

NJM79L00

■ ABSOLUTE MAXIMUM RATINGS

(T_a=25 °C)

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V _{IN}	(79L03A to 79L09A) - 30 (79L12A to 79L15A) - 35 (79L18A to 79L24A) - 40	V
Operating Temperature Range	T _{opr}	-40 to +85	°C
Storage Temperature Range	T _{stg}	-40 to +125	°C
Power Dissipation	P _D	(SOT89) 350	mW

■ ELECTRICAL CHARACTERISTICS (C_{IN}=0.33μF, C_O=1.0μF, T_J=25 °C)

Measurement is to be conducted in pulse testing.

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
NJM79L03UA						
Output Voltage	V _O	V _{IN} =-10V, I _O =40mA	-2.88	-3.0	-3.12	V
Line Regulation	ΔV _O - V _{IN}	V _{IN} =-7 to -20V, I _O =40mA	-	10	60	mV
Load Regulation	ΔV _O - I _O	V _{IN} =-10V, I _O =1 to 100mA	-	4	72	mV
Quiescent Current	I _Q	V _{IN} =-10V, I _O =0mA	-	3.5	6.0	mA
Ripple Rejection	RR	V _{IN} =-8 to -18V, I _O =40mA, e _{in} =1V _{P-P} , f=120Hz	45	72	-	dB
Output Noise Voltage	V _{NO}	V _{IN} =-10V, BW=10Hz to 100kHz, I _O =40mA	-	70	-	μV
NJM79L05UA						
Output Voltage	V _O	V _{IN} =-10V, I _O =40mA	-4.8	-5.0	-5.2	V
Line Regulation	ΔV _O - V _{IN}	V _{IN} =-7 to -20V, I _O =40mA	-	15	150	mV
Load Regulation	ΔV _O - I _O	V _{IN} =-10V, I _O =1 to 100mA	-	7	60	mV
Quiescent Current	I _Q	V _{IN} =-10V, I _O =0mA	-	3.5	6.0	mA
Ripple Rejection	RR	V _{IN} =-8 to -18V, I _O =40mA, e _{in} =1V _{P-P} , f=120Hz	41	71	-	dB
Output Noise Voltage	V _{NO}	V _{IN} =-10V, BW=10Hz to 100kHz, I _O =40mA	-	120	-	μV
NJM79L06UA						
Output Voltage	V _O	V _{IN} =-12V, I _O =40mA	-5.76	-6.0	-6.24	V
Line Regulation	ΔV _O - V _{IN}	V _{IN} =-8.5 to -20V, I _O =40mA	-	18	150	mV
Load Regulation	ΔV _O - I _O	V _{IN} =-12V, I _O =1 to 100mA	-	8	70	mV
Quiescent Current	I _Q	V _{IN} =-12V, I _O =0mA	-	3.5	6.0	mA
Ripple Rejection	RR	V _{IN} =-9 to -19V, I _O =40mA, e _{in} =1V _{P-P} , f=120Hz	40	68	-	dB
Output Noise Voltage	V _{NO}	V _{IN} =-12V, BW=10Hz to 100kHz, I _O =40mA	-	140	-	μV

■ **ELECTRICAL CHARACTERISTICS** ($C_{IN}=0.33\mu F$, $C_O=1.0\mu F$, $T_J=25\text{ }^\circ\text{C}$)

Measurement is to be conducted in pulse testing.

