

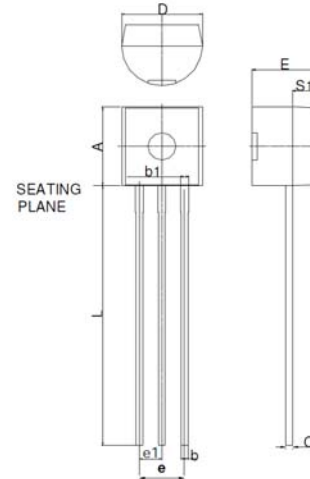
RoHS Compliant Product

A suffix of "-C" specifies halogen or lead -free

DESCRIPTION

The S78Lxx-B series of positive regulators are available in the TO-92 package and with 5V, 6V, 8V, 9V, 10V, 12V, 15V, 18V and 24V fixed output voltages, making it useful in a wide range of applications. These regulators can provide local on-card regulation, eliminating the distribution problems associated with single point regulation. Each type employs internal current limiting, thermal shut-down and safe operating area protection, making it essentially indestructible. If adequate heat sinking is provided, they can deliver over 100mA output current. Although designed primarily as fixed voltage regulators, these devices can be used with external components to obtain adjustable voltages and currents. S78Lxx is characterized for operation from 0°C to +125°C.

TO-92

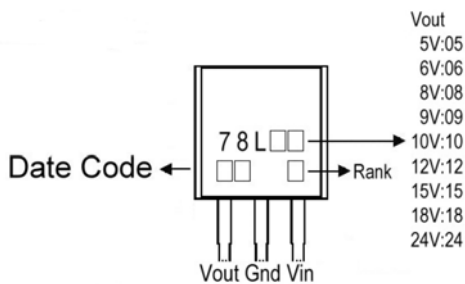


FEATURES

- Internal Short-Circuit Current Limiting
- No External Components Required
- Wide Range Of Available, Fixed Output Voltage
- Internal Thermal Overload Protection

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.45	4.7	D	4.44	4.7
S ₁	1.02	-	E	3.30	3.81
b	0.36	0.51	L	12.70	-
b ₁	0.36	0.76	e1	1.150	1.390
C	0.36	0.51	e	2.42	2.66

MARKING



MAXIMUM RATINGS

Parameter	Symbol	Ratings	Unit
Input Voltage	V_{IN}	5V ~ 10V	30
		12V ~ 18V	35
		24V	40
Output Current	I_o	100	mA
Operating Junction Temperature Range	T_J	0 ~ 125	°C
Storage Temperature Range	T_{stg}	-55 ~ 150	
Power Dissipation	P_D	625 *	mW

* When tested in free air condition, without heat sinking.

S78L05-B ELECTRICAL CHARACTERISTICS

(Refer to the test circuits, $T_j=0\sim 125\text{ }^\circ\text{C}$, $I_o=40\text{mA}$, $V_{IN}=10\text{V}$, $C_{IN}=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$ unless otherwise specified) (Note 1)

Symbol		Test Conditions	Min	Typ	Max	Unit
V_o	B-Rank (5%)	$V_{IN}=10\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $7\text{V} \leq V_{IN} \leq 20\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $7\text{V} \leq V_{IN} \leq V_{max}$, $1\text{mA} \leq I_o \leq 70\text{mA}$ (Note 2)	4.75	5.0	5.25	V
ΔV_o (Line Regulation)		$7\text{V} \leq V_{IN} \leq 20\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	18	75	mV
		$8\text{V} \leq V_{IN} \leq 20\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	10	54	
ΔV_o (Load Regulation)		$V_{IN}=10\text{V}$, $1\text{mA} \leq I_o \leq 100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	20	60	mV
		$V_{IN}=10\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	5	30	
I_q		$V_{IN}=10\text{V}$, $I_o=0\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	3.0	5.0	mA
ΔI_q		$V_{IN}=10\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$	-	-	0.1	mA
		$8\text{V} \leq V_{IN} \leq 20\text{V}$, $I_o=40\text{mA}$	-	-	1.0	
V_N		$10\text{Hz} \leq f \leq 100\text{KHz}$	-	40	-	μV
RR		$8\text{V} \leq V_{IN} \leq 20\text{V}$, $f=120\text{Hz}$, $T_j=25\text{ }^\circ\text{C}$, $I_o=40\text{mA}$	47	62	-	dB
V_D		$I_o=100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	1.7	-	V
$\Delta V_o/\Delta T_j$		$I_o=5\text{mA}$, $0\text{ }^\circ\text{C} \leq T_j \leq 125\text{ }^\circ\text{C}$	-	-0.65	-	mV/ $^\circ\text{C}$

