ\text{C}$	V_O	7.6	8.0	8.4	V
Load Regulation $I_O=1\sim 100\text{mA}$, $T_j=25^\circ\text{C}$ $I_O=1\sim 40\text{mA}$, $T_j=25^\circ\text{C}$	ΔV_O	- -	15 8	80 40	mV
Line Regulation $10.5\text{V}\leq V_{in}\leq 23\text{V}$, $T_j=25^\circ\text{C}$ $11\text{V}\leq V_{in}\leq 20\text{V}$, $T_j=25^\circ\text{C}$	ΔV_O	- -	10 8	175 125	mV
Quiescent Current $T_j=25^\circ\text{C}$ $T_j=125^\circ\text{C}$	I_Q	- -	3.8 -	6.0 5.5	mA
Quiescent Current Change $8\text{V}\leq V_{in}\leq 20\text{V}$ $1\text{mA}\leq I_O\leq 40\text{mA}$	ΔI_Q	- -	- -	1.5 0.1	mA
Output Noise Voltage $10\text{Hz}\leq f\leq 100\text{KHz}$, $T=25^\circ\text{C}$	V_n	-	40	-	μV
Ripple Rejection $8\text{V}\leq V_{in}\leq 18\text{V}$, $f=120\text{Hz}$, $T_j=25^\circ\text{C}$	RR	41	49	-	dB
Dropout Voltage $T=25^\circ\text{C}$	V_D	-	1.7	-	V

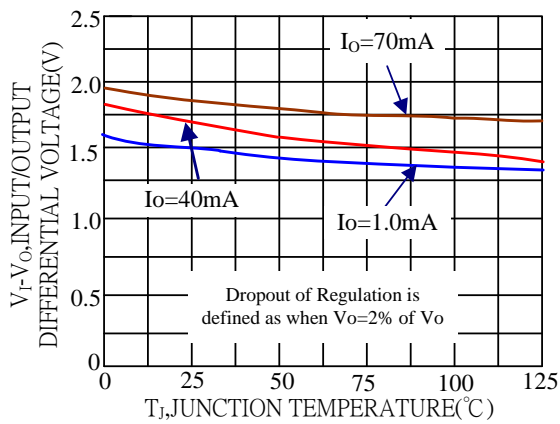
Typical Performance Characteristics



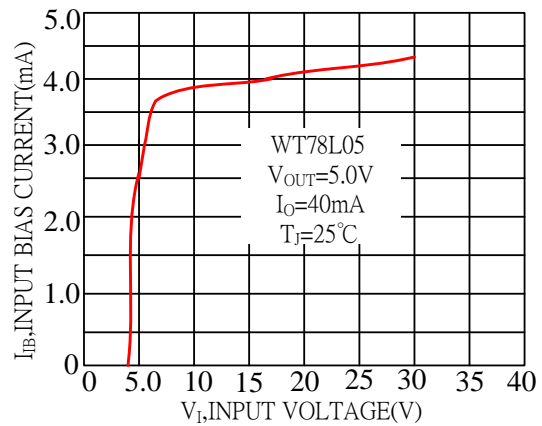
Dropout Characteristics



Dropout Voltage versus Junction Temperature

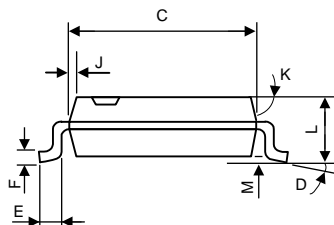
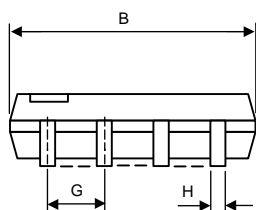
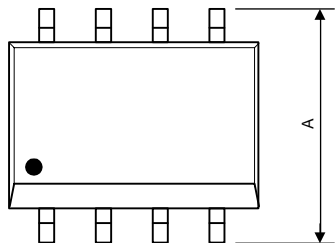


Input Bias Current versus Ambient Temperature



Input Bias Current versus Input Voltage

SOP-8 PACKAGE OUTLINE DIMENSIONS(Unit:mm)



SOP-8		
Dim	Min	Max
A	5.80	6.20
B	4.80	5.00
C	3.80	4.00
D	0°	8°
E	0.40	0.90
F	0.19	0.25
M	0.10	0.25
H	0.35	0.49
L	1.35	1.75
J	0.375 REF	
K	45°	
G	1.27 TYP	