

TOSHIBA Bipolar Linear Integrated Circuit Silicon Monolithic

TA79L005P, TA79L006P, TA79L008P, TA79L009P, TA79L010P, TA79L012P, TA79L015P, TA79L018P, TA79L020P, TA79L024P

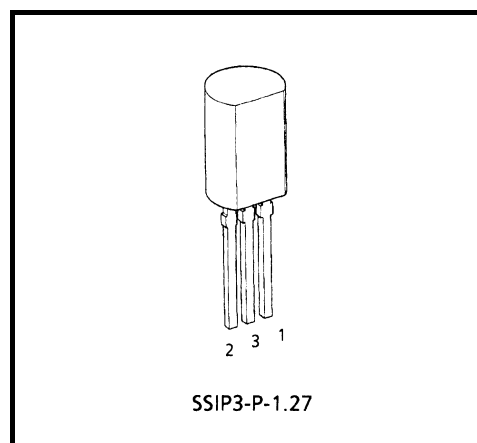
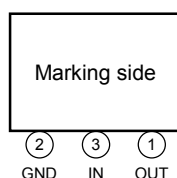
-5 V, -6 V, -8 V, -9 V, -10 V, -12 V, -15 V, -18 V, -20 V, -24 V

Three-Terminal Negative Voltage Regulators

Features

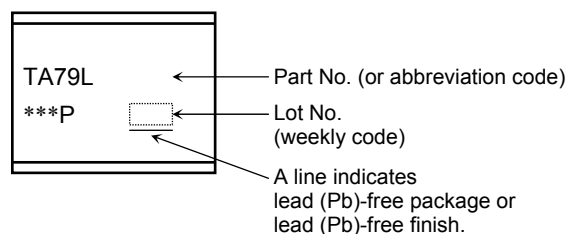
- Best suited to a power supply for TTL and C²MOS.
- Built-in overcurrent protective circuit.
- Built-in thermal protective circuit.
- Maximum output current of 150 mA (T_j = 25°C).
- Packaged in TO-92MOD.

Pin Assignment

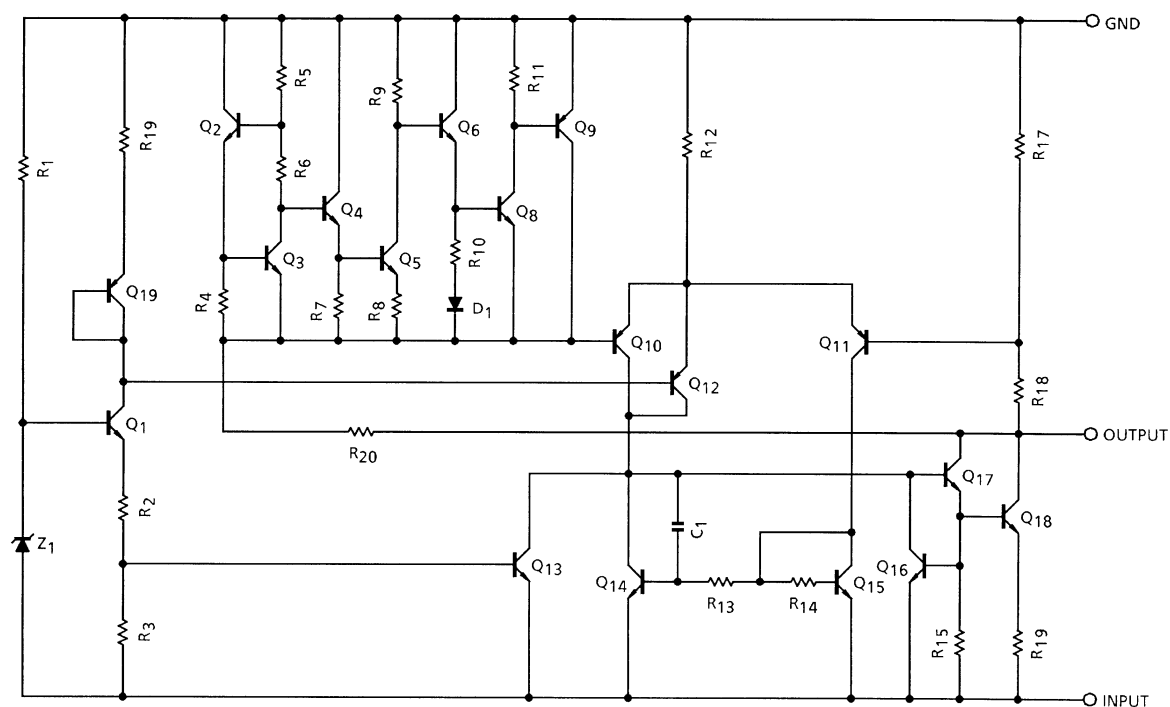


Weight: 0.36 g (Typ.)