S78L06-B ELECTRICAL CHARACTERISTICS

(Refer to the test circuits, $T_j=0\sim 125\text{ }^\circ\text{C}$, $I_o=40\text{mA}$, $V_{IN}=12\text{V}$, $C_{IN}=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$ unless otherwise specified) (Note 1)

Symbol		Test Conditions	Min	Typ	Max	Unit
V_o	B-Rank (5%)	$V_{IN}=12\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $8.5\text{V} \leq V_{IN} \leq 20\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $8.5\text{V} \leq V_{IN} \leq V_{max}$, $1\text{mA} \leq I_o \leq 70\text{mA}$ (Note 2)	5.70	6.0	6.30	V
ΔV_o (Line Regulation)		$8.5\text{V} \leq V_{IN} \leq 20\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	64	175	mV
		$9\text{V} \leq V_{IN} \leq 20\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	54	125	
ΔV_o (Load Regulation)		$V_{IN}=12\text{V}$, $1\text{mA} \leq I_o \leq 100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	12.8	80	mV
		$V_{IN}=12\text{V}$, $1\text{mA} \leq I_o \leq 70\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	5.8	40	
I_q		$V_{IN}=12\text{V}$, $I_o=0\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	3.9	6.0	mA
ΔI_q		$V_{IN}=12\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$	-	-	0.1	mA
		$9\text{V} \leq V_{IN} \leq 20\text{V}$, $I_o=40\text{mA}$	-	-	1.5	
V_N		$10\text{Hz} \leq f \leq 100\text{KHz}$	-	49	-	μV
RR		$10\text{V} \leq V_{IN} \leq 20\text{V}$, $I_o=40\text{mA}$, $f=120\text{Hz}$, $T_j=25\text{ }^\circ\text{C}$	40	46	-	dB
V_D		$I_o=100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	1.7	-	V
$\Delta V_o/\Delta T_j$		$I_o=5\text{mA}$, $0\text{ }^\circ\text{C} \leq T_j \leq 125\text{ }^\circ\text{C}$	-	0.75	-	mV/ $^\circ\text{C}$

S78L08-B ELECTRICAL CHARACTERISTICS

(Refer to the test circuits, $T_j=0\sim 125\text{ }^\circ\text{C}$, $I_o=40\text{mA}$, $V_{IN}=14\text{V}$, $C_{IN}=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$ unless otherwise specified) (Note 1)

Symbol		Test Conditions	Min	Typ	Max	Unit
V_o	B-Rank (5%)	$V_{IN}=14\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $10.5\text{V} \leq V_{IN} \leq 23\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $10.5\text{V} \leq V_{IN} \leq V_{max}$, $1\text{mA} \leq I_o \leq 70\text{mA}$ (Note 2)	7.60	8.0	8.40	V
ΔV_o (Line Regulation)		$10.5\text{V} \leq V_{IN} \leq 23\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	10	175	mV
		$11\text{V} \leq V_{IN} \leq 23\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	8	125	
ΔV_o (Load Regulation)		$V_{IN}=14\text{V}$, $1\text{mA} \leq I_o \leq 100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	15	80	mV
		$V_{IN}=14\text{V}$, $1\text{mA} \leq I_o \leq 70\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	8	40	
I_q		$V_{IN}=14\text{V}$, $I_o=0\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	2.0	5.5	mA
ΔI_q		$V_{IN}=14\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$	-	-	0.1	mA
		$11\text{V} \leq V_{IN} \leq 23\text{V}$, $I_o=40\text{mA}$	-	-	1.5	
V_N		$10\text{Hz} \leq f \leq 100\text{KHz}$	-	49	-	μV
RR		$11\text{V} \leq V_{IN} \leq 21\text{V}$, $I_o=40\text{mA}$, $f=120\text{Hz}$, $T_j=25\text{ }^\circ\text{C}$	39	45	-	dB
V_D		$I_o=100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	1.7	-	V
$\Delta V_o/\Delta T_j$		$I_o=5\text{mA}$, $0\text{ }^\circ\text{C} \leq T_j \leq 125\text{ }^\circ\text{C}$	-	0.75	-	mV/ $^\circ\text{C}$

