

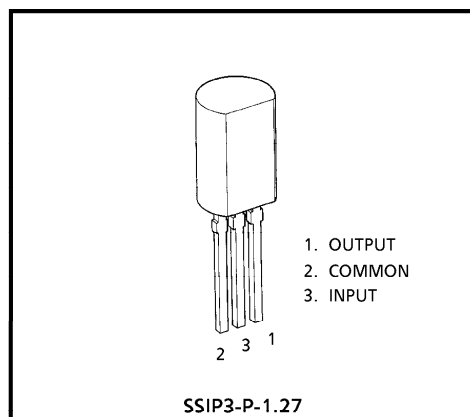
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

**TA79L005P, TA79L006P, TA79L008P, TA79L009P, TA79L010P
TA79L012P, TA79L015P, TA79L018P, TA79L020P, TA79L024P**
- 5V, - 6V, - 8V, - 9V, - 10V, - 12V, - 15V, - 18V, - 20V, - 24V

3-TERMINAL NEGATIVE VOLTAGE REGULATORS

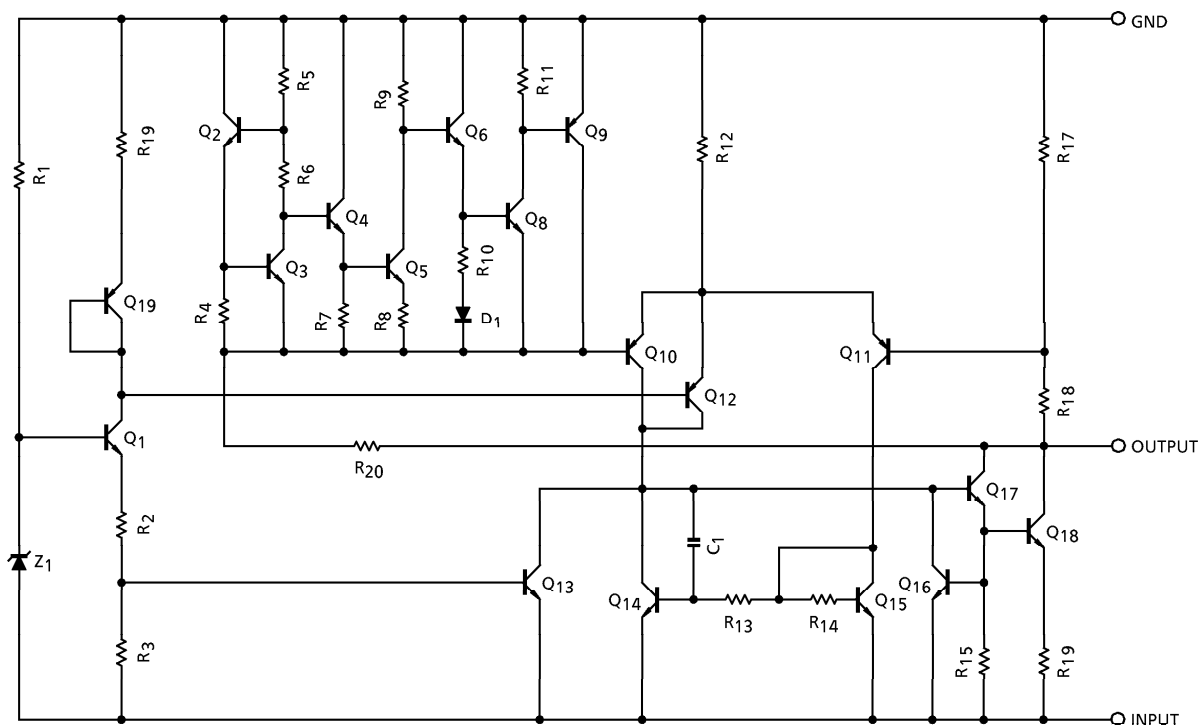
FEATURES

- Best suited to a power supply for TTL and C²MOS
- Built-in overcurrent protective circuit
- Built-in thermal protective circuit
- Max. output current 150mA ($T_j = 25^\circ\text{C}$)
- Packaged in TO-92MOD



Weight : 0.36g (Typ.)

