TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

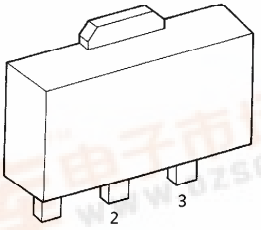
TA79L05F, TA79L06F, TA79L08F, TA79L09F, TA79L10F TA79L12F, TA79L15F, TA79L18F, TA79L20F, TA79L24F

3-TERMINAL NEGATIVE VOLTAGE REGULATORS

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

FEATURES

- Best suited to a power supply for TTL and C^2MOS
- Built-in over current protective circuit
- Built-in thermal protective circuit
- Max. output current 150mA ($T_j = 25°C$)
- Packaged in POWER MINI. (SOT-89)

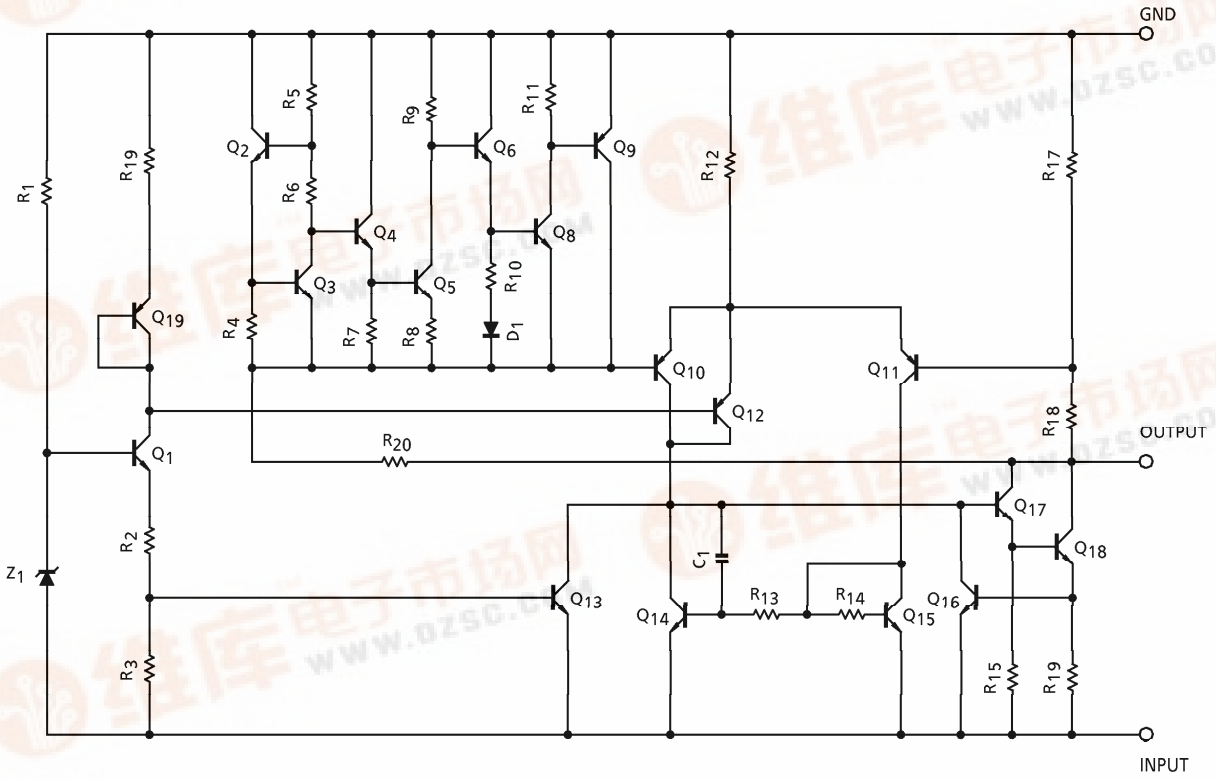


1. COMMON
2. INPUT (CASE)
3. OUTPUT

HSOP3-P-1.50

Weight : 0.05g (Typ.)