Marking



Equivalent Circuit



Absolute Maximum Ratings (Ta = 25°C)

Characteristics		Symbol	Rating	Unit
Input voltage	TA79L005P	V _{IN}	-35	V
	TA79L006P			
	TA79L008P			
	TA79L009P			
	TA79L010P			
	TA79L012P			
	TA79L015P			
	TA79L018P			
	TA79L020P		-40	
	TA79L024P			
Power dissipation	(Ta = 25°C)	P _D	800	mW
Operating temperature		T _{opr}	-30~85	°C
Storage temperature		T _{stg}	-55~150	°C
Junction temperature		T _j	150	°C
Thermal resistance		R _{th (j-a)}	156	°C/W

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings and the operating ranges.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

TA79L005P
Electrical Characteristics

(Unless otherwise specified, $V_{IN} = -10\text{ V}$, $I_{OUT} = 40\text{ mA}$, $C_{IN} = 0.33\text{ }\mu\text{F}$, $C_{OUT} = 0.1\text{ }\mu\text{F}$, $0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$)

Characteristics	Symbol	Test Circuit	Test Condition		Min	Typ.	Max	Unit
Output voltage	V _{OUT}	1	T _j = 25°C		-5.2	-5.0	-4.8	V
Line regulation	Reg-line	1	T _j = 25°C	-20 V ≤ V _{IN} ≤ -7.0 V	—	55	150	mV
				-20 V ≤ V _{IN} ≤ -8.0 V	—	45	100	
Load regulation	Reg-load	1	T _j = 25°C	1.0 mA ≤ I _{OUT} ≤ 100 mA	—	11	60	mV
				1.0 mA ≤ I _{OUT} ≤ 40 mA	—	5.0	30	
Output voltage	V _{OUT}	1	T _j = 25°C	-20 V ≤ V _{IN} ≤ -7.0 V, 1.0 mA ≤ I _{OUT} ≤ 40 mA	-5.25	—	-4.75	V
				1.0 mA ≤ I _{OUT} ≤ 70 mA	-5.25	—	-4.75	
Quiescent current	I _B	1	T _j = 25°C		—	3.1	6.0	mA
			T _j = 125°C		—	—	5.5	
Quiescent current change	ΔI _{BI}	1	T _j = 25°C	-20 V ≤ V _{IN} ≤ -8.0 V	—	—	1.5	mA
	ΔI _{BO}	1		1.0 mA ≤ I _{OUT} ≤ 40 mA	—	—	0.1	
Output noise voltage	V _{NO}	2	Ta = 25°C, 10 Hz ≤ f ≤ 100 kHz		—	40	—	μV _{rms}
Long term stability	ΔV _{OUT} /Δt	1	—		—	12	—	mV/kh
Ripple rejection ratio	R.R.	3	-18 V ≤ V _{IN} ≤ -8.0 V, T _j = 25°C, f = 120 Hz		41	49	—	dB
Dropout voltage	V _D	1	T _j = 25°C		—	1.7	—	V
Average temperature coefficient of output voltage	T _{CVO}	1	I _{OUT} = 5 mA		—	0.6	—	mV/°C

TA79L006P
Electrical Characteristics

(Unless otherwise specified, $V_{IN} = -11\text{ V}$, $I_{OUT} = 40\text{ mA}$, $C_{IN} = 0.33\text{ }\mu\text{F}$, $C_{OUT} = 0.1\text{ }\mu\text{F}$, $0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$)

Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Output voltage	V_{OUT}	1	$T_j = 25^\circ\text{C}$	-6.24	-6.0	-5.76	V
Line regulation	Reg.line	1	$T_j = 25^\circ\text{C}$	—	50	150	mV
			$-21\text{ V} \leq V_{IN} \leq -9.0\text{ V}$	—	45	110	
Load regulation	Reg.load	1	$T_j = 25^\circ\text{C}$	—	12	70	mV
			$1.0\text{ mA} \leq I_{OUT} \leq 40\text{ mA}$	—	5.5	35	
Output voltage	V_{OUT}	1	$T_j = 25^\circ\text{C}$	-6.3	—	-5.7	V
			$-21\text{ V} \leq V_{IN} \leq -8.1\text{ V}$, $1.0\text{ mA} \leq I_{OUT} \leq 40\text{ mA}$	-6.3	—	-5.7	
Quiescent current	I_B	1	$T_j = 25^\circ\text{C}$	—	3.1	6.0	mA
			$T_j = 125^\circ\text{C}$	—	—	5.5	
Quiescent current change	ΔI_{BI}	1	$T_j = 25^\circ\text{C}$	—	—	1.5	mA
	ΔI_{BO}	1		—	—	0.1	
Output noise voltage	V_{NO}	2	$T_a = 25^\circ\text{C}$, $10\text{ Hz} \leq f \leq 100\text{ kHz}$	—	40	—	μV_{rms}
Long term stability	$\Delta V_{OUT}/\Delta t$	1	—	—	14	—	mV/kh
Ripple rejection ratio	R.R.	3	$-19\text{ V} \leq V_{IN} \leq -9.0\text{ V}$, $T_j = 25^\circ\text{C}$, $f = 120\text{ Hz}$	39	47	—	dB
Dropout voltage	V_D	1	$T_j = 25^\circ\text{C}$	—	1.7	—	V
Average temperature coefficient of output voltage	T_{CVO}	1	$I_{OUT} = 5\text{ mA}$	—	0.7	—	mV/ $^\circ\text{C}$

