AN7900T/AN7900F Series

3-pin Negative Output Voltage Regulators (1A Type)

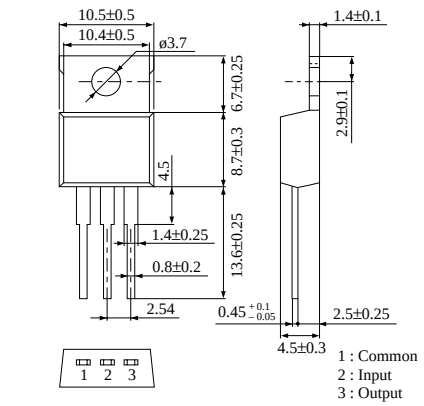
■ Overview

The AN7900T/AN7900F series is 3-pin fixed negative output type monolithic voltage regulators.
A stabilized fixed negative output voltage is obtained from an unstable DC input voltage without using any external parts. Eleven types of fixed output voltage are available from –5V through –10V, –12V, –15V, –18V, –20V, and –24V. They can be used widely as power circuits with a current capacitance of up to 1A.

■ Features

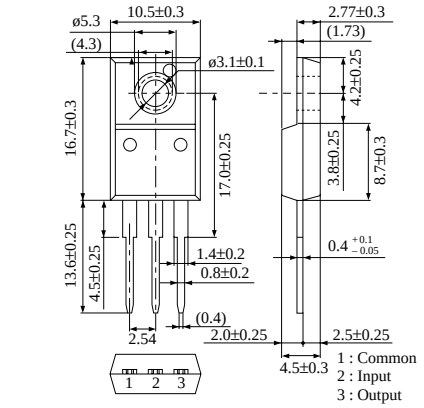
- No external components
- Output voltage : –5V, –6V, –7V, –8V, –9V, –10V, –12V, –15V, –18V, –20V, –24V
- Overcurrent limit circuit built-in
- Thermal over-load protection built-in
- Area of safe operation (ASO) circuit built-in

AN7900T Series Unit : mm



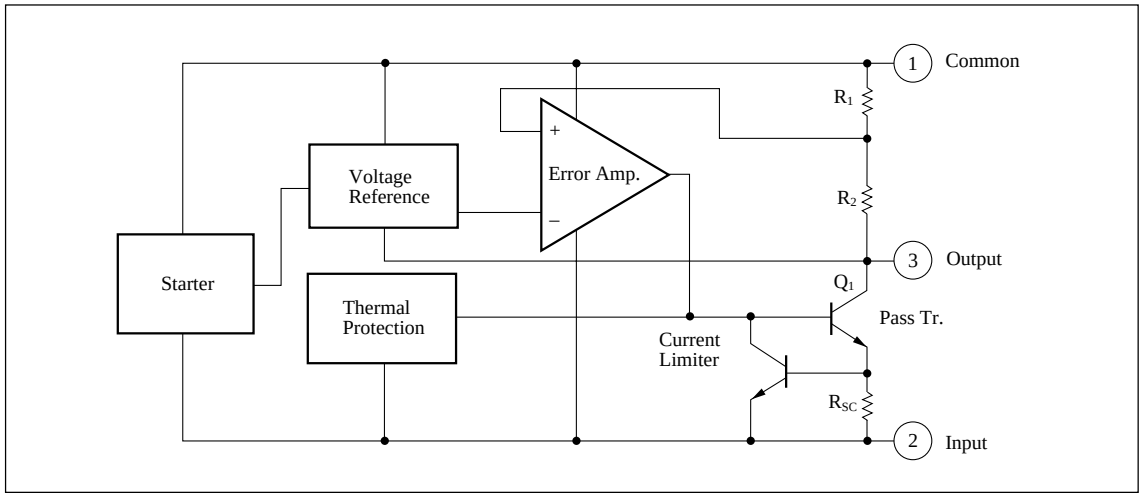
JEDEC: TO-220AB (HSIP003-P-0000)

AN7900F Series Unit : mm



TO-220 Full Pack Package (HSIP003-P-0000A)

■ Block Diagram



■ Absolute Maximum Ratings (Ta=25˚C)

Parameter		Symbol	Rating	Unit
Input voltage		V_I	–35 *1	V
			–40 *2	V
Power dissipation	AN7900T Series	P_D	15 *3	W
	AN7900F Series		10.25 *3	
Operating ambient temperature		T_{opr}	–30 to +80	˚C
Storage temperature		T_{stg}	–55 to +150	˚C

*1 AN7905T/F, AN7906T/F, AN7907T/F, AN7908T/F, AN7909T/F, AN7910T/F, AN7912T/F, AN7915T/F, AN7918T/F
*2 AN7920T/F, AN7924T/F
*3 Follow the derating curve. When T_j exceeds 150˚C, the internal circuit shuts off the output.