EQUIVALENT CIRCUIT



961001EBA2

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Input Voltage	TA79L05F	V_{IN}	−35	V
	TA79L06F			
	TA79L08F			
	TA79L09F			
	TA79L10F			
	TA79L12F			
	TA79L15F			
	TA79L18F		−40	
	TA79L20F			
	TA79L24F			
Power Dissipation	(Ta = 25°C)	P_D	500	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		$R_{th\ (j-a)}$	250	°C / W

TYPE NO.	MARKING
TA79L05F	AJ
TA79L06F	BJ
TA79L08F	CJ
TA79L09F	DJ
TA79L10F	EJ
TA79L12F	FJ
TA79L15F	GJ
TA79L18F	HJ
TA79L20F	IJ
TA79L24F	JJ

TA79L05F

ELECTRICAL CHARACTERISTICS

(V_{IN} = −10V, I_{OUT} = 40mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, 0°C ≦ T_j ≦ 125°C, unless otherwise specified)

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	150	mV
				−20V ≦ V_{IN} ≦ −8.0V	—	45	100	
Load Regulation	Reg.Load	1	T_j = 25°C	1.0mA ≦ I_{OUT} ≦ 100mA	—	11	100	mV
				1.0mA ≦ I_{OUT} ≦ 40mA	—	5.0	50	
Output Voltage	V_{OUT}	1	T_j = 25°C	−20V ≦ V_{IN} ≦ −7.0V 1.0mA ≦ I_{OUT} ≦ 40mA	−5.25	—	−4.75	V
				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_{BI}	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	Ta = 25°C, 10Hz ≦ f ≦ 100kHz		—	40	—	μV_{rms}
Long Term Stability	$\Delta V_{OUT} / \Delta t$	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	$\lvert V_{IN}-V_{OUT} \rvert$	1	T_j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T_{CVO}	1	I_{OUT} = 5mA		—	0.6	—	mV / °C

TA79L06F

ELECTRICAL CHARACTERISTICS

(V_{IN} = −11V, I_{OUT} = 40mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, 0°C ≦ T_j ≦ 125°C, unless otherwise specified)

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	150	mV
				−21V ≦ V_{IN} ≦ −9.0V	—	45	110	
Load Regulation	Reg.Load	1	T_j = 25°C	1.0mA ≦ I_{OUT} ≦ 100mA	—	12	120	mV
				1.0mA ≦ I_{OUT} ≦ 40mA	—	5.5	60	
Output Voltage	V_{OUT}	1	T_j = 25°C	−21V ≦ V_{IN} ≦ −8.1V 1.0mA ≦ I_{OUT} ≦ 40mA	−6.3	—	−5.7	V
				1.0mA ≦ I_{OUT} ≦ 70mA	−6.3	—	−5.7	
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	−20V ≦ V_{IN} ≦ −9.0V		—	—	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		—	40	—	μV_{rms}
Long Term Stability	$\Delta V_{OUT} / \Delta t$	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	$\lvert V_{IN}-V_{OUT} \rvert$	1	T_j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T_{CVO}	1	I_{OUT} = 5mA		—	0.7	—	mV / °C

TA79L08F

ELECTRICAL CHARACTERISTICS

(V_{IN} = −14V, I_{OUT} = 40mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, 0°C ≦ T_j ≦ 125°C, unless otherwise specified)

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	175	mV
				−23V ≦ V_{IN} ≦ −11V	—	12	125	
Load Regulation	Reg.Load	1	T_j = 25°C	1.0mA ≦ I_{OUT} ≦ 100mA	—	15	155	mV
				1.0mA ≦ I_{OUT} ≦ 40mA	—	7.0	75	
Output Voltage	V_{OUT}	1	T_j = 25°C	−23V ≦ V_{IN} ≦ −10.5V 1.0mA ≦ I_{OUT} ≦ 40mA	−8.4	—	−7.6	V
				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_{BI}	1	−23V ≦ V_{IN} ≦ −11V		—	—	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		—	60	—	μV_{rms}
Long Term Stability	$\Delta V_{OUT} / \Delta t$	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	$\lvert V_{IN}-V_{OUT} \rvert$	1	T_j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T_{CVO}	1	I_{OUT} = 5mA		—	0.8	—	mV / °C

TA79L09F

ELECTRICAL CHARACTERISTICS

(V_{IN} = −15V, I_{OUT} = 40mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, 0°C ≦ T_j ≦ 125°C, unless otherwise specified)