TA79L008P
Electrical Characteristics

(Unless otherwise specified, $V_{IN} = -14\text{ V}$, $I_{OUT} = 40\text{ mA}$, $C_{IN} = 0.33\text{ }\mu\text{F}$, $C_{OUT} = 0.1\text{ }\mu\text{F}$, $0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$)

Characteristics	Symbol	Test Circuit	Test Condition		Min	Typ.	Max	Unit
Output voltage	V _{OUT}	1	T _j = 25°C		-8.3	-8.0	-7.7	V
Line regulation	Reg-line	1	T _j = 25°C	-23 V ≤ V _{IN} ≤ -10.5 V	—	20	175	mV
				-23 V ≤ V _{IN} ≤ -11 V	—	12	125	
Load regulation	Reg-load	1	T _j = 25°C	1.0 mA ≤ I _{OUT} ≤ 100 mA	—	15	80	mV
				1.0 mA ≤ I _{OUT} ≤ 40 mA	—	7.0	40	
Output voltage	V _{OUT}	1	T _j = 25°C	-23 V ≤ V _{IN} ≤ -10.5 V, 1.0 mA ≤ I _{OUT} ≤ 40 mA	-8.4	—	-7.6	V
				1.0 mA ≤ I _{OUT} ≤ 70 mA	-8.4	—	-7.6	
Quiescent current	I _B	1	T _j = 25°C		—	3.1	6.5	mA
			T _j = 125°C		—	—	6.0	
Quiescent current change	ΔI _{BI}	1	T _j = 25°C	-23 V ≤ V _{IN} ≤ -11 V	—	—	1.5	mA
	ΔI _{BO}	1		1.0 mA ≤ I _{OUT} ≤ 40 mA	—	—	0.1	
Output noise voltage	V _{NO}	2	T _a = 25°C, 10 Hz ≤ f ≤ 100 kHz		—	60	—	μV _{rms}
Long term stability	ΔV _{OUT} /Δt	1	—		—	20	—	mV/kh
Ripple rejection ratio	R.R.	3	-23 V ≤ V _{IN} ≤ -12 V, T _j = 25°C, f = 120 Hz		37	45	—	dB
Dropout voltage	V _D	1	T _j = 25°C		—	1.7	—	V
Average temperature coefficient of output voltage	T _{CV0}	1	I _{OUT} = 5 mA		—	0.8	—	mV/°C

TA79L009P
Electrical Characteristics

(Unless otherwise specified, $V_{IN} = -15\text{ V}$, $I_{OUT} = 40\text{ mA}$, $C_{IN} = 0.33\text{ }\mu\text{F}$, $C_{OUT} = 0.1\text{ }\mu\text{F}$, $0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$)

