

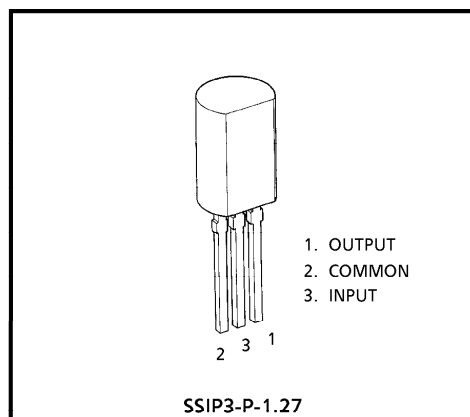
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC
TA79L005P, TA79L006P, TA79L008P, TA79L009P, TA79L010P
TA79L012P, TA79L015P, TA79L018P, TA79L020P, TA79L024P

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

3-TERMINAL NEGATIVE VOLTAGE REGULATORS

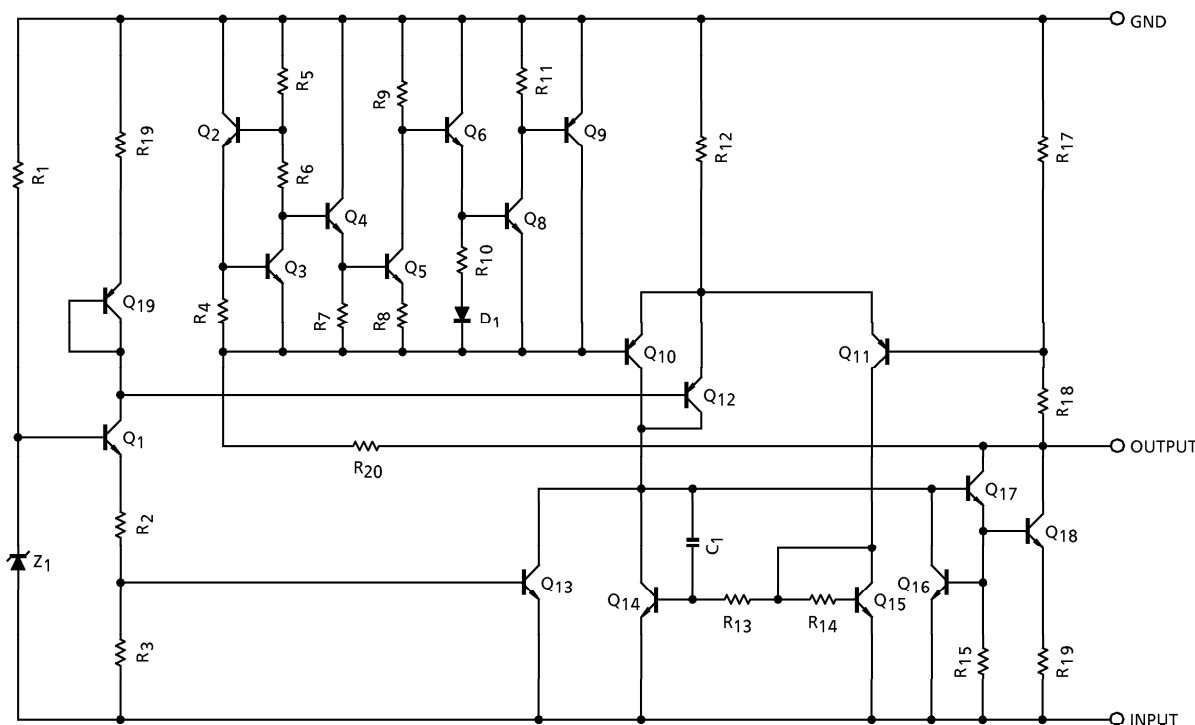
FEATURES

- 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°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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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	$T_j = 25^\circ C$	-5.2	-5.0	-4.8	V	
Line Regulation	Reg. Line	1	$T_j = 25^\circ C$	$-20V \leq V_{IN} \leq -7.0V$	—	55	150	mV
				$-20V \leq V_{IN} \leq -8.0V$	—	45	100	
Load Regulation	Reg. Load	1	$T_j = 25^\circ C$	$1.0mA \leq I_{OUT} \leq 100mA$	—	11	60	mV
				$1.0mA \leq I_{OUT} \leq 40mA$	—	5.0	30	
Output Voltage	V_{OUT}	1	$T_j = 25^\circ C$	$-20V \leq V_{IN} \leq -7.0V$	-5.25	—	-4.75	V
				$1.0mA \leq I_{OUT} \leq 40mA$	—	—	—	
				$1.0mA \leq I_{OUT} \leq 70mA$	-5.25	—	-4.75	
Quiescent Current	I_B	1	$T_j = 25^\circ C$	—	3.1	6.0	mA	
			$T_j = 125^\circ C$	—	—	5.5		
Quiescent Current Change	ΔI_B	1	$-20V \leq V_{IN} \leq -8.0V$	—	—	1.5	mA	
	ΔI_{BO}	1	$1.0mA \leq I_{OUT} \leq 40mA$	—	—	0.1		
Output Noise Voltage	V_{NO}	2	$T_a = 25^\circ C$ $10Hz \leq f \leq 100kHz$	—	40	—	μV_{rms}	
Long Term Stability	$\Delta V_{OUT} / \Delta t$	1	—	—	12	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	$-18V \leq V_{IN} \leq -8.0V$ $T_j = 25^\circ C, f = 120Hz$	41	49	—	dB	
Dropout Voltage	$ V_{IN} - V_{OUT} $	1	$T_j = 25^\circ C$	—	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	$T_j = 25^\circ C$	-6.24	-6.0	-5.76	V	
Line Regulation	Reg. Line	1	$T_j = 25^\circ C$	$-21V \leq V_{IN} \leq -8.1V$	—	50	150	mV
				$-21V \leq V_{IN} \leq -9.0V$	—	45	110	
Load Regulation	Reg. Load	1	$T_j = 25^\circ C$	$1.0mA \leq I_{OUT} \leq 100mA$	—	12	70	mV
				$1.0mA \leq I_{OUT} \leq 40mA$	—	5.5	35	