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	200	mV
				−24V ≦ V_{IN} ≦ −12V	—	20	160	
Load Regulation	Reg.Load	1	T_j = 25°C	1.0mA ≦ I_{OUT} ≦ 100mA	—	17	175	mV
				1.0mA ≦ I_{OUT} ≦ 40mA	—	8.0	80	
Output Voltage	V_{OUT}	1	T_j = 25°C	−24V ≦ V_{IN} ≦ −11.4V 1.0mA ≦ I_{OUT} ≦ 40mA	−9.45	—	−8.55	V
				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_{BI}	1	−24V ≦ V_{IN} ≦ −12V		—	—	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		—	65	—	μV_{rms}
Long Term Stability	$\Delta V_{OUT} / \Delta t$	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	$\lvert V_{IN}-V_{OUT} \rvert$	1	T_j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T_{CVO}	1	I_{OUT} = 5mA		—	0.85	—	mV / °C

TA79L10F

ELECTRICAL CHARACTERISTICS

(V_{IN} = – 16V, I_{OUT} = 40mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, 0°C ≦ T_j ≦ 125°C, unless otherwise specified)

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	190	mV
				1.0mA ≦ I_{OUT} ≦ 40mA	—	8.5	90	
Output Voltage	V_{OUT}	1	T_j = 25°C	– 25V ≦ V_{IN} ≦ – 12.5V 1.0mA ≦ I_{OUT} ≦ 40mA	– 10.5	—	– 9.5	V
				1.0mA ≦ I_{OUT} ≦ 70mA	– 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	– 25V ≦ V_{IN} ≦ – 13V		—	—	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		—	70	—	μV_{rms}
Long Term Stability	$\Delta V_{OUT} / \Delta t$	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	$\lvert V_{IN}-V_{OUT} \rvert$	1	T_j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T_{CVO}	1	I_{OUT} = 5mA		—	0.9	—	mV / °C

TA79L12F

ELECTRICAL CHARACTERISTICS

(V_{IN} = – 19V, I_{OUT} = 40mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, 0°C ≦ T_j ≦ 125°C, unless otherwise specified)

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	225	mV
				1.0mA ≦ I_{OUT} ≦ 40mA	—	10	105	
Output Voltage	V_{OUT}	1	T_j = 25°C	– 27V ≦ V_{IN} ≦ – 14.5V 1.0mA ≦ I_{OUT} ≦ 40mA	– 12.6	—	– 11.4	V
				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_{BI}	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	$\Delta V_{OUT} / \Delta t$	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	$\lvert V_{IN}-V_{OUT} \rvert$	1	T_j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T_{CVO}	1	I_{OUT} = 5mA		—	1.0	—	mV / °C

TA79L15F

ELECTRICAL CHARACTERISTICS

(V_{IN} = −23V, I_{OUT} = 40mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, 0°C ≦ T_j ≦ 125°C, unless otherwise specified)

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	280	mV
				1.0mA ≦ I_{OUT} ≦ 40mA	—	12	130	
Output Voltage	V_{OUT}	1	T_j = 25°C	−30V ≦ V_{IN} ≦ −17.5V 1.0mA ≦ I_{OUT} ≦ 40mA	−15.75	—	−14.25	V
				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_{BI}	1	−30V ≦ V_{IN} ≦ −20V		—	—	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		—	90	—	μV_{rms}
Long Term Stability	$\Delta V_{OUT} / \Delta t$	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	$\lvert V_{IN}-V_{OUT} \rvert$	1	T_j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T_{CVO}	1	I_{OUT} = 5mA		—	1.3	—	mV / °C

TA79L18F

ELECTRICAL CHARACTERISTICS

(V_{IN} = −27V, I_{OUT} = 40mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, 0°C ≦ T_j ≦ 125°C, unless otherwise specified)

CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	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	335	mV
				1.0mA ≦ I_{OUT} ≦ 40mA	—	15	155	
Output Voltage	V_{OUT}	1	T_j = 25°C	−33V ≦ V_{IN} ≦ −20.9V 1.0mA ≦ I_{OUT} ≦ 40mA	−18.9	—	−17.1	V
				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_{BI}	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	$\Delta V_{OUT} / \Delta t$	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	$\lvert V_{IN}-V_{OUT} \rvert$	1	T_j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T_{CVO}	1	I_{OUT} = 5mA		—	1.5	—	mV / °C

