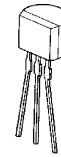


3-TERMINAL POSITIVE VOLTAGE REGULATOR

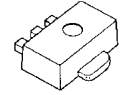
■ GENERAL DESCRIPTION

NJM78L00 is 3-terminal positive voltage regulator.
 NJM78L00 series is mounted in EMP8 package of the surface mount package.
 The EMP8 package possible flow soldering.

■ PACKAGE OUTLINE



NJM78L00A



NJM78L00UA

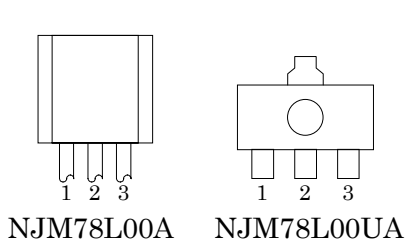


NJM78L00EA
(5V,9V,12V)

■ FEATURES

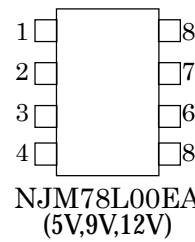
- Internal Short Circuit Current Limit
- Internal Thermal Overload Protection
- Excellent Ripple Rejection
- Guaranteed 100mA Output Current
- Bipolar Technology
- Package Outline T0-92,SOT-89,EMP8

■ PIN CONFIGURATION



PIN FUNCTION

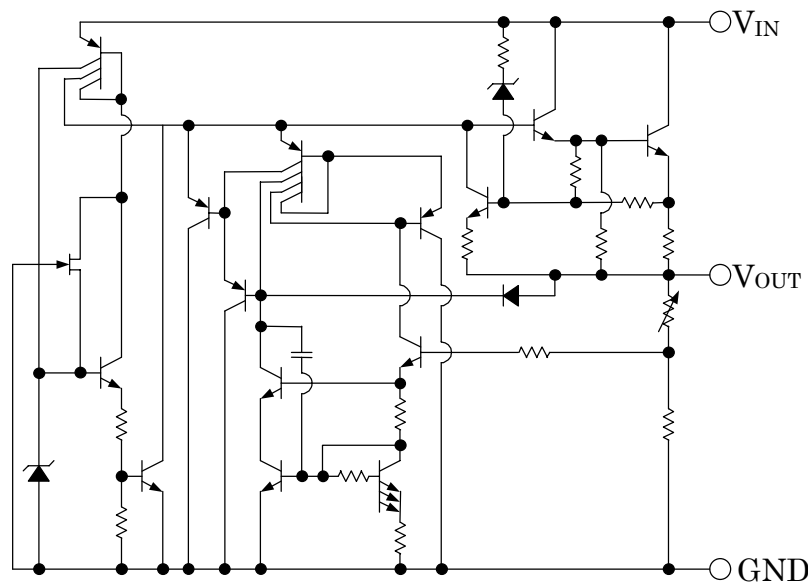
- 1.OUT
- 2.GND
- 3.IN



PIN FUNCTION

- 1.OUT
- 2.GND
- 3.GND
- 4.NC
- 5.NC
- 6.GND
- 7.GND
- 8.IN

■ EQUIVALENT CIRCUIT



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

| PARAMETER | SYMBOL | MAXIMUM RATINGS | UNIT |
|-----------------------------|----------|--|------|
| Input Voltage | V_{IN} | (78L02A ~ 78L09A) 30 (78L12A ~ 78L15A) 35 (78L18A ~ 78L24A) 40 | V |
| Power Dissipation | P_D | (TO-92) 500 (EMP8) 350 (SOT-89) 300 | mW |
| Operating Temperature Range | Topr | -40 ~ +85 | °C |
| Storage Temperature Range | Tstg | -40 ~ +150 | °C |

■ ELECTRICAL CHARACTERISTICS(C_{IN}=0.33μF,Co=0.1μF,Tj=25°C)

Measurement is to be conducted is pulse testing.