EQUIVALENT CIRCUIT



961001EBA2

● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Input Voltage	TA79L005P	V _{IN}	- 35	V
	TA79L006P			
	TA79L008P			
	TA79L009P			
	TA79L010P			
	TA79L012P			
	TA79L015P			
	TA79L018P		- 40	
	TA79L020P			
	TA79L024P			
Power Dissipation	(Ta = 25°C)	P _D	800	mW
Operating Temperature		T _{opr}	- 30~75	°C
Storage Temperature		T _{stg}	- 55~150	°C
Operating Junction Temperature		T _j	- 30~150	°C
Thermal Resistance		R _{th (j-a)}	156	°C / W

961001EBA2'

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- The information contained herein is subject to change without notice.

TA79L005P

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

CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	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	− 20V ≤ V _{IN} ≤ − 7.0V	—	55	mV	
				− 20V ≤ V _{IN} ≤ − 8.0V	—	45		100
Load Regulation	Reg. Load	1	T _j = 25°C	1.0mA ≤ I _{OUT} ≤ 100mA	—	11	mV	
				1.0mA ≤ I _{OUT} ≤ 40mA	—	5.0		30
Output Voltage	V _{OUT}	1	T _j = 25°C	− 20V ≤ V _{IN} ≤ − 7.0V	− 5.25	—	V	
				1.0mA ≤ I _{OUT} ≤ 40mA	—	—		− 4.75
				1.0mA ≤ I _{OUT} ≤ 70mA	− 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 _B	1	− 20V ≤ V _{IN} ≤ − 8.0V	—	—	1.5	mA	
	ΔI _{BO}	1	1.0mA ≤ I _{OUT} ≤ 40mA	—	—	0.1		
Output Noise Voltage	V _{NO}	2	T _a = 25°C 10Hz ≤ f ≤ 100kHz	—	40	—	μV _{rms}	
Long Term Stability	ΔV _{OUT} / Δt	1	—	—	12	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	− 18V ≤ V _{IN} ≤ − 8.0V T _j = 25°C, f = 120Hz	41	49	—	dB	
Dropout Voltage	V _{IN} - V _{OUT}	1	T _j = 25°C	—	1.7	—	V	
Average Temperature Coefficient of Output Voltage	T _{CVO}	1	I _{OUT} = 5mA	—	0.6	—	mV / °C	

TA79L006P

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

CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Voltage	V _{OUT}	1	T _j = 25°C	− 6.24	− 6.0	− 5.76	V
Line Regulation	Reg. Line	1	T _j = 25°C	− 21V ≤ V _{IN} ≤ − 8.1V	—	50	mV
				− 21V ≤ V _{IN} ≤ − 9.0V	—	45	
Load Regulation	Reg. Load	1	T _j = 25°C	1.0mA ≤ I _{OUT} ≤ 100mA	—	12	mV
				1.0mA ≤ I _{OUT} ≤ 40mA	—	5.5	
Output Voltage	V _{OUT}	1	T _j = 25°C	− 21V ≤ V _{IN} ≤ − 8.1V	− 6.3	—	V
				1.0mA ≤ I _{OUT} ≤ 40mA	—	—	
				1.0mA ≤ I _{OUT} ≤ 70mA	− 6.3	—	
Quiescent Current	I _B	1	T _j = 25°C	—	3.1	6.0	mA
			T _j = 125°C	—	—	5.5	
Quiescent Current Change	ΔI _B	1	− 21V ≤ V _{IN} ≤ − 9.0V	—	—	1.5	mA
	ΔI _{BO}	1	1.0mA ≤ I _{OUT} ≤ 40mA	—	—	0.1	
Output Noise Voltage	V _{NO}	2	T _a = 25°C 10Hz ≤ f ≤ 100kHz	—	40	—	μV _{rms}
Long Term Stability	ΔV _{OUT} / Δt	1	—	—	14	—	mV / 1.0kh
Ripple Rejection Ratio	R.R.	3	− 19V ≤ V _{IN} ≤ − 9.0V T _j = 25°C, f = 120Hz	39	47	—	dB
Dropout Voltage	V _{IN} - V _{OUT}	1	T _j = 25°C	—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T _{CVO}	1	I _{OUT} = 5mA	—	0.7	—	mV / °C