Output Voltage	V_{OUT}	1	$T_j = 25^\circ C$	$-21V \leq V_{IN} \leq -8.1V$	-6.3	—	-5.7	V
				$1.0mA \leq I_{OUT} \leq 40mA$	—	—	—	
				$1.0mA \leq I_{OUT} \leq 70mA$	-6.3	—	-5.7	
Quiescent Current	I_B	1	$T_j = 25^\circ C$	—	3.1	6.0	mA	
			$T_j = 125^\circ C$	—	—	5.5		
Quiescent Current Change	ΔI_B	1	$-21V \leq V_{IN} \leq -9.0V$	—	—	1.5	mA	
	ΔI_{BO}	1	$1.0mA \leq I_{OUT} \leq 40mA$	—	—	0.1		
Output Noise Voltage	V_{NO}	2	$T_a = 25^\circ C$ $10Hz \leq f \leq 100kHz$	—	40	—	μV_{rms}	
Long Term Stability	$\Delta V_{OUT} / \Delta t$	1	—	—	14	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	$-19V \leq V_{IN} \leq -9.0V$ $T_j = 25^\circ C, f = 120Hz$	39	47	—	dB	
Dropout Voltage	$ V_{IN} - V_{OUT} $	1	$T_j = 25^\circ C$	—	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	$T_j = 25^{\circ}C$	-8.3	-8.0	-7.7	V	
Line Regulation	Reg. Line	1	$T_j = 25^{\circ}C$	$-23V \leq V_{IN} \leq -10.5V$	—	20	175	mV
				$-23V \leq V_{IN} \leq -11V$	—	12	125	
Load Regulation	Reg. Load	1	$T_j = 25^{\circ}C$	$1.0mA \leq I_{OUT} \leq 100mA$	—	15	80	mV
				$1.0mA \leq I_{OUT} \leq 40mA$	—	7.0	40	
Output Voltage	V_{OUT}	1	$T_j = 25^{\circ}C$	$-23V \leq V_{IN} \leq -10.5V$	-8.4	—	-7.6	V
				$1.0mA \leq I_{OUT} \leq 40mA$	-8.4	—	-7.6	
				$1.0mA \leq I_{OUT} \leq 70mA$	-8.4	—	-7.6	
Quiescent Current	I_B	1	$T_j = 25^{\circ}C$	—	3.1	6.5	mA	
			$T_j = 125^{\circ}C$	—	—	6.0		
Quiescent Current Change	ΔI_B	1	$-23V \leq V_{IN} \leq -11V$	—	—	1.5	mA	
	ΔI_{BO}	1	$1.0mA \leq I_{OUT} \leq 40mA$	—	—	0.1		
Output Noise Voltage	V_{NO}	2	$T_a = 25^{\circ}C$ $10Hz \leq f \leq 100kHz$	—	60	—	μV_{rms}	
Long Term Stability	$\Delta V_{OUT} / \Delta t$	1	—	—	20	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	$-23V \leq V_{IN} \leq -12V$ $T_j = 25^{\circ}C, f = 120Hz$	37	45	—	dB	
Dropout Voltage	$ V_{IN} - V_{OUT} $	1	$T_j = 25^{\circ}C$	—	1.7	—	V	
Average Temperature Coefficient of Output Voltage	T_{CVO}	1	$I_{OUT} = 5mA$	—	0.8	—	mV / $^{\circ}C$	