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|-----------------------|--|------|------|------|-------|
| NJM78L02A | | | | | | |
| Output Voltage | V_O | $V_{IN}=9V, I_o=40mA$ | 2.47 | 2.6 | 2.73 | V |
| Line Regulation1 | ΔV_O-V_{IN1} | $V_{IN}=4.75V \sim 20V, I_o=40mA$ | - | - | 125 | mV |
| Line Regulation2 | ΔV_O-V_{IN2} | $V_{IN}=5V \sim 20V, I_o=40mA$ | - | - | 100 | mV |
| Load Regulation1 | ΔV_O-I_o1 | $V_{IN}=9V, I_o=1 \sim 40mA$ | - | - | 25 | mV |
| Load Regulation2 | ΔV_O-I_o2 | $V_{IN}=9V, I_o=1 \sim 100mA$ | - | - | 50 | mV |
| Quiescent Current | I_Q | $V_{IN}=9V, I_o=0mA$ | - | 2.0 | 6 | mA |
| Average Temperature Coefficient of Output Voltage | $\Delta V_O/\Delta T$ | $V_{IN}=9V, I_o=1mA$ | - | 0.2 | - | mV/°C |
| Ripple Rejection | RR | $6V < V_{IN} < 16V, I_o=40mA$ $e_{in}=1Vp-p, f=120Hz$ | 43 | 73 | - | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=9V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | - | 35 | - | μV |
| NJM78L03A(*1) | | | | | | |
| Output Voltage | V_O | $V_{IN}=9V, I_o=40mA$ | 2.85 | 3.0 | 3.15 | V |
| Line Regulation1 | ΔV_O-V_{IN1} | $V_{IN}=5V \sim 20V, I_o=40mA$ | - | - | 125 | mV |
| Line Regulation2 | ΔV_O-V_{IN2} | $V_{IN}=6V \sim 20V, I_o=40mA$ | - | - | 100 | mV |
| Load Regulation1 | ΔV_O-I_o1 | $V_{IN}=9V, I_o=1 \sim 40mA$ | - | - | 25 | mV |
| Load Regulation2 | ΔV_O-I_o2 | $V_{IN}=9V, I_o=1 \sim 100mA$ | - | - | 50 | mV |
| Quiescent Current | I_Q | $V_{IN}=9V, I_o=0mA$ | - | 2.0 | 6 | mA |
| Average Temperature Coefficient of Output Voltage | $\Delta V_O/\Delta T$ | $V_{IN}=9V, I_o=1mA$ | - | 0.2 | - | mV/°C |
| Ripple Rejection | RR | $6V < V_{IN} < 16V, I_o=40mA$ $e_{in}=1Vp-p, f=120Hz$ | 43 | 72 | - | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=9V, BW=10Hz \sim 100kHz,$ $I_o=40mA$ | - | 40 | - | μV |
| NJM78L05A(*3) | | | | | | |
| Output Voltage | V_O | $V_{IN}=10V, I_o=40mA$ | 4.75 | 5.0 | 5.25 | V |
| Line Regulation1 | ΔV_O-V_{IN1} | $V_{IN}=7V \sim 20V, I_o=40mA$ | - | - | 200 | mV |
| Line Regulation2 | ΔV_O-V_{IN2} | $V_{IN}=8V \sim 20V, I_o=40mA$ | - | - | 150 | mV |
| Load Regulation1 | ΔV_O-I_o1 | $V_{IN}=10V, I_o=1 \sim 40mA$ | - | - | 30 | mV |
| Load Regulation2 | ΔV_O-I_o2 | $V_{IN}=10V, I_o=1 \sim 100mA$ | - | - | 60 | mV |
| Quiescent Current | I_Q | $V_{IN}=10V, I_o=0mA$ | - | 2.0 | 6 | mA |
| Average Temperature Coefficient of Output Voltage | $\Delta V_O/\Delta T$ | $V_{IN}=10V, I_o=1mA$ | - | 0.4 | - | mV/°C |
| Ripple Rejection | RR | $8V < V_{IN} < 18V, I_o=40mA$ $e_{in}=1Vp-p, f=120Hz$ | 40 | 69 | - | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=10V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | - | 70 | - | μV |

(*1):SOT-89 package only.
 (*2):TO-92 package only.
 (*3):SOT-89,TO-92, EMP8

■ ELECTRICAL CHARACTERISTICS($C_{IN}=0.33\mu F, C_o=0.1\mu F, T_j=25^\circ C$)
 Measurement is to be conducted is pulse testing.