TA79L008P

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

CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	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	− 23V ≤ V _{IN} ≤ − 10.5V	—	20	mV	
				− 23V ≤ V _{IN} ≤ − 11V	—	12		125
Load Regulation	Reg. Load	1	T _j = 25°C	1.0mA ≤ I _{OUT} ≤ 100mA	—	15	mV	
				1.0mA ≤ I _{OUT} ≤ 40mA	—	7.0		40
Output Voltage	V _{OUT}	1	T _j = 25°C	− 23V ≤ V _{IN} ≤ − 10.5V	− 8.4	—	V	
				1.0mA ≤ I _{OUT} ≤ 40mA				− 7.6
				1.0mA ≤ I _{OUT} ≤ 70mA	− 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 _B	1	− 23V ≤ V _{IN} ≤ − 11V	—	—	1.5	mA	
	ΔI _{BO}	1	1.0mA ≤ I _{OUT} ≤ 40mA	—	—	0.1		
Output Noise Voltage	V _{NO}	2	T _a = 25°C 10Hz ≤ f ≤ 100kHz	—	60	—	μV _{rms}	
Long Term Stability	ΔV _{OUT} / Δt	1	—	—	20	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	− 23V ≤ V _{IN} ≤ − 12V T _j = 25°C, f = 120Hz	37	45	—	dB	
Dropout Voltage	V _{IN} -V _{OUT}	1	T _j = 25°C	—	1.7	—	V	
Average Temperature Coefficient of Output Voltage	T _{CVO}	1	I _{OUT} = 5mA	—	0.8	—	mV / °C	

TA79L009P

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

CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	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	− 24V ≤ V _{IN} ≤ − 11.4V	—	80	mV	
				− 24V ≤ V _{IN} ≤ − 12V	—	20		160
Load Regulation	Reg. Load	1	T _j = 25°C	1.0mA ≤ I _{OUT} ≤ 100mA	—	17	mV	
				1.0mA ≤ I _{OUT} ≤ 40mA	—	8.0		45
Output Voltage	V _{OUT}	1	T _j = 25°C	− 24V ≤ V _{IN} ≤ − 11.4V	− 9.45	—	V	
				1.0mA ≤ I _{OUT} ≤ 40mA				
				1.0mA ≤ I _{OUT} ≤ 70mA	− 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 _B	1	− 24V ≤ V _{IN} ≤ − 12V	—	—	1.5	mA	
	ΔI _{BO}	1	1.0mA ≤ I _{OUT} ≤ 40mA	—	—	0.1		
Output Noise Voltage	V _{NO}	2	T _a = 25°C 10Hz ≤ f ≤ 100kHz	—	65	—	μV _{rms}	
Long Term Stability	ΔV _{OUT} / Δt	1	—	—	21	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	− 24V ≤ V _{IN} ≤ − 12V T _j = 25°C, f = 120Hz	36	44	—	dB	
Dropout Voltage	V _{IN} − V _{OUT}	1	T _j = 25°C	—	1.7	—	V	
Average Temperature Coefficient of Output Voltage	T _{CVO}	1	I _{OUT} = 5mA	—	0.85	—	mV / °C	

TA79L010P

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

CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	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	− 25V ≤ V _{IN} ≤ − 12.5V	—	80	230	mV
			− 25V ≤ V _{IN} ≤ − 13V	—	30	170		
Load Regulation	Reg. Load	1	T _j = 25°C	1.0mA ≤ I _{OUT} ≤ 100mA	—	18	90	mV
				1.0mA ≤ I _{OUT} ≤ 40mA	—	8.5	45	
Output Voltage	V _{OUT}	1	T _j = 25°C	− 25V ≤ V _{IN} ≤ − 12.5V	− 10.5	—	− 9.5	V
				1.0mA ≤ I _{OUT} ≤ 40mA				
				1.0mA ≤ I _{OUT} ≤ 70mA				
Quiescent Current	I _B	1	T _j = 25°C	—	3.2	6.5	mA	
			T _j = 125°C	—	—	6.0		
Quiescent Current Change	ΔI _B	1	− 25V ≤ V _{IN} ≤ − 13V	—	—	1.5	mA	
	ΔI _{BO}	1	1.0mA ≤ I _{OUT} ≤ 40mA	—	—	0.1		
Output Noise Voltage	V _{NO}	2	T _a = 25°C 10Hz ≤ f ≤ 100kHz	—	70	—	μV _{rms}	
Long Term Stability	ΔV _{OUT} / Δt	1	—	—	22	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	− 24V ≤ V _{IN} ≤ − 13V T _j = 25°C, f = 120Hz	36	43	—	dB	
Dropout Voltage	V _{IN} − V _{OUT}	1	T _j = 25°C	—	1.7	—	V	
Average Temperature Coefficient of Output Voltage	T _{CVO}	1	I _{OUT} = 5mA	—	0.9	—	mV / °C	