S78L09-B ELECTRICAL CHARACTERISTICS

(Refer to the test circuits, $T_j=0\sim 125\text{ }^\circ\text{C}$, $I_o=40\text{mA}$, $V_{IN}=15\text{V}$, $C_{IN}=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$ unless otherwise specified) (Note 1)

Symbol		Test Conditions	Min	Typ	Max	Unit
V_o	B-Rank (5%)	$V_{IN}=15\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $11.5\text{V} \leq V_{IN} \leq 24\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $11.5\text{V} \leq V_{IN} \leq V_{max}$, $1\text{mA} \leq I_o \leq 70\text{mA}$ (Note 2)	8.55	9.0	9.45	V
ΔV_o (Line Regulation)		$11.5\text{V} \leq V_{IN} \leq 24\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $13\text{V} \leq V_{IN} \leq 24\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	90 100	200 150	mV
ΔV_o (Load Regulation)		$V_{IN}=15\text{V}$, $1\text{mA} \leq I_o \leq 100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $V_{IN}=15\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	20 10	90 45	mV
I_q		$V_{IN}=15\text{V}$, $I_o=0\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	2.0	6.0	mA
ΔI_q		$V_{IN}=15\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $13\text{V} \leq V_{IN} \leq 24\text{V}$, $I_o=40\text{mA}$	-	-	0.1 1.5	mA
V_N		$10\text{Hz} \leq f \leq 100\text{KHz}$	-	49	-	μV
RR		$12\text{V} \leq V_{IN} \leq 23\text{V}$, $I_o=40\text{mA}$, $f=120\text{Hz}$, $T_j=25\text{ }^\circ\text{C}$	38	44	-	dB
V_D		$I_o=100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	1.7	-	V
$\Delta V_o/\Delta T_j$		$I_o=5\text{mA}$, $0\text{ }^\circ\text{C} \leq T_j \leq 125\text{ }^\circ\text{C}$	-	0.75	-	mV/ $^\circ\text{C}$

S78L10-B ELECTRICAL CHARACTERISTICS

(Refer to the test circuits, $T_j=0\sim 125\text{ }^\circ\text{C}$, $I_o=40\text{mA}$, $V_{IN}=17\text{V}$, $C_{IN}=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$ unless otherwise specified) (Note 1)

Symbol		Test Conditions	Min	Typ	Max	Unit
V_o	B-Rank (5%)	$V_{IN}=17\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $13\text{V} \leq V_{IN} \leq 25\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $13\text{V} \leq V_{IN} \leq V_{max}$, $1\text{mA} \leq I_o \leq 70\text{mA}$ (Note 2)	9.50	10.0	10.50	V
ΔV_o (Line Regulation)		$13\text{V} \leq V_{IN} \leq 25\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $14\text{V} \leq V_{IN} \leq 25\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	51 42	175 125	mV
ΔV_o (Load Regulation)		$V_{IN}=17\text{V}$, $1\text{mA} \leq I_o \leq 100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $V_{IN}=17\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	20 11	90 40	mV
I_q		$V_{IN}=17\text{V}$, $I_o=0\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	4.2	6.0	mA
ΔI_q		$V_{IN}=17\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $14\text{V} \leq V_{IN} \leq 25\text{V}$, $I_o=40\text{mA}$	-	-	0.1 1.5	mA
V_N		$10\text{Hz} \leq f \leq 100\text{KHz}$	-	62	-	μV
RR		$15\text{V} \leq V_{IN} \leq 25\text{V}$, $I_o=40\text{mA}$, $f=120\text{Hz}$, $T_j=25\text{ }^\circ\text{C}$	37	44	-	dB
V_D		$I_o=100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	1.7	-	V

S78L12-B ELECTRICAL CHARACTERISTICS

(Refer to the test circuits, $T_j=0\sim 125\text{ }^\circ\text{C}$, $I_o=40\text{mA}$, $V_{IN}=19\text{V}$, $C_{IN}=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$ unless otherwise specified) (Note 1)