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|-------------------------------|-----------------------|---|------|------|------|---------|
| NJM78L06A | | | | | | |
| Output Voltage | V_o | $V_{IN}=12V, I_o=40mA$ | 5.7 | 6.0 | 6.3 | V |
| Line Regulation1 | ΔV_o-V_{IN1} | $V_{IN}=8.5V \sim 20V, I_o=40mA$ | - | - | 200 | mV |
| Line Regulation2 | ΔV_o-V_{IN2} | $V_{IN}=9V \sim 20V, I_o=40mA$ | - | - | 150 | mV |
| Load Regulation1 | ΔV_o-I_o1 | $V_{IN}=12V, I_o=1 \sim 40mA$ | - | - | 40 | mV |
| Load Regulation2 | ΔV_o-I_o2 | $V_{IN}=12V, I_o=1 \sim 100mA$ | - | - | 80 | mV |
| Quiescent Current | I_Q | $V_{IN}=12V, I_o=0mA$ | - | 2.0 | 6 | mA |
| Average Temperature | $\Delta V_o/\Delta T$ | $V_{IN}=12V, I_o=1mA$ | - | 0.5 | - | mV/°C |
| Coefficient of Output Voltage | | | | | | |
| Ripple Rejection | RR | $9V < V_{IN} < 20V, I_o=40mA$ $e_{in}=1V_{p-p}, f=120Hz$ | 40 | 67 | - | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=12V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | - | 80 | - | μV |
| NJM78L62A(*2) | | | | | | |
| Output Voltage | V_o | $V_{IN}=12.2V, I_o=40mA$ | 5.89 | 6.2 | 6.51 | V |
| Line Regulation1 | ΔV_o-V_{IN1} | $V_{IN}=8.7V \sim 20.2V, I_o=40mA$ | - | - | 200 | mV |
| Line Regulation2 | ΔV_o-V_{IN2} | $V_{IN}=9.2V \sim 20.2V, I_o=40mA$ | - | - | 150 | mV |
| Load Regulation1 | ΔV_o-I_o1 | $V_{IN}=12.2V, I_o=1 \sim 40mA$ | - | - | 40 | mV |
| Load Regulation2 | ΔV_o-I_o2 | $V_{IN}=12.2V, I_o=1 \sim 100mA$ | - | - | 85 | mV |
| Quiescent Current | I_Q | $V_{IN}=12.2V, I_o=0mA$ | - | 2.0 | 6 | mA |
| Average Temperature | $\Delta V_o/\Delta T$ | $V_{IN}=12.2V, I_o=1mA$ | - | 0.5 | - | mV/°C |
| Coefficient of Output Voltage | | | | | | |
| Ripple Rejection | RR | $9.2V < V_{IN} < 20.2V, I_o=40mA$ $e_{in}=1V_{p-p}, f=120Hz$ | 40 | 67 | - | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=12.2V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | - | 85 | - | μV |
| NJM78L07A | | | | | | |
| Output Voltage | V_o | $V_{IN}=13V, I_o=40mA$ | 6.65 | 7.0 | 7.35 | V |
| Line Regulation1 | ΔV_o-V_{IN1} | $V_{IN}=9.5V \sim 22V, I_o=40mA$ | - | - | 210 | mV |
| Line Regulation2 | ΔV_o-V_{IN2} | $V_{IN}=10V \sim 22V, I_o=40mA$ | - | - | 160 | mV |
| Load Regulation1 | ΔV_o-I_o1 | $V_{IN}=13V, I_o=1 \sim 40mA$ | - | - | 45 | mV |
| Load Regulation2 | ΔV_o-I_o2 | $V_{IN}=13V, I_o=1 \sim 100mA$ | - | - | 90 | mV |
| Quiescent Current | I_Q | $V_{IN}=13V, I_o=0mA$ | - | 2.1 | 6 | mA |
| Average Temperature | $\Delta V_o/\Delta T$ | $V_{IN}=13V, I_o=1mA$ | - | 0.55 | - | mV/°C |
| Coefficient of Output Voltage | | | | | | |
| Ripple Rejection | RR | $10V < V_{IN} < 20V, I_o=40mA$ $e_{in}=1V_{p-p}, f=120Hz$ | 39 | 66 | - | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=13V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | - | 100 | - | μV |
| NJM78L08A | | | | | | |
| Output Voltage | V_o | $V_{IN}=14V, I_o=40mA$ | 7.6 | 8.0 | 8.4 | V |
| Line Regulation1 | ΔV_o-V_{IN1} | $V_{IN}=10.5V \sim 23V, I_o=40mA$ | - | - | 225 | mV |
| Line Regulation2 | ΔV_o-V_{IN2} | $V_{IN}=11V \sim 23V, I_o=40mA$ | - | - | 175 | mV |
| Load Regulation1 | ΔV_o-I_o1 | $V_{IN}=14V, I_o=1 \sim 40mA$ | - | - | 50 | mV |
| Load Regulation2 | ΔV_o-I_o2 | $V_{IN}=14V, I_o=1 \sim 100mA$ | - | - | 100 | mV |
| Quiescent Current | I_Q | $V_{IN}=14V, I_o=0mA$ | - | 2.1 | 6 | mA |
| Average Temperature | $\Delta V_o/\Delta T$ | $V_{IN}=14V, I_o=1mA$ | - | 0.6 | - | mV/°C |
| Coefficient of Output Voltage | | | | | | |
| Ripple Rejection | RR | $11V < V_{IN} < 20V, I_o=40mA$ $e_{in}=1V_{p-p}, f=120Hz$ | 39 | 66 | - | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=14V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | - | 115 | - | μV |