TA79L012P

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

CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Voltage	V _{OUT}	1	T _j = 25°C		− 12.5	− 12.0	− 11.5	V
Line Regulation	Reg. Line	1	T _j = 25°C	− 27V ≤ V _{IN} ≤ − 14.5V	—	120	250	mV
				− 27V ≤ V _{IN} ≤ − 16V	—	100	200	
Load Regulation	Reg. Load	1	T _j = 25°C	1.0mA ≤ I _{OUT} ≤ 100mA	—	20	100	mV
				1.0mA ≤ I _{OUT} ≤ 40mA	—	10	50	
Output Voltage	V _{OUT}	1	T _j = 25°C	− 27V ≤ V _{IN} ≤ − 14.5V	− 12.6	—	− 11.4	V
				1.0mA ≤ I _{OUT} ≤ 40mA				
				1.0mA ≤ I _{OUT} ≤ 70mA	− 12.6	—	− 11.4	
Quiescent Current	I _B	1	T _j = 25°C	—	3.2	6.5	mA	
			T _j = 125°C	—	—	6.0		
Quiescent Current Change	ΔI _B	1	− 27V ≤ V _{IN} ≤ − 16V		—	—	1.5	mA
	ΔI _{BO}	1	1.0mA ≤ I _{OUT} ≤ 40mA		—	—	0.1	
Output Noise Voltage	V _{NO}	2	Ta = 25°C 10Hz ≤ f ≤ 100kHz		—	80	—	μV _{rms}
Long Term Stability	ΔV _{OUT} / Δt	1	—		—	24	—	mV / 1.0kh
Ripple Rejection Ratio	R.R.	3	− 25V ≤ V _{IN} ≤ − 15V T _j = 25°C, f = 120Hz		37	42	—	dB
Dropout Voltage	V _{IN} − V _{OUT}	1	T _j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T _{CVO}	1	I _{OUT} = 5mA		—	1.0	—	mV / °C

TA79L015P

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

CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	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	− 30V ≤ V _{IN} ≤ − 17.5V	—	130	300	mV
				− 30V ≤ V _{IN} ≤ − 20V	—	110	250	
Load Regulation	Reg. Load	1	T _j = 25°C	1.0mA ≤ I _{OUT} ≤ 100mA	—	25	150	mV
				1.0mA ≤ I _{OUT} ≤ 40mA	—	12	75	
Output Voltage	V _{OUT}	1	T _j = 25°C	− 30V ≤ V _{IN} ≤ − 17.5V	− 15.75	—	− 14.25	V
				1.0mA ≤ I _{OUT} ≤ 40mA				
				1.0mA ≤ I _{OUT} ≤ 70mA	− 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	− 30V ≤ V _{IN} ≤ − 20V		—	—	1.5	mA
	ΔI _{BO}	1	1.0mA ≤ I _{OUT} ≤ 40mA		—	—	0.1	
Output Noise Voltage	V _{NO}	2	T _a = 25°C 10Hz ≤ f ≤ 100kHz		—	90	—	μV _{rms}
Long Term Stability	ΔV _{OUT} / Δt	1	—		—	30	—	mV / 1.0kh
Ripple Rejection Ratio	R.R.	3	− 28.5V ≤ V _{IN} ≤ − 18.5V T _j = 25°C, f = 120Hz		34	39	—	dB
Dropout Voltage	V _{IN} - V _{OUT}	1	T _j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T _{CVO}	1	I _{OUT} = 5mA		—	1.3	—	mV / °C