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	$T_j = 25^\circ C$	-9.36	-9.0	-8.64	V	
Line Regulation	Reg. Line	1	$T_j = 25^\circ C$	$-24V \leq V_{IN} \leq -11.4V$	—	80	200	mV
				$-24V \leq V_{IN} \leq -12V$	—	20	160	
Load Regulation	Reg. Load	1	$T_j = 25^\circ C$	$1.0mA \leq I_{OUT} \leq 100mA$	—	17	90	mV
				$1.0mA \leq I_{OUT} \leq 40mA$	—	8.0	45	
Output Voltage	V_{OUT}	1	$T_j = 25^\circ C$	$-24V \leq V_{IN} \leq -11.4V$	-9.45	—	-8.55	V
				$1.0mA \leq I_{OUT} \leq 40mA$	-9.45	—	-8.55	
				$1.0mA \leq I_{OUT} \leq 70mA$	-9.45	—	-8.55	
Quiescent Current	I_B	1	$T_j = 25^\circ C$	—	3.2	6.5	mA	
			$T_j = 125^\circ C$	—	—	6.0		
Quiescent Current Change	ΔI_B	1	$-24V \leq V_{IN} \leq -12V$	—	—	1.5	mA	
	ΔI_{BO}	1	$1.0mA \leq I_{OUT} \leq 40mA$	—	—	0.1		
Output Noise Voltage	V_{NO}	2	$T_a = 25^\circ C$ $10Hz \leq f \leq 100kHz$	—	65	—	μV_{rms}	
Long Term Stability	$\Delta V_{OUT} / \Delta t$	1	—	—	21	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	$-24V \leq V_{IN} \leq -12V$ $T_j = 25^\circ C, f = 120Hz$	36	44	—	dB	
Dropout Voltage	$ V_{IN} - V_{OUT} $	1	$T_j = 25^\circ C$	—	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	$T_j = 25^\circ C$	-10.4	-10.0	-9.6	V	
Line Regulation	Reg. Line	1	$T_j = 25^\circ C$	$-25V \leq V_{IN} \leq -12.5V$	—	80	230	mV
				$-25V \leq V_{IN} \leq -13V$	—	30	170	
Load Regulation	Reg. Load	1	$T_j = 25^\circ C$	$1.0mA \leq I_{OUT} \leq 100mA$	—	18	90	mV
				$1.0mA \leq I_{OUT} \leq 40mA$	—	8.5	45	
Output Voltage	V_{OUT}	1	$T_j = 25^\circ C$	$-25V \leq V_{IN} \leq -12.5V$	-10.5	—	-9.5	V
				$1.0mA \leq I_{OUT} \leq 40mA$	-10.5	—	-9.5	
				$1.0mA \leq I_{OUT} \leq 70mA$	-10.5	—	-9.5	
Quiescent Current	I_B	1	$T_j = 25^\circ C$	—	3.2	6.5	mA	
			$T_j = 125^\circ C$	—	—	6.0		
Quiescent Current Change	ΔI_B	1	$-25V \leq V_{IN} \leq -13V$	—	—	1.5	mA	
	ΔI_{BO}	1	$1.0mA \leq I_{OUT} \leq 40mA$	—	—	0.1		
Output Noise Voltage	V_{NO}	2	$T_a = 25^\circ C$ $10Hz \leq f \leq 100kHz$	—	70	—	μV_{rms}	
Long Term Stability	$\Delta V_{OUT} / \Delta t$	1	—	—	22	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	$-24V \leq V_{IN} \leq -13V$ $T_j = 25^\circ C, f = 120Hz$	36	43	—	dB	
Dropout Voltage	$ V_{IN} - V_{OUT} $	1	$T_j = 25^\circ C$	—	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	$T_j = 25^\circ C$	-12.5	-12.0	-11.5	V	