TA79L20F

ELECTRICAL CHARACTERISTICS

(V_{IN} = −29V, I_{OUT} = 40mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, 0°C ≦ T_j ≦ 125°C, unless otherwise specified)

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	370	mV
				1.0mA ≦ I_{OUT} ≦ 40mA	—	17	170	
Output Voltage	V_{OUT}	1	T_j = 25°C	−35V ≦ V_{IN} ≦ −23.5V 1.0mA ≦ I_{OUT} ≦ 40mA	−21.0	—	−19.0	V
				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_{BI}	1	−35V ≦ V_{IN} ≦ 24V		—	—	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		—	170	—	μV_{rms}
Long Term Stability	$\Delta V_{OUT} / \Delta t$	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	$\lvert V_{IN}-V_{OUT} \rvert$	1	T_j = 25°C		—	1.7	—	V
Average Temperature Coefficient of Output Voltage	T_{CVO}	1	I_{OUT} = 5mA		—	1.7	—	mV / °C

TA79L24F

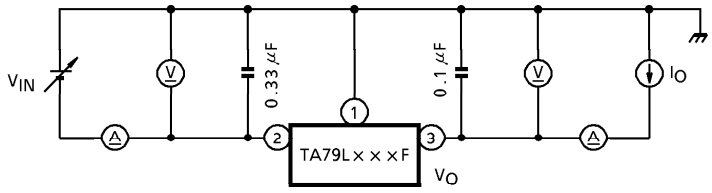
ELECTRICAL CHARACTERISTICS

(V_{IN} = −33V, I_{OUT} = 40mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, 0°C≦T_j≦125°C, unless otherwise specified)

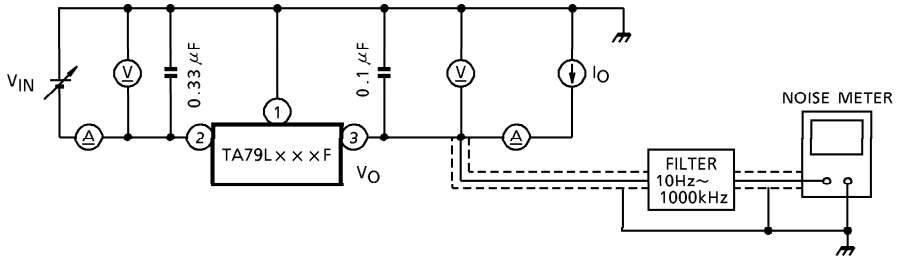
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Voltage	V_{OUT}	1	T_j = 25°C		−25.0	−24.0	−23.0	V
Line Regulation	Reg.Line	1	T_j = 25°C	−38V≦V_{IN}≦−27V	—	35	350	mV
				−38V≦V_{IN}≦−28V	—	30	300	
Load Regulation	Reg.Load	1	T_j = 25°C	1.0mA≦I_{OUT}≦100mA	—	40	440	mV
				1.0mA≦I_{OUT}≦40mA	—	20	200	
Output Voltage	V_{OUT}	1	T_j = 25°C	−38V≦V_{IN}≦−27V 1.0mA≦I_{OUT}≦40mA	−25.2	—	−22.8	V
				1.0mA≦I_{OUT}≦70mA	−25.2	—	−22.8	
Quiescent Current	I_B	1	T_j = 25°C		—	3.5	6.5	mA
			T_j = 125°C		—	—	6.0	
Quiescent Current Change	ΔI_{BI}	1	−38V≦V_{IN}≦−28V		—	—	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		—	200	—	μV_{rms}
Long Term Stability	$\Delta V_{OUT}/\Delta t$	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	$\lvert V_{IN}-V_{OUT}\rvert$	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