TA79L018P

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

CHARACTERISTIC	SYMBOL	TEST CIR- CUI	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Voltage	V _{OUT}	1	T _j = 25°C		- 18.7	- 18.0	- 17.3	V
Line Regulation	Reg. Line	1	T _j = 25°C	- 33V ≤ V _{IN} ≤ 20.7V	—	32	325	mV
				- 33V ≤ V _{IN} ≤ - 21V	—	27	275	
Load Regulation	Reg. Load	1	T _j = 25°C	1.0mA ≤ I _{OUT} ≤ 100mA	—	30	170	mV
				1.0mA ≤ I _{OUT} ≤ 40mA	—	15	75	
Output Voltage	V _{OUT}	1	T _j = 25°C	- 33V ≤ V _{IN} ≤ - 20.9V	- 18.9	—	- 17.1	V
				1.0mA ≤ I _{OUT} ≤ 40mA				
				1.0mA ≤ I _{OUT} ≤ 70mA	- 18.9	—	- 17.1	
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	- 33V ≤ V _{IN} ≤ - 21V		—	—	1.5	mA
	ΔI _{BO}	1	1.0mA ≤ I _{OUT} ≤ 40mA		—	—	0.1	
Output Noise Voltage	V _{NO}	2	Ta = 25°C 10Hz ≤ f ≤ 100kHz		—	150	—	μV _{rms}
Long Term Stability	ΔV _{OUT} / Δt	1	—		—	45	—	mV / 1.0kh
Ripple Rejection Ratio	R.R.	3	- 33V ≤ V _{IN} ≤ - 23V T _j = 25°C, f = 120Hz		33	48	—	dB
Dropout Voltage	V _{IN} -V _{OUT}	1	T _j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T _{CVO}	1	I _{OUT} = 5mA		—	1.5	—	mV / °C

TA79L020P

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

CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	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	- 35V ≤ V _{IN} ≤ - 23.5V	—	33	330	mV
				- 35V ≤ V _{IN} ≤ - 24V	—	28	285	
Load Regulation	Reg. Load	1	T _j = 25°C	1.0mA ≤ I _{OUT} ≤ 100mA	—	33	180	mV
				1.0mA ≤ I _{OUT} ≤ 40mA	—	17	90	
Output Voltage	V _{OUT}	1	T _j = 25°C	- 35V ≤ V _{IN} ≤ - 23.5V	- 21.0	—	- 19.0	V
				1.0mA ≤ I _{OUT} ≤ 40mA				
				1.0mA ≤ I _{OUT} ≤ 70mA	- 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	- 35V ≤ V _{IN} ≤ - 24V		—	—	1.5	mA
	ΔI _{BO}	1	10mA ≤ I _{OUT} ≤ 40mA		—	—	0.1	
Output Noise Voltage	V _{NO}	2	T _a = 25°C 10Hz ≤ f ≤ 100kHz		—	170	—	μV _{rms}
Long Term Stability	ΔV _{OUT} / Δt	1	—		—	49	—	mV / 1.0kh
Ripple Rejection Ratio	R.R.	3	- 35V ≤ V _{IN} ≤ - 27V T _j = 25°C, f = 120Hz		31	37	—	dB
Dropout Voltage	V _{IN} -V _{OUT}	1	T _j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T _{CVO}	1	I _{OUT} = 5mA		—	1.7	—	mV / °C