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
NJM79L07UA						
Output Voltage	V_O	$V_{IN}=-13V$, $I_O=40mA$	-6.72	-7.0	-7.28	V
Line Regulation	$\Delta V_O - V_{IN}$	$V_{IN}=-9.5\sim-22V$, $I_O=40mA$	-	21	160	mV
Load Regulation	$\Delta V_O - I_O$	$V_{IN}=-13V$, $I_O=1\sim 100mA$	-	9	75	mV
Quiescent Current	I_Q	$V_{IN}=-13V$, $I_O=0mA$	-	3.5	6.0	mA
Ripple Rejection	RR	$V_{IN}=-10\sim-20V$, $I_O=40mA$, $e_{in}=1V_{P-P}$, $f=120Hz$	40	68	-	dB
Output Noise Voltage	V_{NO}	$V_{IN}=-13V$, $BW=10Hz\sim 100kHz$, $I_O=40mA$	-	170	-	μV
NJM79L08UA						
Output Voltage	V_O	$V_{IN}=-14V$, $I_O=40mA$	-7.68	-8.0	-8.32	V
Line Regulation	$\Delta V_O - V_{IN}$	$V_{IN}=-10.5$ to $-23V$, $I_O=40mA$	-	24	175	mV
Load Regulation	$\Delta V_O - I_O$	$V_{IN}=-14V$, $I_O=1$ to $100mA$	-	10	80	mV
Quiescent Current	I_Q	$V_{IN}=-14V$, $I_O=0mA$	-	3.5	6.0	mA
Ripple Rejection	RR	$V_{IN}=-11$ to $-21V$, $I_O=40mA$, $e_{in}=1V_{P-P}$, $f=120Hz$	39	68	-	dB
Output Noise Voltage	V_{NO}	$V_{IN}=-14V$, $BW=10Hz$ to $100kHz$, $I_O=40mA$	-	190	-	μV
NJM79L09UA						
Output Voltage	V_O	$V_{IN}=-15V$, $I_O=40mA$	-8.64	-9.0	-9.36	V
Line Regulation	$\Delta V_O - V_{IN}$	$V_{IN}=-11.5$ to $-24V$, $I_O=40mA$	-	27	200	mV
Load Regulation	$\Delta V_O - I_O$	$V_{IN}=-15V$, $I_O=1$ to $100mA$	-	12	90	mV
Quiescent Current	I_Q	$V_{IN}=-15V$, $I_O=0mA$	-	3.5	6.0	mA
Ripple Rejection	RR	$V_{IN}=-12$ to $-22V$, $I_O=40mA$, $e_{in}=1V_{P-P}$, $f=120Hz$	38	67	-	dB
Output Noise Voltage	V_{NO}	$V_{IN}=-15V$, $BW=10Hz$ to $100kHz$, $I_O=40mA$	-	210	-	μV
NJM79L12UA						
Output Voltage	V_O	$V_{IN}=-19V$, $I_O=40mA$	-11.5	-12.0	-12.5	V
Line Regulation	$\Delta V_O - V_{IN}$	$V_{IN}=-14.5$ to $-27V$, $I_O=40mA$	-	36	250	mV
Load Regulation	$\Delta V_O - I_O$	$V_{IN}=-19V$, $I_O=1$ to $100mA$	-	16	100	mV
Quiescent Current	I_Q	$V_{IN}=-19V$, $I_O=0mA$	-	3.5	6.5	mA
Ripple Rejection	RR	$V_{IN}=-15$ to $-25V$, $I_O=40mA$, $e_{in}=1V_{P-P}$, $f=120Hz$	37	64	-	dB
Output Noise Voltage	V_{NO}	$V_{IN}=-19V$, $BW=10Hz$ to $100kHz$, $I_O=40mA$	-	210	-	μV

NJM79L00

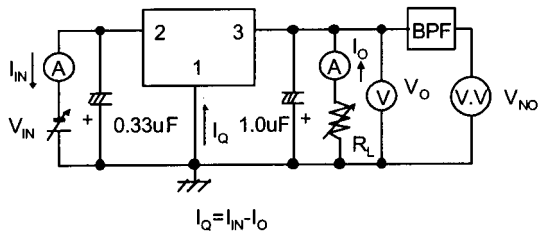
■ ELECTRICAL CHARACTERISTICS (C_{IN}=0.33μF, C_O=1.0μF, T_J=25°C)

Measurement is to be conducted in pulse testing.