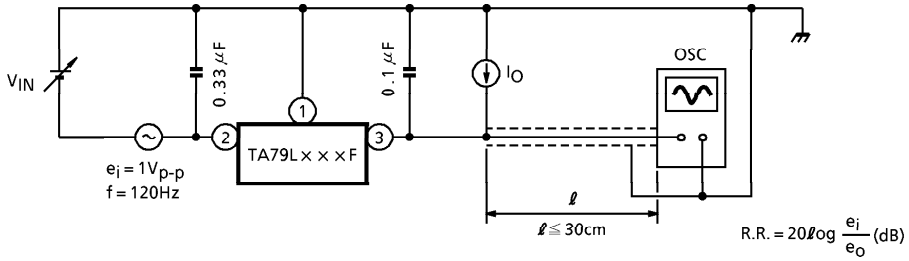
1. V_{OUT}, Reg.line, Reg.load, I_B, ΔI_B, $\Delta V_{OUT} / \Delta t$, $|V_{IN}-V_{OUT}|$, T_{CVO}



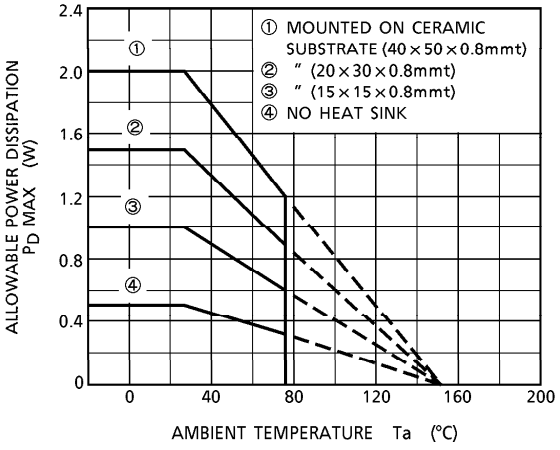
2. V_{NO}



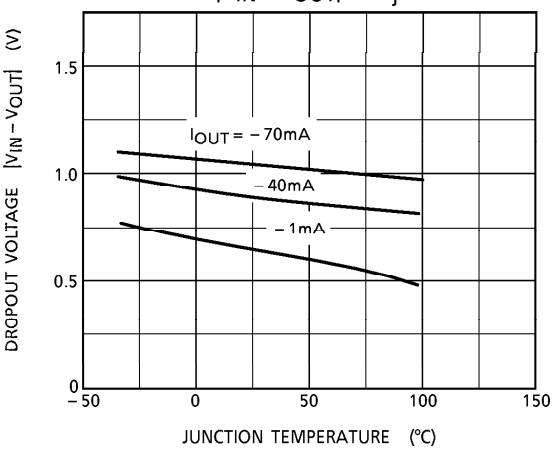
3. R.R.