(*1):SOT-89 package only.

(*2):TO-92 package only.

(*3):SOT-89,TO-92, EMP8

■ ELECTRICAL CHARACTERISTICS($C_{IN}=0.33\mu F, C_o=0.1\mu F, T_j=25^\circ C$)
 Measurement is to be conducted is pulse testing.

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|-------------------------------|-----------------------|---|------|------|------|---------|
| NJM78L09A(*3) | | | | | | |
| Output Voltage | V_o | $V_{IN}=15V, I_o=40mA$ | 8.55 | 9.0 | 9.45 | V |
| Line Regulation1 | ΔV_o-V_{IN1} | $V_{IN}=11.5V \sim 23V, I_o=40mA$ | — | — | 250 | mV |
| Line Regulation2 | ΔV_o-V_{IN2} | $V_{IN}=12V \sim 23V, I_o=40mA$ | — | — | 200 | mV |
| Load Regulation1 | ΔV_o-I_o1 | $V_{IN}=15V, I_o=1 \sim 40mA$ | — | — | 50 | mV |
| Load Regulation2 | ΔV_o-I_o2 | $V_{IN}=15V, I_o=1 \sim 100mA$ | — | — | 100 | mV |
| Quiescent Current | I_Q | $V_{IN}=15V, I_o=0mA$ | — | 2.1 | 6 | mA |
| Average Temperature | $\Delta V_o/\Delta T$ | $V_{IN}=15V, I_o=1mA$ | — | 0.65 | — | mV/°C |
| Coefficient of Output Voltage | | | | | | |
| Ripple Rejection | RR | $12V < V_{IN} < 21V, I_o=40mA$ $e_{in}=1Vp-p, f=120Hz$ | 38 | 65 | — | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=15V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | — | 125 | — | μV |
| NJM78L10A | | | | | | |
| Output Voltage | V_o | $V_{IN}=16V, I_o=40mA$ | 9.5 | 10.0 | 10.5 | V |
| Line Regulation1 | ΔV_o-V_{IN1} | $V_{IN}=13V \sim 25V, I_o=40mA$ | — | — | 250 | mV |
| Line Regulation2 | ΔV_o-V_{IN2} | $V_{IN}=14V \sim 25V, I_o=40mA$ | — | — | 200 | mV |
| Load Regulation1 | ΔV_o-I_o1 | $V_{IN}=16V, I_o=1 \sim 40mA$ | — | — | 50 | mV |
| Load Regulation2 | ΔV_o-I_o2 | $V_{IN}=16V, I_o=1 \sim 100mA$ | — | — | 100 | mV |
| Quiescent Current | I_Q | $V_{IN}=16V, I_o=0mA$ | — | 2.1 | 6 | mA |
| Average Temperature | $\Delta V_o/\Delta T$ | $V_{IN}=16V, I_o=1mA$ | — | 0.7 | — | mV/°C |
| Coefficient of Output Voltage | | | | | | |
| Ripple Rejection | RR | $13V < V_{IN} < 22V, I_o=40mA$ $e_{in}=1Vp-p, f=120Hz$ | 37 | 64 | — | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=16V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | — | 135 | — | μV |