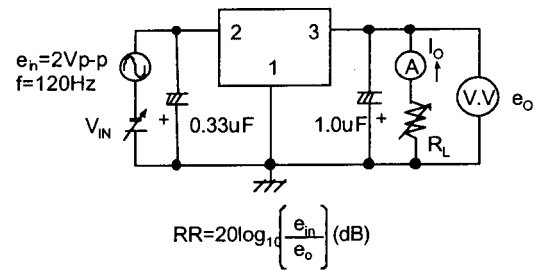
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
NJM79L15UA						
Output Voltage	V _O	V _{IN} =-23V, I _O =40mA	-14.4	-15.0	-15.6	V
Line Regulation	ΔV _O - V _{IN}	V _{IN} =-17.5 to -30V, I _O =40mA	-	45	300	mV
Load Regulation	ΔV _O - I _O	V _{IN} =-23V, I _O =1 to 100mA	-	20	150	mV
Quiescent Current	I _Q	V _{IN} =-23V, I _O =0mA	-	3.5	6.5	mA
Ripple Rejection	RR	V _{IN} =-18.5 to -28.5V, I _O =40mA, e _{in} =1V _{P-P} , f=120Hz	34	63	-	dB
Output Noise Voltage	V _{NO}	V _{IN} =-23V, BW=10Hz to 100kHz, I _O =40mA	-	340	-	μV
NJM79L18UA						
Output Voltage	V _O	V _{IN} =-27V, I _O =40mA	-17.3	-18.0	-18.7	V
Line Regulation	ΔV _O - V _{IN}	V _{IN} =-20.7 to -33V, I _O =40mA	-	54	325	mV
Load Regulation	ΔV _O - I _O	V _{IN} =-27V, I _O =1 to 100mA	-	23	170	mV
Quiescent Current	I _Q	V _{IN} =-27V, I _O =0mA	-	3.5	6.5	mA
Ripple Rejection	RR	V _{IN} =-23 to -33V, I _O =40mA, e _{in} =1V _{P-P} , f=120Hz	33	60	-	dB
Output Noise Voltage	V _{NO}	V _{IN} =-27V, BW=10Hz to 100kHz, I _O =40mA	-	410	-	μV
NJM79L24UA						
Output Voltage	V _O	V _{IN} =-33V, I _O =40mA	-23.0	-24.0	-25.0	V
Line Regulation	ΔV _O - V _{IN}	V _{IN} =-27 to -38V, I _O =40mA	-	72	350	mV
Load Regulation	ΔV _O - I _O	V _{IN} =-33V, I _O =1 to 100mA	-	30	200	mV
Quiescent Current	I _Q	V _{IN} =-33V, I _O =0mA	-	3.5	6.5	mA
Ripple Rejection	RR	V _{IN} =-29 to -35V, I _O =40mA, e _{in} =1V _{P-P} , f=120Hz	31	55	-	dB
Output Noise Voltage	V _{NO}	V _{IN} =-33V, BW=10Hz to 100kHz, I _O =40mA	-	550	-	μV

■ TEST CIRCUIT

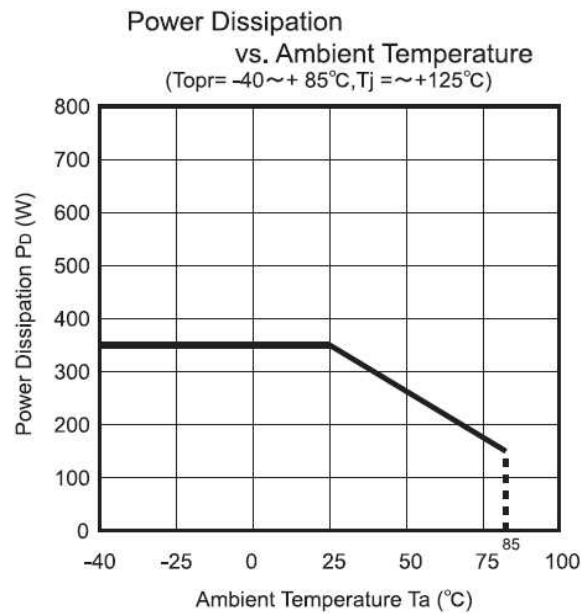
1. Output Voltage, Output Current, Line Regulation, Load Regulation, Quiescent Current, Output Noise Voltage