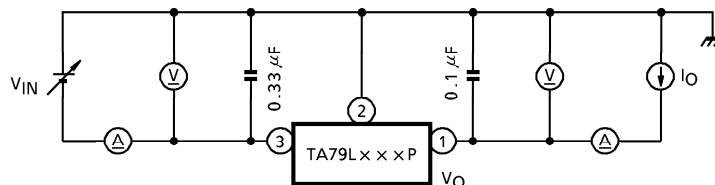
TA79L024P

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

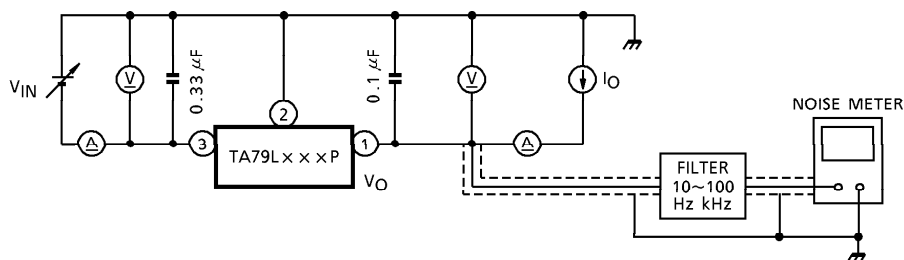
CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Voltage	V _{OUT}	1	T _j = 25°C		- 25.0	- 24.0	- 23.0	V
Line Regulation	Reg. Line	1	T _j = 25°C	- 38V ≤ V _{IN} ≤ - 27V	—	35	350	mV
				- 38V ≤ V _{IN} ≤ - 28V	—	30	300	
Load Regulation	Reg. Load	1	T _j = 25°C	1.0mA ≤ I _{OUT} ≤ 100mA	—	40	200	mV
				1.0mA ≤ I _{OUT} ≤ 40mA	—	20	100	
Output Voltage	V _{OUT}	1	T _j = 25°C	- 38V ≤ V _{IN} ≤ - 27V	- 25.2	—	- 22.8	V
				1.0mA ≤ I _{OUT} ≤ 40mA				
				1.0mA ≤ I _{OUT} ≤ 70mA				
Quiescent Current	I _B	1	T _j = 25°C	—	3.5	6.5	mA	
			T _j = 125°C	—	—	6.0		
Quiescent Current Change	ΔI _B	1	- 38V ≤ V _{IN} ≤ - 28V		—	—	1.5	mA
	ΔI _{BO}	1	1.0mA ≤ I _{OUT} ≤ 40mA		—	—	0.1	
Output Noise Voltage	V _{NO}	2	T _a = 25°C 10Hz ≤ f ≤ 100kHz		—	200	—	μV _{rms}
Long Term Stability	ΔV _{OUT} / Δt	1	—		—	56	—	mV / 1.0kh
Ripple Rejection Ratio	R.R.	3	- 35V ≤ V _{IN} ≤ - 29V T _j = 25°C, f = 120Hz		31	47	—	dB
Dropout Voltage	V _{IN} -V _{OUT}	1	T _j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T _{CVO}	1	I _{OUT} = 5mA		—	2.0	—	mV / °C

TEST CIRCUIT

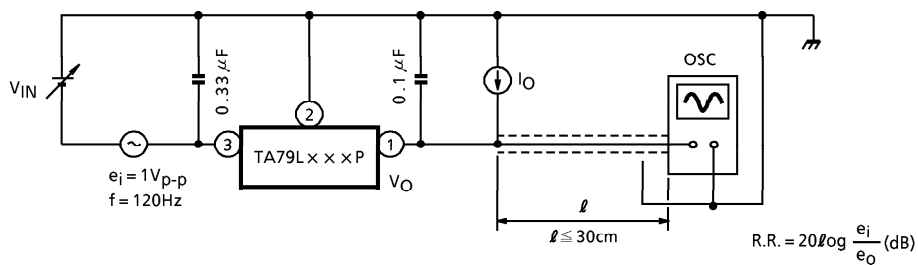
1. V_{OUT} , Reg.line, Reg.load, I_B , ΔI_B , $\Delta V_{OUT} / \Delta t$, $|V_{IN} - V_{OUT}|$, T_{CVO}