| NJM78L12A(*3) | | | | | | |
| Output Voltage | V_o | $V_{IN}=19V, I_o=40mA$ | 11.4 | 12.0 | 12.6 | V |
| Line Regulation1 | ΔV_o-V_{IN1} | $V_{IN}=14.5V \sim 27V, I_o=40mA$ | — | — | 250 | mV |
| Line Regulation2 | ΔV_o-V_{IN2} | $V_{IN}=16V \sim 27V, I_o=40mA$ | — | — | 200 | mV |
| Load Regulation1 | ΔV_o-I_o1 | $V_{IN}=19V, I_o=1 \sim 40mA$ | — | — | 50 | mV |
| Load Regulation2 | ΔV_o-I_o2 | $V_{IN}=19V, I_o=1 \sim 100mA$ | — | — | 100 | mV |
| Quiescent Current | I_Q | $V_{IN}=19V, I_o=0mA$ | — | 2.1 | 6.5 | mA |
| Average Temperature | $\Delta V_o/\Delta T$ | $V_{IN}=19V, I_o=1mA$ | — | 0.9 | — | mV/°C |
| Coefficient of Output Voltage | | | | | | |
| Ripple Rejection | RR | $15V < V_{IN} < 25V, I_o=40mA$ $e_{in}=1Vp-p, f=120Hz$ | 37 | 62 | — | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=19V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | — | 160 | — | μV |
| NJM78L15A | | | | | | |
| Output Voltage | V_o | $V_{IN}=23V, I_o=40mA$ | 14.3 | 15.0 | 15.7 | V |
| Line Regulation1 | ΔV_o-V_{IN1} | $V_{IN}=17.5V \sim 30V, I_o=40mA$ | — | — | 300 | mV |
| Line Regulation2 | ΔV_o-V_{IN2} | $V_{IN}=20V \sim 30V, I_o=40mA$ | — | — | 250 | mV |
| Load Regulation1 | ΔV_o-I_o1 | $V_{IN}=23V, I_o=1 \sim 40mA$ | — | — | 75 | mV |
| Load Regulation2 | ΔV_o-I_o2 | $V_{IN}=23V, I_o=1 \sim 100mA$ | — | — | 150 | mV |
| Quiescent Current | I_Q | $V_{IN}=23V, I_o=0mA$ | — | 2.2 | 6.5 | mA |
| Average Temperature | $\Delta V_o/\Delta T$ | $V_{IN}=23V, I_o=1mA$ | — | 1.0 | — | mV/°C |
| Coefficient of Output Voltage | | | | | | |
| Ripple Rejection | RR | $18.5V < V_{IN} < 28.5V, I_o=40mA$ $e_{in}=1Vp-p, f=120Hz$ | 34 | 60 | — | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=23V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | — | 190 | — | μV |

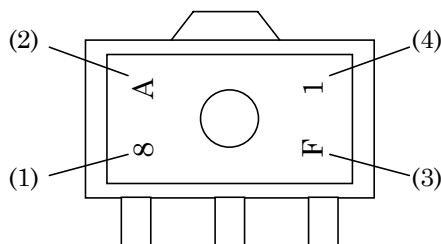
(*1):SOT-89 package only.
 (*2):TO-92 package only.
 (*3):SOT-89,TO-92, EMP8

■ ELECTRICAL CHARACTERISTICS($C_{IN}=0.33\mu F, C_o=0.1\mu F, T_j=25^\circ C$)
Measurement is to be conducted is pulse testing.