2. Ripple Rejection



■ POWER DISSIPATION VS. AMBIENT TEMPERATURE

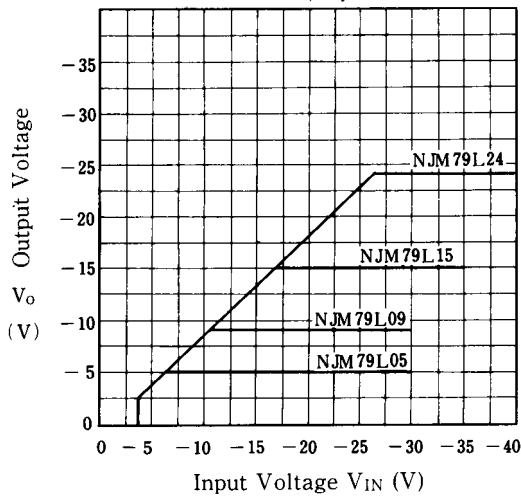


NJM79L00

■ TYPICAL CHARACTERISTICS

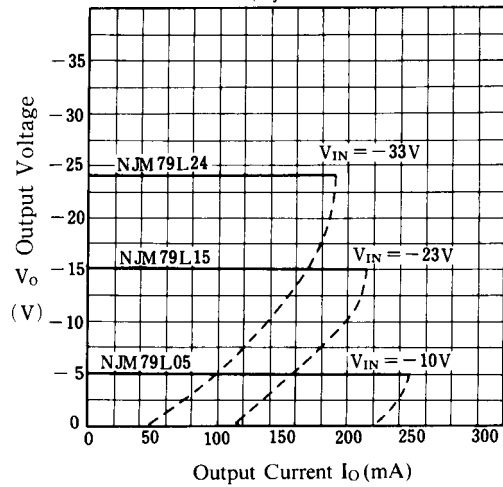
NJM79L00 Input Voltage vs. Output Voltage

($I_o = 40\text{mA}$, $T_j = 25^\circ\text{C}$)



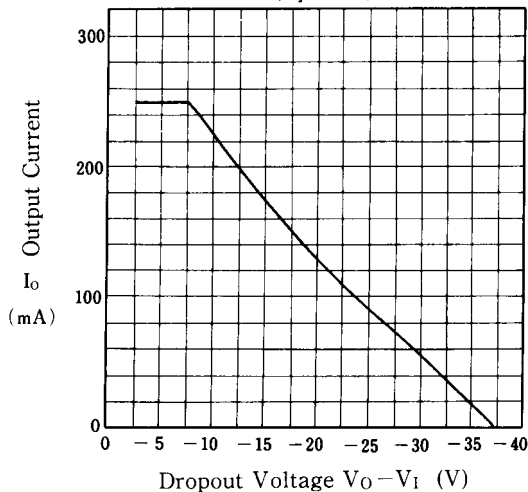
NJM79L05/15/24 Load Characteristics

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

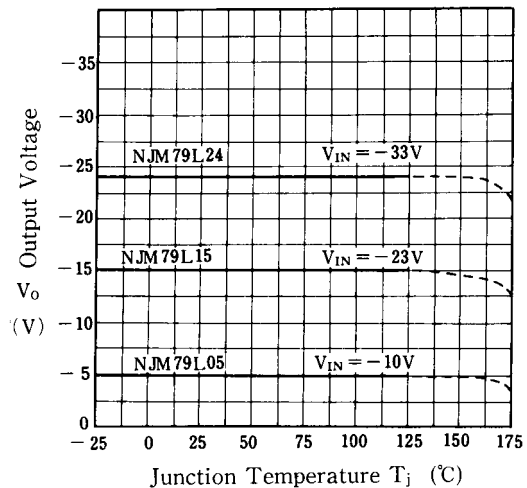


NJM79L00 Series Short Circuit Current

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

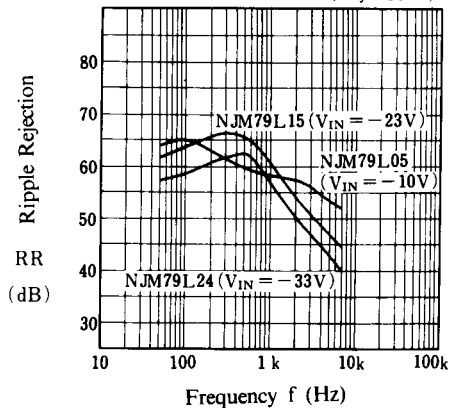


NJM79L05/12/24 Output Voltage vs. Junction Temperature



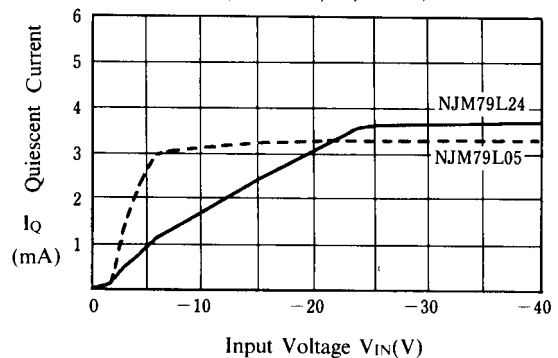
NJM79L05/15/24 Ripple Rejection vs. Frequency

($I_o = 40\text{mA}$, $e_{in} = 2\text{V}_{p-p}$, $T_j = 25^\circ\text{C}$)