Characteristics	Symbol	Test Circuit	Test Condition		Min	Typ.	Max	Unit
Output voltage	V _{OUT}	1	T _J = 25°C		-9.36	-9.0	-8.64	V
Line regulation	Reg-line	1	T _J = 25°C	-24 V ≤ V _{IN} ≤ -11.4 V	—	80	200	mV
				-24 V ≤ V _{IN} ≤ -12 V	—	20	160	
Load regulation	Reg-load	1	T _J = 25°C	1.0 mA ≤ I _{OUT} ≤ 100 mA	—	17	90	mV
				1.0 mA ≤ I _{OUT} ≤ 40 mA	—	8.0	45	
Output voltage	V _{OUT}	1	T _J = 25°C	-24 V ≤ V _{IN} ≤ -11.4 V, 1.0 mA ≤ I _{OUT} ≤ 40 mA	-9.45	—	-8.55	V
				1.0 mA ≤ I _{OUT} ≤ 70 mA	-9.45	—	-8.55	
Quiescent current	I _B	1	T _J = 25°C		—	3.2	6.5	mA
			T _J = 125°C		—	—	6.0	
Quiescent current change	ΔI _{BI}	1	T _J = 25°C	-24 V ≤ V _{IN} ≤ -12 V	—	—	1.5	mA
	ΔI _{BO}	1		1.0 mA ≤ I _{OUT} ≤ 40 mA	—	—	0.1	
Output noise voltage	V _{NO}	2	T _a = 25°C, 10 Hz ≤ f ≤ 100 kHz		—	65	—	μV _{rms}
Long term stability	ΔV _{OUT} /Δt	1	—		—	21	—	mV/kh
Ripple rejection ratio	R.R.	3	-24 V ≤ V _{IN} ≤ -12 V, T _J = 25°C, f = 120 Hz		36	44	—	dB
Dropout voltage	V _D	1	T _J = 25°C		—	1.7	—	V
Average temperature coefficient of output voltage	T _{CV0}	1	I _{OUT} = 5 mA		—	0.85	—	mV/°C

TA79L010P
Electrical Characteristics

(Unless otherwise specified, $V_{IN} = -16\text{ V}$, $I_{OUT} = 40\text{ mA}$, $C_{IN} = 0.33\text{ }\mu\text{F}$, $C_{OUT} = 0.1\text{ }\mu\text{F}$, $0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$)

Characteristics	Symbol	Test Circuit	Test Condition		Min	Typ.	Max	Unit
Output voltage	V _{OUT}	1	T _j = 25°C		-10.4	-10.0	-9.6	V
Line regulation	Reg-line	1	T _j = 25°C	-25 V ≤ V _{IN} ≤ -12.5 V	—	80	230	mV
				-25 V ≤ V _{IN} ≤ -13 V	—	30	170	
Load regulation	Reg-load	1	T _j = 25°C	1.0 mA ≤ I _{OUT} ≤ 100 mA	—	18	90	mV
				1.0 mA ≤ I _{OUT} ≤ 40 mA	—	8.5	45	
Output voltage	V _{OUT}	1	T _j = 25°C	-25 V ≤ V _{IN} ≤ -12.5 V, 1.0 mA ≤ I _{OUT} ≤ 40 mA	-10.5	—	-9.5	V
				1.0 mA ≤ I _{OUT} ≤ 70 mA	-10.5	—	-9.5	
Quiescent current	I _B	1	T _j = 25°C		—	3.2	6.5	mA
			T _j = 125°C		—	—	6.0	
Quiescent current change	ΔI _{BI}	1	T _j = 25°C	-25 V ≤ V _{IN} ≤ -13 V	—	—	1.5	mA
	ΔI _{BO}	1		1.0 mA ≤ I _{OUT} ≤ 40 mA	—	—	0.1	
Output noise voltage	V _{NO}	2	T _a = 25°C, 10 Hz ≤ f ≤ 100 kHz		—	70	—	μV _{rms}
Long term stability	ΔV _{OUT} /Δt	1	—		—	22	—	mV/kh
Ripple rejection ratio	R.R.	3	-24 V ≤ V _{IN} ≤ -13 V, T _j = 25°C, f = 120 Hz		36	43	—	dB
Dropout voltage	V _D	1	T _j = 25°C		—	1.7	—	V
Average temperature coefficient of output voltage	T _{CV0}	1	I _{OUT} = 5 mA		—	0.9	—	mV/°C

TA79L012P
Electrical Characteristics

(Unless otherwise specified, $V_{IN} = -19\text{ V}$, $I_{OUT} = 40\text{ mA}$, $C_{IN} = 0.33\text{ }\mu\text{F}$, $C_{OUT} = 0.1\text{ }\mu\text{F}$, $0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$)

Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Output voltage	V_{OUT}	1	$T_j = 25^\circ\text{C}$	-12.5	-12.0	-11.5	V
Line regulation	Reg.line	1	$T_j = 25^\circ\text{C}$	—	120	250	mV
			$-27\text{ V} \leq V_{IN} \leq -14.5\text{ V}$	—	100	200	
Load regulation	Reg.load	1	$T_j = 25^\circ\text{C}$	—	20	100	mV
			$1.0\text{ mA} \leq I_{OUT} \leq 100\text{ mA}$	—	10	50	
Output voltage	V_{OUT}	1	$T_j = 25^\circ\text{C}$	-12.6	—	-11.4	V
			$-27\text{ V} \leq V_{IN} \leq -14.5\text{ V}$, $1.0\text{ mA} \leq I_{OUT} \leq 40\text{ mA}$	-12.6	—	-11.4	
Quiescent current	I_B	1	$T_j = 25^\circ\text{C}$	—	3.2	6.5	mA
			$T_j = 125^\circ\text{C}$	—	—	6.0	
Quiescent current change	ΔI_B	1	$T_j = 25^\circ\text{C}$	—	—	1.5	mA
	ΔI_{BO}	1	$1.0\text{ mA} \leq I_{OUT} \leq 40\text{ mA}$	—	—	0.1	
Output noise voltage	V_{NO}	2	$T_a = 25^\circ\text{C}$, $10\text{ Hz} \leq f \leq 100\text{ kHz}$	—	80	—	μV_{rms}
Long term stability	$\Delta V_{OUT}/\Delta t$	1	—	—	24	—	mV/kh
Ripple rejection ratio	R.R.	3	$-25\text{ V} \leq V_{IN} \leq -15\text{ V}$, $T_j = 25^\circ\text{C}$, $f = 120\text{ Hz}$	37	42	—	dB
Dropout voltage	V_D	1	$T_j = 25^\circ\text{C}$	—	1.7	—	V
Average temperature coefficient of output voltage	T_{CVO}	1	$I_{OUT} = 5\text{ mA}$	—	1.0	—	mV/ $^\circ\text{C}$

TA79L015P
Electrical Characteristics

(Unless otherwise specified, $V_{IN} = -23\text{ V}$, $I_{OUT} = 40\text{ mA}$, $C_{IN} = 0.33\text{ }\mu\text{F}$, $C_{OUT} = 0.1\text{ }\mu\text{F}$, $0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$)

Characteristics	Symbol	Test Circuit	Test Condition		Min	Typ.	Max	Unit
Output voltage	V _{OUT}	1	T _j = 25°C		-15.6	-15.0	-14.4	V
Line regulation	Reg.line	1	T _j = 25°C	-30 V ≤ V _{IN} ≤ -17.5 V	—	130	300	mV
				-30 V ≤ V _{IN} ≤ -20 V	—	110	250	
Load regulation	Reg.load	1	T _j = 25°C	1.0 mA ≤ I _{OUT} ≤ 100 mA	—	25	150	mV
				1.0 mA ≤ I _{OUT} ≤ 40 mA	—	12	75	
Output voltage	V _{OUT}	1	T _j = 25°C	-30 V ≤ V _{IN} ≤ -17.5 V, 1.0 mA ≤ I _{OUT} ≤ 40 mA	-15.75	—	-14.25	V
				1.0 mA ≤ I _{OUT} ≤ 70 mA	-15.75	—	-14.25	
Quiescent current	I _B	1	T _j = 25°C		—	3.3	6.5	mA
			T _j = 125°C		—	—	6.0	
Quiescent current change	ΔI _B	1	T _j = 25°C	-30 V ≤ V _{IN} ≤ -20 V	—	—	1.5	mA
	ΔI _{BO}	1		1.0 mA ≤ I _{OUT} ≤ 40 mA	—	—	0.1	
Output noise voltage	V _{NO}	2	T _a = 25°C, 10 Hz ≤ f ≤ 100 kHz		—	90	—	μV _{rms}
Long term stability	ΔV _{OUT} /Δt	1	—		—	30	—	mV/kh
Ripple rejection ratio	R.R.	3	-28.5 V ≤ V _{IN} ≤ -18.5 V, T _j = 25°C, f = 120 Hz		34	39	—	dB
Dropout voltage	V _D	1	T _j = 25°C		—	1.7	—	V
Average temperature coefficient of output voltage	T _{CVO}	1	I _{OUT} = 5 mA		—	1.3	—	mV/°C

TA79L018P
Electrical Characteristics

(Unless otherwise specified, $V_{IN} = -27\text{ V}$, $I_{OUT} = 40\text{ mA}$, $C_{IN} = 0.33\text{ }\mu\text{F}$, $C_{OUT} = 0.1\text{ }\mu\text{F}$, $0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$)

Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Output voltage	V_{OUT}	1	$T_j = 25^\circ\text{C}$	-18.7	-18.0	-17.3	V
Line regulation	Reg.line	1	$T_j = 25^\circ\text{C}$	—	32	325	mV
			$-33\text{ V} \leq V_{IN} \leq -21\text{ V}$	—	27	275	
Load regulation	Reg.load	1	$T_j = 25^\circ\text{C}$	—	30	170	mV
			$1.0\text{ mA} \leq I_{OUT} \leq 40\text{ mA}$	—	15	75	
Output voltage	V_{OUT}	1	$T_j = 25^\circ\text{C}$	-18.9	—	-17.1	V
			$-33\text{ V} \leq V_{IN} \leq -20.9\text{ V}$, $1.0\text{ mA} \leq I_{OUT} \leq 40\text{ mA}$	-18.9	—	-17.1	
Quiescent current	I_B	1	$T_j = 25^\circ\text{C}$	—	3.3	6.5	mA
			$T_j = 125^\circ\text{C}$	—	—	6.0	
Quiescent current change	ΔI_B	1	$T_j = 25^\circ\text{C}$	—	—	1.5	mA
	ΔI_{BO}	1	$1.0\text{ mA} \leq I_{OUT} \leq 40\text{ mA}$	—	—	0.1	
Output noise voltage	V_{NO}	2	$T_a = 25^\circ\text{C}$, $10\text{ Hz} \leq f \leq 100\text{ kHz}$	—	150	—	μV_{rms}
Long term stability	$\Delta V_{OUT}/\Delta t$	1	—	—	45	—	mV/kh
Ripple rejection ratio	R.R.	3	$-33\text{ V} \leq V_{IN} \leq -23\text{ V}$, $T_j = 25^\circ\text{C}$, $f = 120\text{ Hz}$	33	48	—	dB
Dropout voltage	V_D	1	$T_j = 25^\circ\text{C}$	—	1.7	—	V
Average temperature coefficient of output voltage	T_{CVO}	1	$I_{OUT} = 5\text{ mA}$	—	1.5	—	mV/ $^\circ\text{C}$

TA79L020P
Electrical Characteristics

(Unless otherwise specified, $V_{IN} = -29\text{ V}$, $I_{OUT} = 40\text{ mA}$, $C_{IN} = 0.33\text{ }\mu\text{F}$, $C_{OUT} = 0.1\text{ }\mu\text{F}$, $0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$)

Characteristics	Symbol	Test Circuit	Test Condition		Min	Typ.	Max	Unit
Output voltage	V _{OUT}	1	T _j = 25°C		-20.8	-20.0	-19.2	V
Line regulation	Reg-line	1	T _j = 25°C	-35 V ≤ V _{IN} ≤ -23.5 V	—	33	330	mV
				-35 V ≤ V _{IN} ≤ -24 V	—	28	285	
Load regulation	Reg-load	1	T _j = 25°C	1.0 mA ≤ I _{OUT} ≤ 100 mA	—	33	180	mV
				1.0 mA ≤ I _{OUT} ≤ 40 mA	—	17	90	
Output voltage	V _{OUT}	1	T _j = 25°C	-35 V ≤ V _{IN} ≤ -23.5 V, 1.0 mA ≤ I _{OUT} ≤ 40 mA	-21.0	—	-19.0	V
				1.0 mA ≤ I _{OUT} ≤ 70 mA	-21.0	—	-19.0	
Quiescent current	I _B	1	T _j = 25°C		—	3.3	6.5	mA
			T _j = 125°C		—	—	6.0	
Quiescent current change	ΔI _B	1	T _j = 25°C	-35 V ≤ V _{IN} ≤ -24 V	—	—	1.5	mA
	ΔI _{BO}	1		1.0 mA ≤ I _{OUT} ≤ 40 mA	—	—	0.1	
Output noise voltage	V _{NO}	2	T _a = 25°C, 10 Hz ≤ f ≤ 100 kHz		—	170	—	μV _{rms}
Long term stability	ΔV _{OUT} /Δt	1	—		—	49	—	mV/kh
Ripple rejection ratio	R.R.	3	-35 V ≤ V _{IN} ≤ -27 V, T _j = 25°C, f = 120 Hz		31	37	—	dB
Dropout voltage	V _D	1	T _j = 25°C		—	1.7	—	V
Average temperature coefficient of output voltage	T _{CV0}	1	I _{OUT} = 5 mA		—	1.7	—	mV/°C

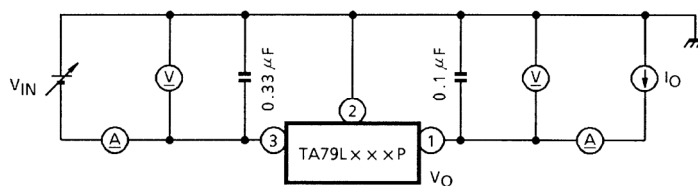
TA79L024P
Electrical Characteristics

(Unless otherwise specified, $V_{IN} = -33\text{ V}$, $I_{OUT} = 40\text{ mA}$, $C_{IN} = 0.33\text{ }\mu\text{F}$, $C_{OUT} = 0.1\text{ }\mu\text{F}$, $0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$)

Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Output voltage	V_{OUT}	1	$T_j = 25^\circ\text{C}$	-25.0	-24.0	-23.0	V
Line regulation	Reg.line	1	$T_j = 25^\circ\text{C}$	—	35	350	mV
			$-38\text{ V} \leq V_{IN} \leq -27\text{ V}$	—	30	300	
Load regulation	Reg.load	1	$T_j = 25^\circ\text{C}$	—	40	200	mV
			$1.0\text{ mA} \leq I_{OUT} \leq 100\text{ mA}$	—	20	100	
Output voltage	V_{OUT}	1	$T_j = 25^\circ\text{C}$	-25.2	—	-22.8	V
			$-38\text{ V} \leq V_{IN} \leq -27\text{ V}$, $1.0\text{ mA} \leq I_{OUT} \leq 40\text{ mA}$	-25.2	—	-22.8	
Quiescent current	I_B	1	$T_j = 25^\circ\text{C}$	—	3.5	6.5	mA
			$T_j = 125^\circ\text{C}$	—	—	6.0	
Quiescent current change	ΔI_B	1	$T_j = 25^\circ\text{C}$	—	—	1.5	mA
	ΔI_{BO}	1		—	—	0.1	
Output noise voltage	V_{NO}	2	$T_a = 25^\circ\text{C}$, $10\text{ Hz} \leq f \leq 100\text{ kHz}$	—	200	—	μV_{rms}
Long term stability	$\Delta V_{OUT}/\Delta t$	1	—	—	56	—	mV/kh
Ripple rejection ratio	R.R.	3	$-35\text{ V} \leq V_{IN} \leq -29\text{ V}$, $T_j = 25^\circ\text{C}$, $f = 120\text{ Hz}$	31	47	—	dB
Dropout voltage	V_D	1	$T_j = 25^\circ\text{C}$	—	1.7	—	V
Average temperature coefficient of output voltage	T_{CVO}	1	$I_{OUT} = 5\text{ mA}$	—	2.0	—	mV/ $^\circ\text{C}$

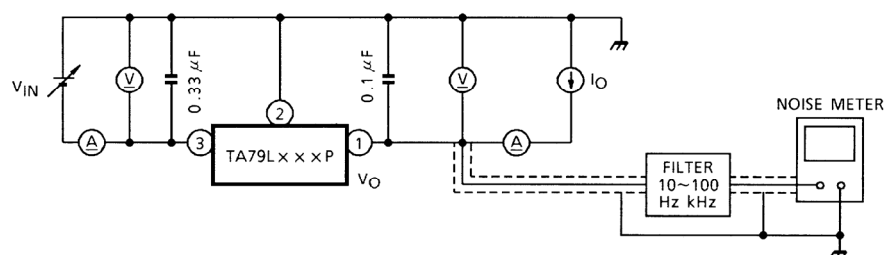
Test Circuit 1

V_{OUT} , Reg·line, Reg·load, I_B , ΔI_B , $\Delta V_{OUT}/\Delta t$, V_D , T_{CVO}