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|-------------------------------|-----------------------|---|------|------|------|---------|
| NJM78L18A | | | | | | |
| Output Voltage | V_o | $V_{IN}=27V, I_o=40mA$ | 17.1 | 18.0 | 18.9 | V |
| Line Regulation1 | ΔV_o-V_{IN1} | $V_{IN}=22V \sim 33V, I_o=40mA$ | - | - | 320 | mV |
| Line Regulation2 | ΔV_o-V_{IN2} | $V_{IN}=23V \sim 33V, I_o=40mA$ | - | - | 270 | mV |
| Load Regulation1 | ΔV_o-I_o1 | $V_{IN}=27V, I_o=1 \sim 40mA$ | - | - | 80 | mV |
| Load Regulation2 | ΔV_o-I_o2 | $V_{IN}=27V, I_o=1 \sim 100mA$ | - | - | 160 | mV |
| Quiescent Current | I_Q | $V_{IN}=27V, I_o=0mA$ | - | 2.2 | 6.5 | mA |
| Average Temperature | $\Delta V_o/\Delta T$ | $V_{IN}=27V, I_o=1mA$ | - | 1.1 | - | mV/°C |
| Coefficient of Output Voltage | | | | | | |
| Ripple Rejection | RR | $23V < V_{IN} < 33V, I_o=40mA$ $e_{in}=1Vp-p, f=120Hz$ | 33 | 59 | - | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=27V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | - | 230 | - | μV |
| NJM78L20A | | | | | | |
| Output Voltage | V_o | $V_{IN}=29V, I_o=40mA$ | 19.0 | 20.0 | 21.0 | V |
| Line Regulation1 | ΔV_o-V_{IN1} | $V_{IN}=23V \sim 34V, I_o=40mA$ | - | - | 330 | mV |
| Line Regulation2 | ΔV_o-V_{IN2} | $V_{IN}=24V \sim 34V, I_o=40mA$ | - | - | 280 | mV |
| Load Regulation1 | ΔV_o-I_o1 | $V_{IN}=29V, I_o=1 \sim 40mA$ | - | - | 90 | mV |
| Load Regulation2 | ΔV_o-I_o2 | $V_{IN}=29V, I_o=1 \sim 100mA$ | - | - | 180 | mV |
| Quiescent Current | I_Q | $V_{IN}=29V, I_o=0mA$ | - | 2.3 | 7 | mA |
| Average Temperature | $\Delta V_o/\Delta T$ | $V_{IN}=29V, I_o=1mA$ | - | 1.2 | - | mV/°C |
| Coefficient of Output Voltage | | | | | | |
| Ripple Rejection | RR | $24V < V_{IN} < 34V, I_o=40mA$ $e_{in}=1Vp-p, f=120Hz$ | 32 | 58 | - | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=29V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | - | 250 | - | μV |
| NJM78L24A | | | | | | |
| Output Voltage | V_o | $V_{IN}=33V, I_o=40mA$ | 22.8 | 24 | 25.2 | V |
| Line Regulation1 | ΔV_o-V_{IN1} | $V_{IN}=27V \sim 38V, I_o=40mA$ | - | - | 350 | mV |
| Line Regulation2 | ΔV_o-V_{IN2} | $V_{IN}=28V \sim 38V, I_o=40mA$ | - | - | 300 | mV |
| Load Regulation1 | ΔV_o-I_o1 | $V_{IN}=33V, I_o=1 \sim 40mA$ | - | - | 100 | mV |
| Load Regulation2 | ΔV_o-I_o2 | $V_{IN}=33V, I_o=1 \sim 100mA$ | - | - | 200 | mV |
| Quiescent Current | I_Q | $V_{IN}=33V, I_o=0mA$ | - | 2.3 | 7 | mA |
| Average Temperature | $\Delta V_o/\Delta T$ | $V_{IN}=33V, I_o=1mA$ | - | 1.4 | - | mV/°C |
| Coefficient of Output Voltage | | | | | | |
| Ripple Rejection | RR | $27.5V < V_{IN} < 37.5V, I_o=40mA$ $e_{in}=1Vp-p, f=120Hz$ | 32 | 57 | - | dB |
| Output Noise Voltage | V_{NO} | $V_{IN}=33V, BW=10Hz \sim 100kHz$ $I_o=40mA$ | - | 280 | - | μV |