Line Regulation	Reg. Line	1	$T_j = 25^\circ C$	$-27V \leq V_{IN} \leq -14.5V$	—	120	250	mV
				$-27V \leq V_{IN} \leq -16V$	—	100	200	
Load Regulation	Reg. Load	1	$T_j = 25^\circ C$	$1.0mA \leq I_{OUT} \leq 100mA$	—	20	100	mV
				$1.0mA \leq I_{OUT} \leq 40mA$	—	10	50	
Output Voltage	V_{OUT}	1	$T_j = 25^\circ C$	$-27V \leq V_{IN} \leq -14.5V$	-12.6	—	-11.4	V
				$1.0mA \leq I_{OUT} \leq 40mA$	-12.6	—	-11.4	
				$1.0mA \leq I_{OUT} \leq 70mA$	-12.6	—	-11.4	
Quiescent Current	I_B	1	$T_j = 25^\circ C$	—	3.2	6.5	mA	
			$T_j = 125^\circ C$	—	—	6.0		
Quiescent Current Change	ΔI_B	1	$-27V \leq V_{IN} \leq -16V$	—	—	1.5	mA	
	ΔI_{BO}	1	$1.0mA \leq I_{OUT} \leq 40mA$	—	—	0.1		
Output Noise Voltage	V_{NO}	2	$T_a = 25^\circ C$ $10Hz \leq f \leq 100kHz$	—	80	—	μV_{rms}	
Long Term Stability	$\Delta V_{OUT} / \Delta t$	1	—	—	24	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	$-25V \leq V_{IN} \leq -15V$ $T_j = 25^\circ C, f = 120Hz$	37	42	—	dB	
Dropout Voltage	$ V_{IN} - V_{OUT} $	1	$T_j = 25^\circ C$	—	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	$T_j = 25^\circ C$	-15.6	-15.0	-14.4	V	
Line Regulation	Reg. Line	1	$T_j = 25^\circ C$	$-30V \leq V_{IN} \leq -17.5V$	—	130	300	mV
				$-30V \leq V_{IN} \leq -20V$	—	110	250	
Load Regulation	Reg. Load	1	$T_j = 25^\circ C$	$1.0mA \leq I_{OUT} \leq 100mA$	—	25	150	mV
				$1.0mA \leq I_{OUT} \leq 40mA$	—	12	75	
Output Voltage	V_{OUT}	1	$T_j = 25^\circ C$	$-30V \leq V_{IN} \leq -17.5V$	-15.75	—	-14.25	V
				$1.0mA \leq I_{OUT} \leq 40mA$	-15.75	—	-14.25	
				$1.0mA \leq I_{OUT} \leq 70mA$	-15.75	—	-14.25	
Quiescent Current	I_B	1	$T_j = 25^\circ C$	—	3.3	6.5	mA	
			$T_j = 125^\circ C$	—	—	6.0		
Quiescent Current Change	ΔI_{BI}	1	$-30V \leq V_{IN} \leq -20V$	—	—	1.5	mA	
	ΔI_{BO}	1	$1.0mA \leq I_{OUT} \leq 40mA$	—	—	0.1		
Output Noise Voltage	V_{NO}	2	$T_a = 25^\circ C$ $10Hz \leq f \leq 100kHz$	—	90	—	μV_{rms}	
Long Term Stability	$\Delta V_{OUT} / \Delta t$	1	—	—	30	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	$-28.5V \leq V_{IN} \leq -18.5V$ $T_j = 25^\circ C$, $f = 120Hz$	34	39	—	dB	
Dropout Voltage	$ V_{IN} - V_{OUT} $	1	$T_j = 25^\circ C$	—	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-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Output Voltage	V_{OUT}	1	$T_j = 25^\circ C$	- 18.7	- 18.0	- 17.3	V	