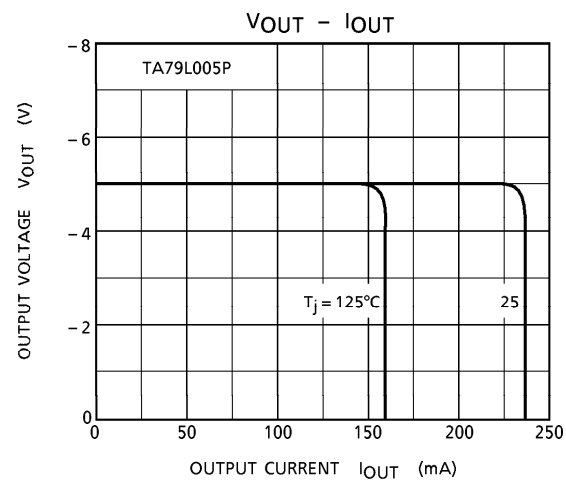
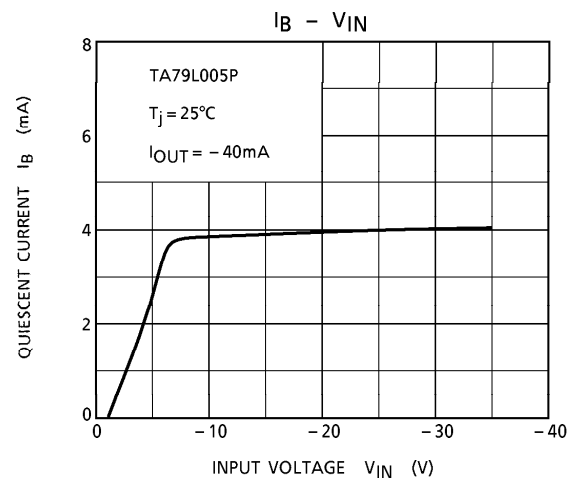
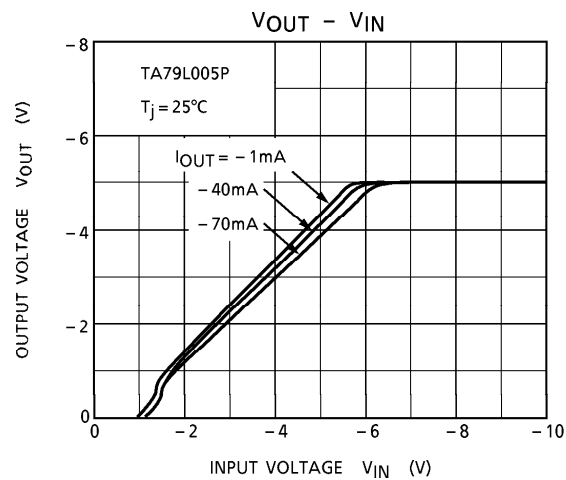
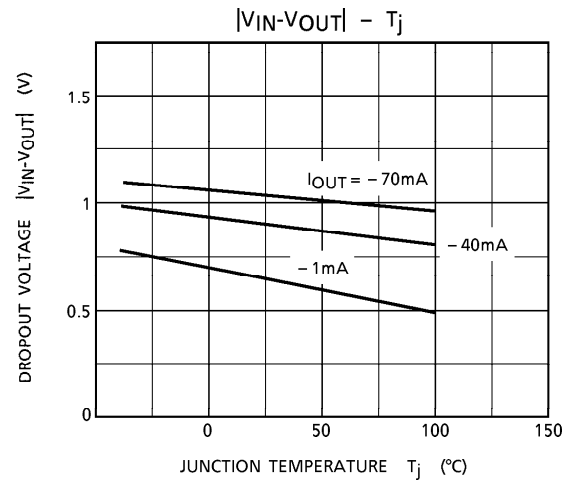
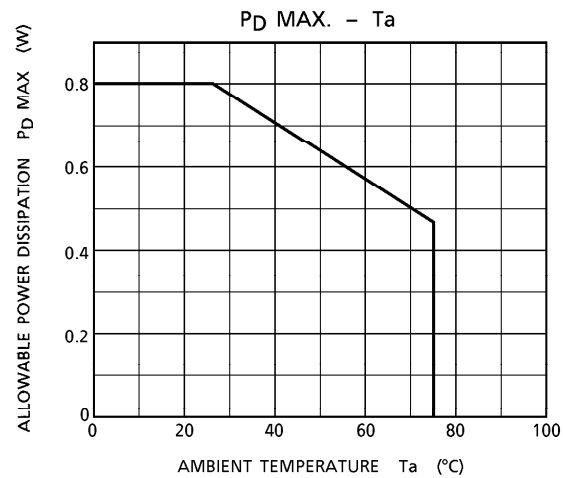


2. V_{NO}



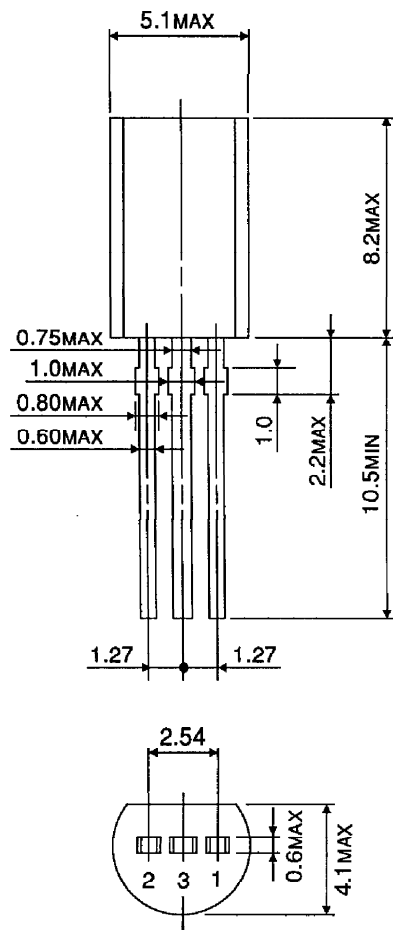
3. R.R.





OUTLINE DRAWING
SSIP3-P-1.27

Unit : mm



Weight : 0.36g (Typ.)