(*1):SOT-89 package only.
(*2):TO-92 package only.
(*3):SOT-89,TO-92, EMP8

■ SOT-89 MARK



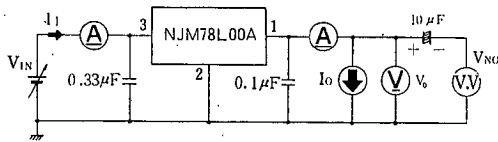
- (1) 8 : Positive Output
(2) Vo Rank
(3) The end of A.D.
(4) Production Mouth
Oct. ... X
Nov. ... Y
Dec. ... Z

| | | |
|-----------|---|---|
| NJM78L02A | 8 | A |
| NJM78L03A | 8 | B |
| NJM78L05A | 8 | C |
| NJM78L06A | 8 | E |
| NJM78L62A | 8 | Z |
| NJM78L07A | 8 | F |
| NJM78L08A | 8 | G |
| NJM78L09A | 8 | H |
| NJM78L10A | 8 | J |
| NJM78L12A | 8 | K |
| NJM78L15A | 8 | L |
| NJM78L18A | 8 | M |
| NJM78L20A | 8 | N |
| NJM78L24A | 8 | P |

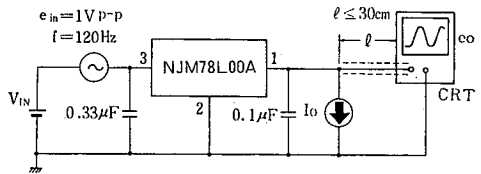
NJM78L00

■ TEST CIRCUIT

1. Output Voltage, Line Regulation, Load Regulation, Quiescent Current, Average Temperature Coefficient of Output Voltage, Output Noise Voltage, Peak Output/Short-Circuit Current
2. Ripple Rejection

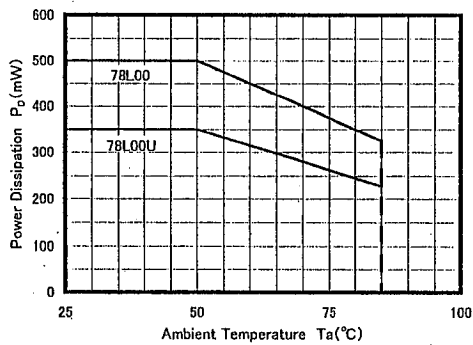


○ Measurement is to be conducted in pulse testing.
 ○ $I_Q = I_1 - I_o$



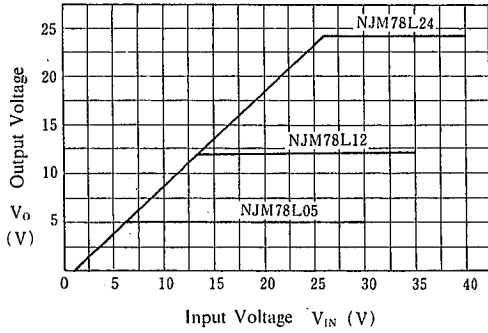
$$RR = 20 \log_{10} \left(\frac{e_{in}}{e_o} \right) \text{ (dB)}$$

■ AMBIENT TEMPERATURE VS. POWER DISSIPATION

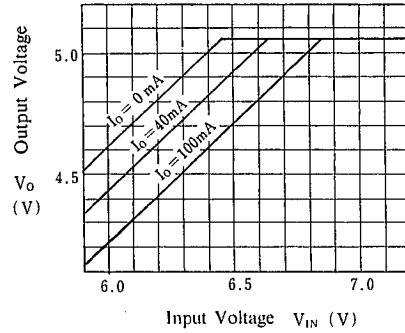


■ TYPICAL CHARACTERISTICS

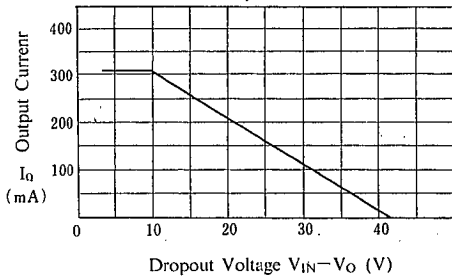
**NJM78L05/L12/L24
Output Characteristics**
($I_O = 0 \text{ mA}$, $T_j = 25^\circ\text{C}$)



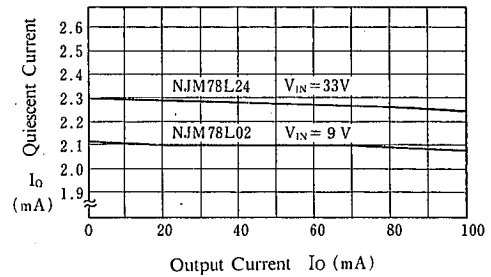
NJM78L05 Dropout Characteristics
($T_j = 25^\circ\text{C}$)