Line Regulation	Reg. Line	1	$T_j = 25^\circ C$	$- 33V \leq V_{IN} \leq 20.7V$	—	32	325	mV
				$- 33V \leq V_{IN} \leq - 21V$	—	27	275	
Load Regulation	Reg. Load	1	$T_j = 25^\circ C$	$1.0mA \leq I_{OUT} \leq 100mA$	—	30	170	mV
				$1.0mA \leq I_{OUT} \leq 40mA$	—	15	75	
Output Voltage	V_{OUT}	1	$T_j = 25^\circ C$	$- 33V \leq V_{IN} \leq - 20.9V$	- 18.9	—	- 17.1	V
				$1.0mA \leq I_{OUT} \leq 40mA$	- 18.9	—	- 17.1	
				$1.0mA \leq I_{OUT} \leq 70mA$	- 18.9	—	- 17.1	
Quiescent Current	I_B	1	$T_j = 25^\circ C$	—	3.3	6.5	mA	
			$T_j = 125^\circ C$	—	—	6.0		
Quiescent Current Change	ΔI_B	1	$- 33V \leq V_{IN} \leq - 21V$	—	—	1.5	mA	
	ΔI_{BO}	1	$1.0mA \leq I_{OUT} \leq 40mA$	—	—	0.1		
Output Noise Voltage	V_{NO}	2	$T_a = 25^\circ C$ $10Hz \leq f \leq 100kHz$	—	150	—	μV_{rms}	
Long Term Stability	$\Delta V_{OUT} / \Delta t$	1	—	—	45	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	$- 33V \leq V_{IN} \leq - 23V$ $T_j = 25^\circ C, f = 120Hz$	33	48	—	dB	
Dropout Voltage	$ V_{IN} - V_{OUT} $	1	$T_j = 25^\circ C$	—	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	$T_j = 25^\circ C$	-20.8	-20.0	-19.2	V	
Line Regulation	Reg. Line	1	$T_j = 25^\circ C$	$-35V \leq V_{IN} \leq -23.5V$	—	33	330	mV
				$-35V \leq V_{IN} \leq -24V$	—	28	285	
Load Regulation	Reg. Load	1	$T_j = 25^\circ C$	$1.0mA \leq I_{OUT} \leq 100mA$	—	33	180	mV
				$1.0mA \leq I_{OUT} \leq 40mA$	—	17	90	
Output Voltage	V_{OUT}	1	$T_j = 25^\circ C$	$-35V \leq V_{IN} \leq -23.5V$	-21.0	—	-19.0	V
				$1.0mA \leq I_{OUT} \leq 40mA$	-21.0	—	-19.0	
				$1.0mA \leq I_{OUT} \leq 70mA$	-21.0	—	-19.0	
Quiescent Current	I_B	1	$T_j = 25^\circ C$	—	3.3	6.5	mA	
			$T_j = 125^\circ C$	—	—	6.0		
Quiescent Current Change	ΔI_B	1	$-35V \leq V_{IN} \leq -24V$	—	—	1.5	mA	
	ΔI_{BO}	1	$10mA \leq I_{OUT} \leq 40mA$	—	—	0.1		
Output Noise Voltage	V_{NO}	2	$T_a = 25^\circ C$ $10Hz \leq f \leq 100kHz$	—	170	—	μV_{rms}	
Long Term Stability	$\Delta V_{OUT} / \Delta t$	1	—	—	49	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	$-35V \leq V_{IN} \leq -27V$ $T_j = 25^\circ C, f = 120Hz$	31	37	—	dB	
Dropout Voltage	$ V_{IN} - V_{OUT} $	1	$T_j = 25^\circ C$	—	1.7	—	V	
Average Temperature Coefficient of Output Voltage	T_{CVO}	1	$I_{OUT} = 5mA$	—	1.7	—	mV / °C	