Symbol		Test Conditions	Min	Typ	Max	Unit
V_o	B-Rank (5%)	$V_{IN}=19\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $14.5\text{V} \leq V_{IN} \leq 27\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $14.5\text{V} \leq V_{IN} \leq V_{max}$, $1\text{mA} \leq I_o \leq 70\text{mA}$ (Note 2)	11.40	12.0	12.60	V
ΔV_o (Line Regulation)		$14.5\text{V} \leq V_{IN} \leq 27\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $16\text{V} \leq V_{IN} \leq 27\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	25 20	300 250	mV
ΔV_o (Load Regulation)		$V_{IN}=19\text{V}$, $1\text{mA} \leq I_o \leq 100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $V_{IN}=19\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	25 12	150 75	mV
I_q		$V_{IN}=19\text{V}$, $I_o=0\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	2.0	6.0	mA
ΔI_q		$V_{IN}=19\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $16\text{V} \leq V_{IN} \leq 27\text{V}$, $I_o=40\text{mA}$	-	-	0.1 1.5	mA
V_N		$10\text{Hz} \leq f \leq 100\text{KHz}$	-	80	-	μV
RR		$15\text{V} \leq V_{IN} \leq 25\text{V}$, $I_o=40\text{mA}$, $f=120\text{Hz}$, $T_j=25\text{ }^\circ\text{C}$	37	65	-	dB
V_D		$I_o=100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	1.7	-	V
$\Delta V_o/\Delta T_j$		$I_o=5\text{mA}$, $0\text{ }^\circ\text{C} \leq T_j \leq 125\text{ }^\circ\text{C}$	-	-1.0	-	mV/ $^\circ\text{C}$

S78L15-B ELECTRICAL CHARACTERISTICS

(Refer to the test circuits, $T_j=0\sim 125\text{ }^\circ\text{C}$, $I_o=40\text{mA}$, $V_{IN}=23\text{V}$, $C_{IN}=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$ unless otherwise specified) (Note 1)

Symbol		Test Conditions	Min	Typ	Max	Unit
V_o	B-Rank (5%)	$V_{IN}=23\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $17.5\text{V} \leq V_{IN} \leq 30\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $17.5\text{V} \leq V_{IN} \leq V_{max}$, $1\text{mA} \leq I_o \leq 70\text{mA}$ (Note 2)	14.25	15.0	15.75	V
ΔV_o (Line Regulation)		$17.5\text{V} \leq V_{IN} \leq 30\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $20\text{V} \leq V_{IN} \leq 30\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	25 15	150 75	mV
ΔV_o (Load Regulation)		$V_{IN}=23\text{V}$, $1\text{mA} \leq I_o \leq 100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $V_{IN}=23\text{V}$, $1\text{mA} \leq I_o \leq 70\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	20 25	150 150	mV
I_q		$V_{IN}=23\text{V}$, $I_o=0\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	2.2	6.5	mA
ΔI_q		$V_{IN}=23\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $20\text{V} \leq V_{IN} \leq 30\text{V}$, $I_o=40\text{mA}$	-	-	0.1 1.5	mA
V_N		$10\text{Hz} \leq f \leq 100\text{KHz}$	-	90	-	μV
RR		$18.5\text{V} \leq V_{IN} \leq 28.5\text{V}$, $I_o=40\text{mA}$, $f=120\text{Hz}$, $T_j=25\text{ }^\circ\text{C}$	34	63	-	dB
V_D		$I_o=100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	1.7	-	V
$\Delta V_o/\Delta T_j$		$I_o=5\text{mA}$, $0\text{ }^\circ\text{C} \leq T_j \leq 125\text{ }^\circ\text{C}$	-	-1.3	-	$\text{mV}/\text{ }^\circ\text{C}$

S78L18-B ELECTRICAL CHARACTERISTICS

(Refer to the test circuits, $T_j=0\sim 125\text{ }^\circ\text{C}$, $I_o=40\text{mA}$, $V_{IN}=27\text{V}$, $C_{IN}=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$ unless otherwise specified) (Note 1)