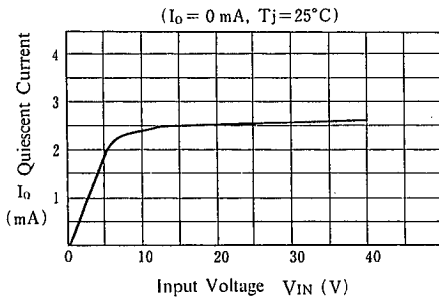
**NJM78L00 Series Short Circuit
Output Current**
($T_j = 25^\circ\text{C}$)



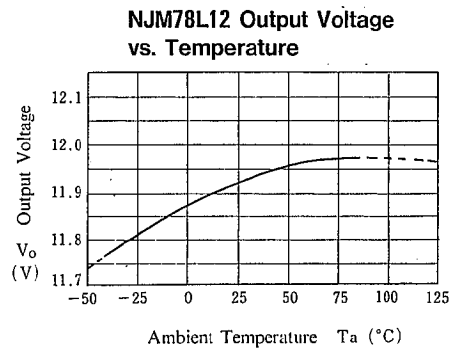
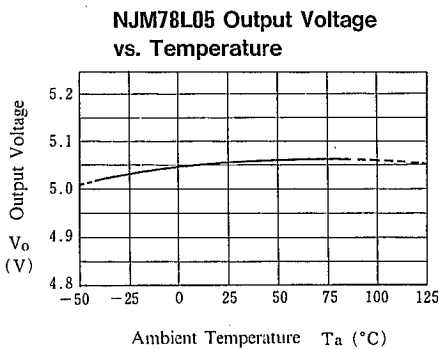
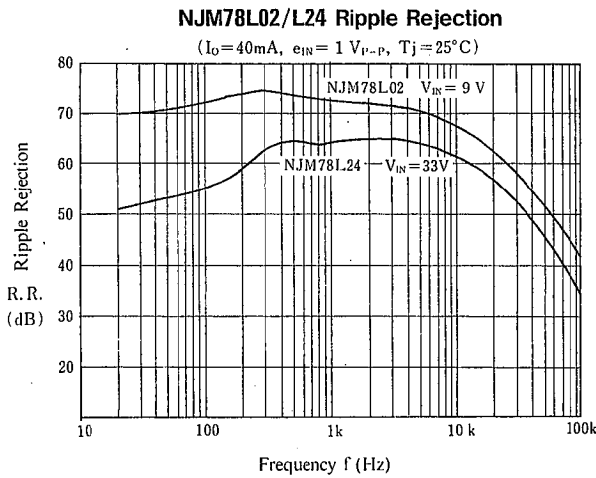
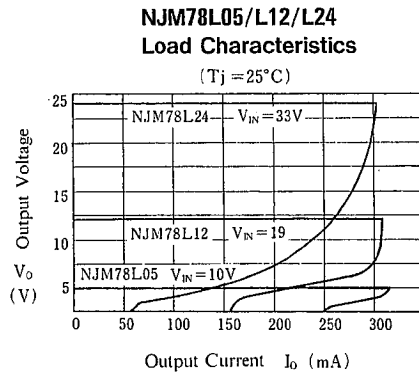
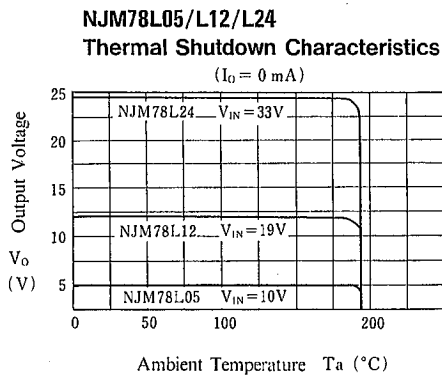
**NJM78L02/L24 Quiescent Current
vs. Output Current**
($T_j = 25^\circ\text{C}$)



**NJM78L05 Quiescent Current
vs. Input Voltage**
($I_O = 0 \text{ mA}$, $T_j = 25^\circ\text{C}$)



■ TYPICAL CHARACTERISTICS



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