TA79L024P

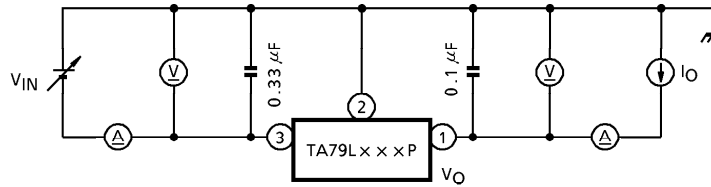
ELECTRICAL CHARACTERISTICS

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

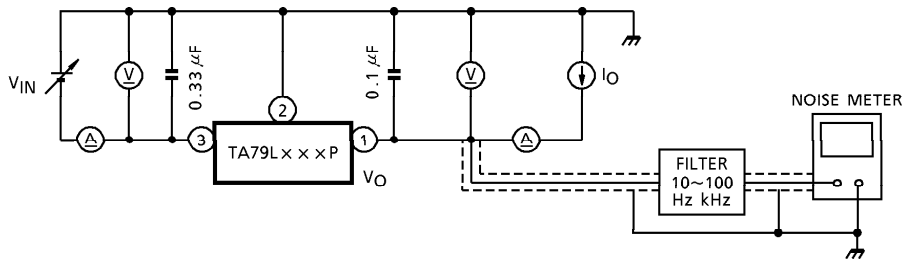
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Output Voltage	V_{OUT}	1	$T_j = 25^\circ C$	-25.0	-24.0	-23.0	V	
Line Regulation	Reg. Line	1	$T_j = 25^\circ C$	$-38V \leq V_{IN} \leq -27V$	—	35	350	mV
				$-38V \leq V_{IN} \leq -28V$	—	30	300	
Load Regulation	Reg. Load	1	$T_j = 25^\circ C$	$1.0mA \leq I_{OUT} \leq 100mA$	—	40	200	mV
				$1.0mA \leq I_{OUT} \leq 40mA$	—	20	100	
Output Voltage	V_{OUT}	1	$T_j = 25^\circ C$	$-38V \leq V_{IN} \leq -27V$	-25.2	—	-22.8	V
				$1.0mA \leq I_{OUT} \leq 40mA$	-25.2	—	-22.8	
				$1.0mA \leq I_{OUT} \leq 70mA$	-25.2	—	-22.8	
Quiescent Current	I_B	1	$T_j = 25^\circ C$	—	3.5	6.5	mA	
			$T_j = 125^\circ C$	—	—	6.0		
Quiescent Current Change	ΔI_B	1	$-38V \leq V_{IN} \leq -28V$	—	—	1.5	mA	
	ΔI_{BO}	1	$1.0mA \leq I_{OUT} \leq 40mA$	—	—	0.1		
Output Noise Voltage	V_{NO}	2	$T_a = 25^\circ C$ $10Hz \leq f \leq 100kHz$	—	200	—	μV_{rms}	
Long Term Stability	$\Delta V_{OUT} / \Delta t$	1	—	—	56	—	mV / 1.0kh	
Ripple Rejection Ratio	R.R.	3	$-35V \leq V_{IN} \leq -29V$ $T_j = 25^\circ C, f = 120Hz$	31	47	—	dB	
Dropout Voltage	$ V_{IN} - V_{OUT} $	1	$T_j = 25^\circ C$	—	1.7	—	V	
Average Temperature Coefficient of Output Voltage	T_{CVO}	1	$I_{OUT} = 5mA$	—	2.0	—	mV / °C	