Quiescent Current vs. Input Voltage

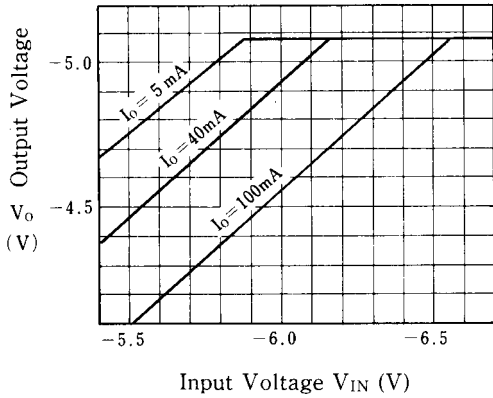
($I_o = 0\text{mA}$, $T_j = 25^\circ\text{C}$)



■ TYPICAL CHARACTERISTICS

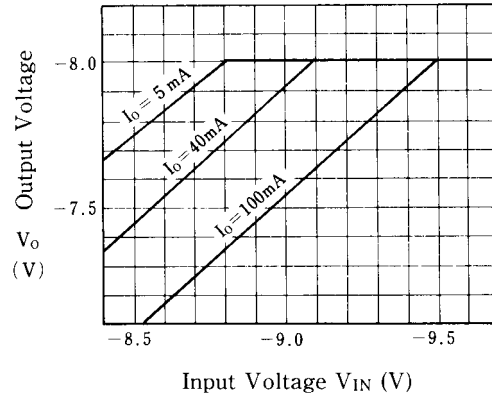
NJM79L05 Dropout Characteristics

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

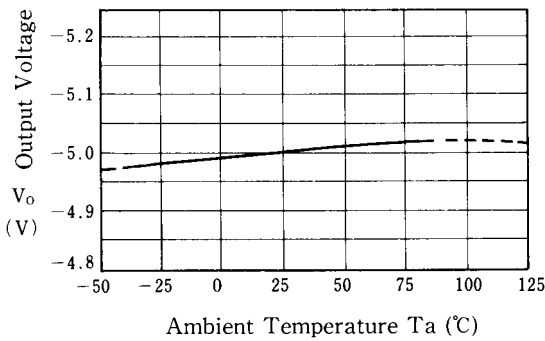


NJM79L08 Dropout Characteristics

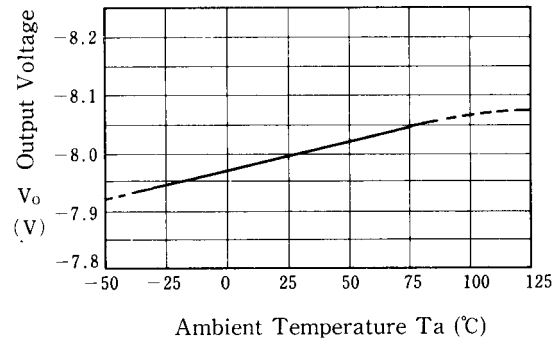
($T_j = 25^\circ\text{C}$)



NJM79L05 Output Voltage vs. Temperature

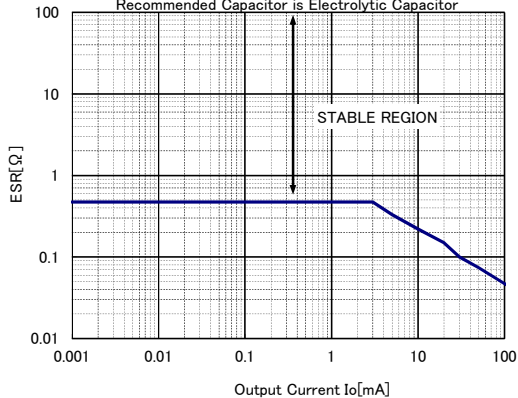


NJM79L08 Output Voltage vs. Temperature



NJM79L00 Equivalent Series Resistance vs. Output Current

V_{in} =Output voltage of the conditions described in the ELECTRICAL CHARACTERISTICS
 $T_a=25^\circ\text{C}$, $C_{in}=0.33\mu\text{F}$, $C_o=1.0\mu\text{F}$ (Ceramic capacitor)
 Recommended Capacitor is Electrolytic Capacitor



[CAUTION]

The specifications on this databook are only given for information, without any guarantee as regards either mistakes or omissions. The application circuits in this databook are described only to show representative usages of the product and not intended for the guarantee or permission of any right including the industrial rights.

NJR:

NJM79L05UA-TE2 NJM79L12UA-TE1 NJM79L05UA-TE1 NJM79L05A NJM79L05A-T1 NJM79L05A-T3
NJM79L05A-T2 NJM79L08UA-TE1 NJM79L09UA-TE1