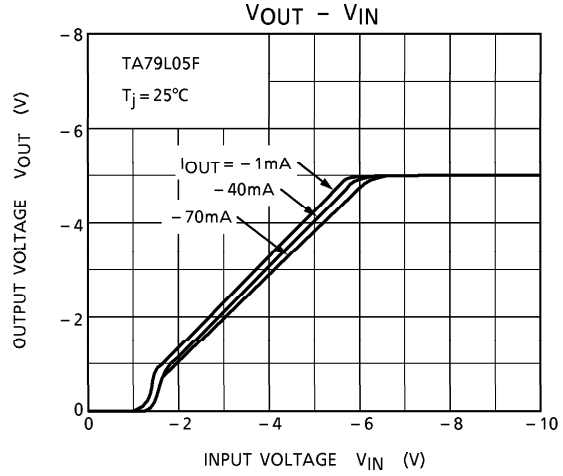
P_D MAX – Ta



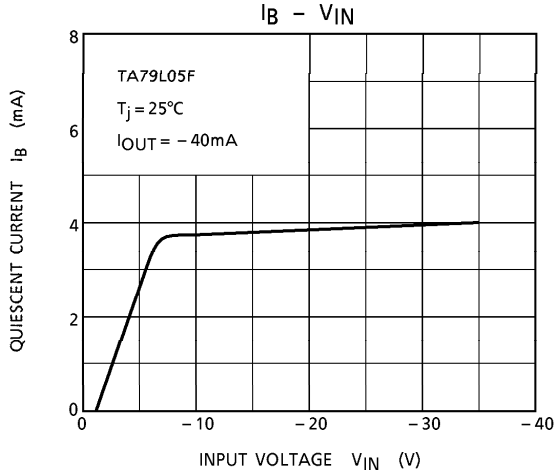
$|V_{IN} - V_{OUT}|$ – T_j



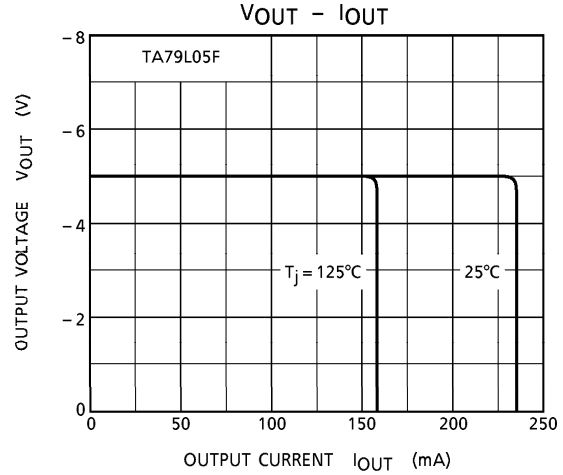
V_{OUT} – V_{IN}



I_B – V_{IN}



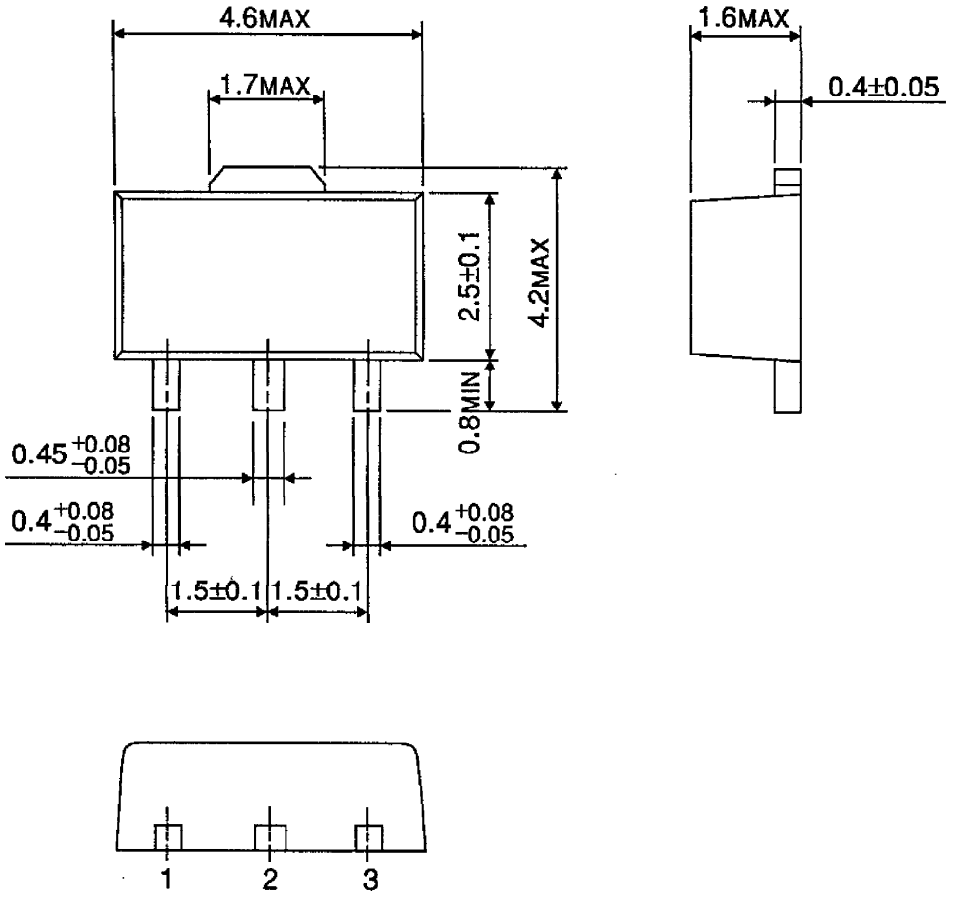
V_{OUT} – I_{OUT}



OUTLINE DRAWING

HSOP3-P-1.50

Unit : mm



Weight : 0.05g (Typ.)