Symbol		Test Conditions	Min	Typ	Max	Unit
V_o	B-Rank (5%)	$V_{IN}=27\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $21\text{V} \leq V_{IN} \leq 33\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $21\text{V} \leq V_{IN} \leq V_{max}$, $1\text{mA} \leq I_o \leq 70\text{mA}$ (Note 2)	17.10	18.0	18.9	V
ΔV_o (Line Regulation)		$21\text{V} \leq V_{IN} \leq 33\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $22\text{V} \leq V_{IN} \leq 33\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	145 135	300 250	mV
ΔV_o (Load Regulation)		$V_{IN}=27\text{V}$, $1\text{mA} \leq I_o \leq 100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $V_{IN}=27\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	30 15	170 85	mV
I_q		$V_{IN}=27\text{V}$, $I_o=0\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	2.0	6.0	mA
ΔI_q		$V_{IN}=27\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $21\text{V} \leq V_{IN} \leq 33\text{V}$, $I_o=40\text{mA}$	-	-	0.1 1.5	mA
V_N		$10\text{Hz} \leq f \leq 100\text{KHz}$	-	150	-	μV
RR		$23\text{V} \leq V_{IN} \leq 33\text{V}$, $I_o=40\text{mA}$, $f=120\text{Hz}$, $T_j=25\text{ }^\circ\text{C}$	34	48	-	dB
V_D		$I_o=100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	1.7	-	V
$\Delta V_o/\Delta T_j$		$I_o=5\text{mA}$, $0\text{ }^\circ\text{C} \leq T_j \leq 125\text{ }^\circ\text{C}$	-	-1.8	-	$\text{mV}/\text{ }^\circ\text{C}$

S78L24-B ELECTRICAL CHARACTERISTICS

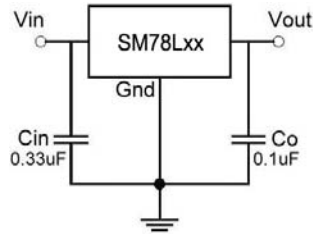
(Refer to the test circuits, $T_j=0\sim 125\text{ }^\circ\text{C}$, $I_o=40\text{mA}$, $V_{IN}=33\text{V}$, $C_{IN}=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$ unless otherwise specified) (Note 1)

Symbol		Test Conditions	Min	Typ	Max	Unit
V_o	B-Rank (5%)	$V_{IN}=33\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $27\text{V} \leq V_{IN} \leq 38\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $27\text{V} \leq V_{IN} \leq V_{max}$, $1\text{mA} \leq I_o \leq 70\text{mA}$ (Note 2)	22.80	24.0	25.20	V
ΔV_o (Line Regulation)		$27\text{V} \leq V_{IN} \leq 38\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $28\text{V} \leq V_{IN} \leq 38\text{V}$, $I_o=40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	160 150	300 250	mV
ΔV_o (Load Regulation)		$V_{IN}=33\text{V}$, $1\text{mA} \leq I_o \leq 100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$ $V_{IN}=33\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	40 20	200 100	mV
I_q		$V_{IN}=33\text{V}$, $I_o=0\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	2.2	6.0	mA
ΔI_q		$V_{IN}=33\text{V}$, $1\text{mA} \leq I_o \leq 40\text{mA}$ $27\text{V} \leq V_{IN} \leq 38\text{V}$, $I_o=40\text{mA}$	-	-	0.1 1.5	mA
V_N		$10\text{Hz} \leq f \leq 100\text{KHz}$	-	200	-	μV
RR		$27\text{V} \leq V_{IN} \leq 38\text{V}$, $I_o=40\text{mA}$, $f=120\text{Hz}$, $T_j=25\text{ }^\circ\text{C}$	34	45	-	dB
V_D		$I_o=100\text{mA}$, $T_j=25\text{ }^\circ\text{C}$	-	1.7	-	V
$\Delta V_o/\Delta T_j$		$I_o=5\text{mA}$, $0\text{ }^\circ\text{C} \leq T_j \leq 125\text{ }^\circ\text{C}$	-	-2.0	-	$\text{mV}/\text{ }^\circ\text{C}$

Note1: The Maximum steady state usable output current is dependent on input voltage, heat sinking, lead length of the package and copper of PCB. The data above represent pulse test conditions with junction temperatures specified at the initiation of test.

Note2: Power dissipation < 0.625W

TYPICAL APPLICATION



CHARACTERISTICS CURVE