TEST CIRCUIT

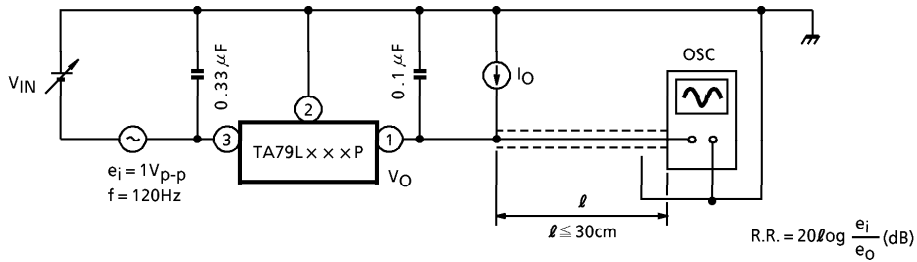
1. V_{OUT} , Reg.line, Reg.load, I_B , ΔI_B , $\Delta V_{OUT} / \Delta t$, $|V_{IN} - V_{OUT}|$, T_{CVO}

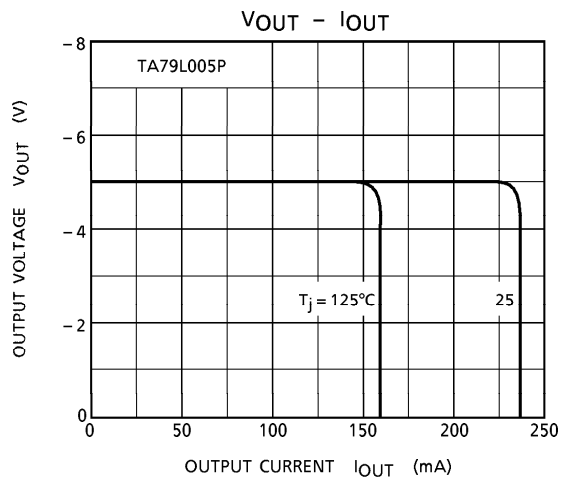
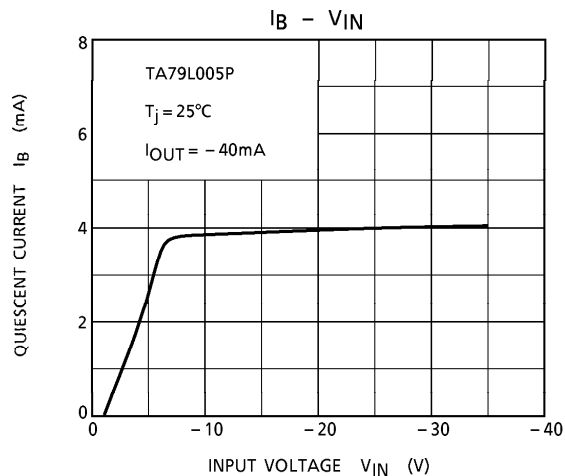