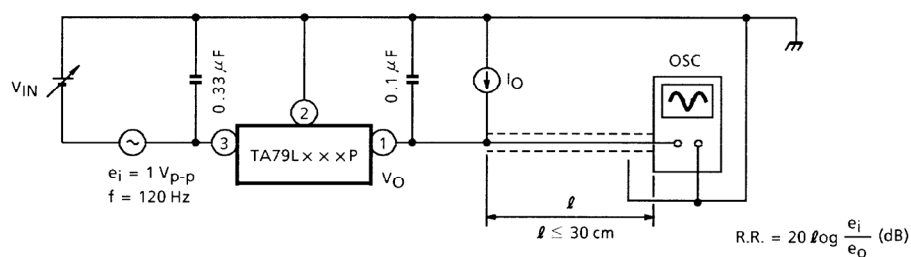
Test Circuit 2

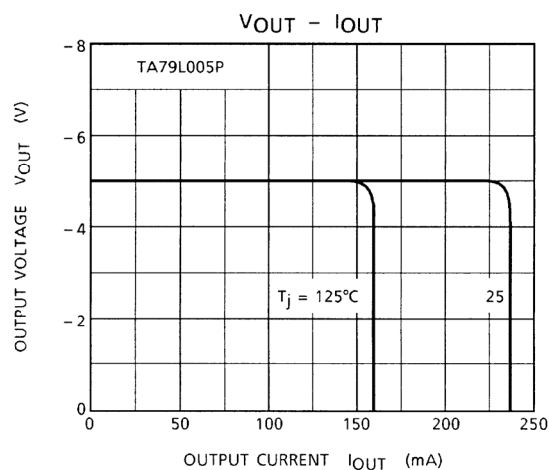
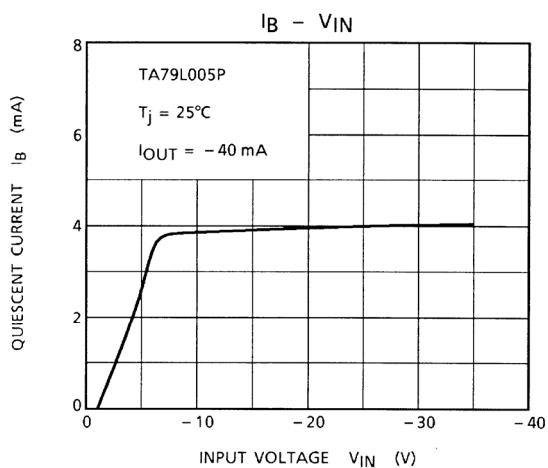
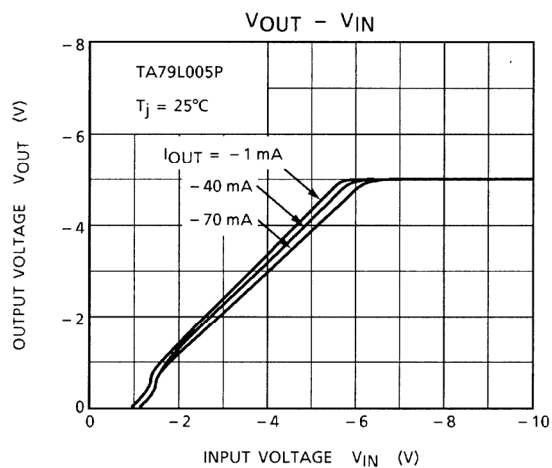
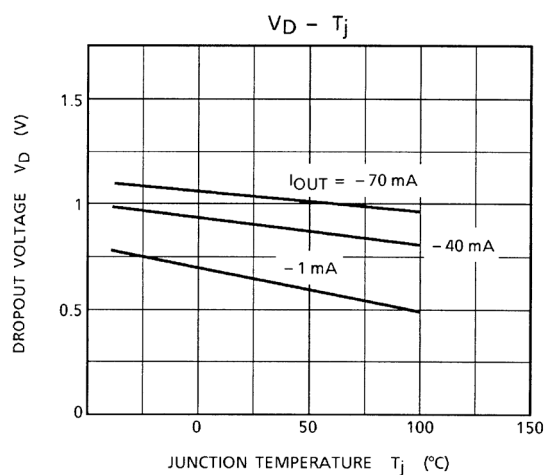
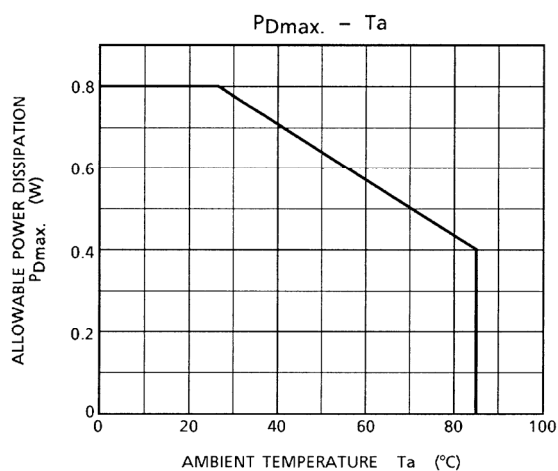
V_{NO}



Test Circuit 3

R.R.

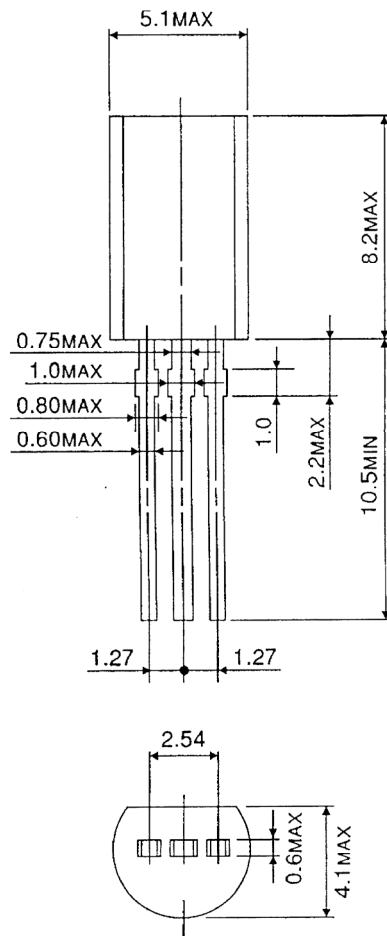




Package Dimensions

SSIP3-P-1.27

Unit : mm



Weight : 0.36 g (Typ.)

RESTRICTIONS ON PRODUCT USE

20070701-EN

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