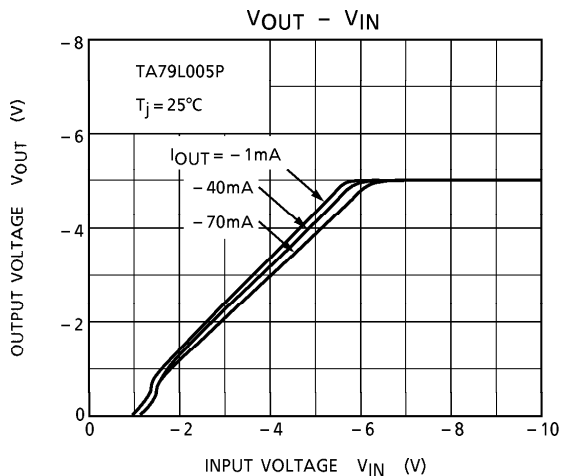
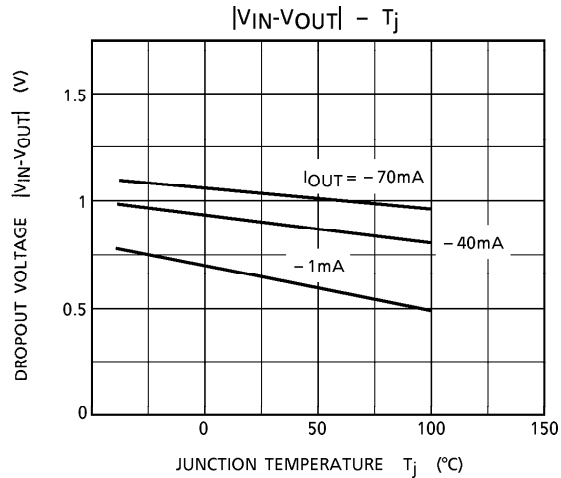
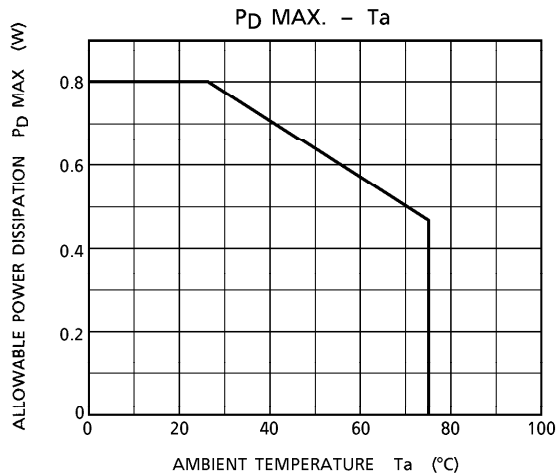


2. V_{NO}



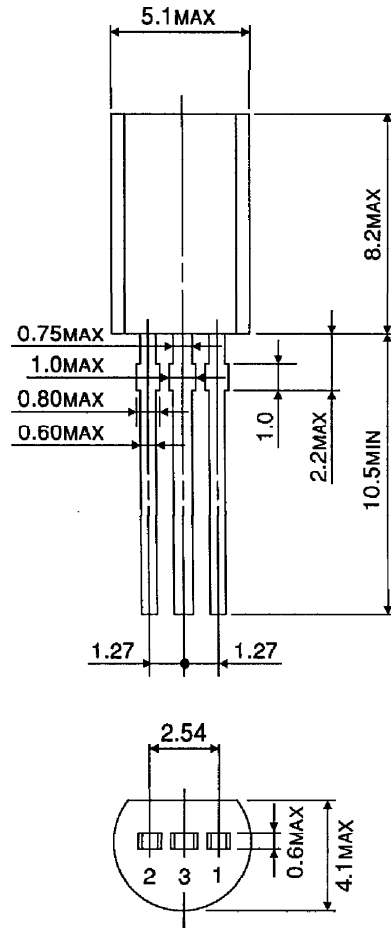
3. R.R.





OUTLINE DRAWING
SSIP3-P-1.27

Unit : mm



Weight : 0.36g (Typ.)