■ Electrical Characteristics (Ta=25˚C)

• AN7905T/AN7905F (–5V Type)

Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V_O	T_j=25˚C	–4.8	–5	–5.2	V
Output voltage tolerance	V_O	V_I=–7 to –20V, I_O=5mA to 1A, $P_D \leqq$*	–4.75	—	–5.25	V
Line regulation	REG_{IN}	V_I=–7 to –25V, T_j=25˚C	—	3	100	mV
		V_I=–8 to –12V, T_j=25˚C	—	1	50	mV
Load regulation	REG_L	I_O=5mA to 1.5A, T_j=25˚C	—	10	100	mV
		I_O=250 to 750mA, T_j=25˚C	—	3	50	mV
Bias current	I_{bias}	T_j=25˚C	—	2	4	mA
Input bias fluctuation	$\Delta I_{bias\ (IN)}$	V_I=–7 to –25V, T_j=25˚C	—	—	1.3	mA
Load bias current fluctuation	$\Delta I_{bias\ (L)}$	I_O=5mA to 1A, T_j=25˚C	—	—	0.5	mA
Output noise voltage	V_{no}	f=10Hz to 100kHz, Ta=25˚C	—	40	—	μV
Ripple rejection ratio	RR	V_I=–8 to –18V, I_O=100mA, f=120Hz	62	74	—	dB
Minimum i/o voltage difference	$V_{DIF\ (min.)}$	I_O=1A, T_j=25˚C	—	1.1	—	V
Peak output current	$I_{O\ (Peak)}$	T_j=25˚C	—	2.1	—	A
Output voltage temperature coefficient	$\Delta V_O/Ta$	I_O=5mA, T_j=0 to 125˚C	—	– 0.4	—	mV/˚C

Note 1) The specified condition T_j=25˚C means that the test should be carried out with the test time so short (within 10ms) that the drift in characteristic value due to the rise in chip junction temperature can be ignored.
Note 2) Unless otherwise specified, V_I=–10V, I_O=500mA, C_I=2μF, C_O=1μF, T_j=0 to 125˚C
* AN7900T series : 15W, AN7900F series : 10.25W

■ Electrical Characteristics (Ta=25˚C) (continued)

• AN7906T/AN7906F (–6V Type)

Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V_O	T_j=25˚C	–5.75	–6	–6.25	V
Output voltage tolerance	V_O	V_I=–8 to –21V, I_O=5mA to 1A, P_D≦*	–5.7	—	–6.3	V
Line regulation	REG_{IN}	V_I=–8 to –25V, T_j=25˚C	—	4	120	mV
		V_I=–9 to –13V, T_j=25˚C	—	1.5	60	mV
Load regulation	REG_L	I_O=5mA to 1.5A, T_j=25˚C	—	10	120	mV
		I_O=250 to 750mA, T_j=25˚C	—	3	60	mV
Bias current	I_{bias}	T_j=25˚C	—	2	4	mA
Input bias fluctuation	$\Delta I_{bias\ (IN)}$	V_I=–8 to –25V, T_j=25˚C	—	—	1.3	mA
Load bias current fluctuation	$\Delta I_{bias\ (L)}$	I_O=5mA to 1A, T_j=25˚C	—	—	0.5	mA
Output noise voltage	V_{no}	f=10Hz to 100kHz, Ta=25˚C	—	44	—	μV
Ripple rejection ratio	RR	V_I=–9 to –19V, I_O=100mA, f=120Hz	60	73	—	dB
Minimum i/o voltage difference	$V_{DIF\ (min.)}$	I_O=1A, T_j=25˚C	—	1.1	—	V
Peak output current	$I_{O\ (Peak)}$	T_j=25˚C	—	2.1	—	A
Output voltage temperature coefficient	ΔV_O/Ta	I_O=5mA, T_j=0 to 125˚C	—	– 0.5	—	mV/˚C

Note 1) The specified condition T_j=25˚C means that the test should be carried out with the test time so short (within 10ms) that the drift in characteristic value due to the rise in chip junction temperature can be ignored.
Note 2) Unless otherwise specified, V_I=–11V, I_O=500mA, C_I=2μF, C_O=1μF, T_j=0 to 125˚C
* AN7900T series : 15W, AN7900F series : 10.25W

• AN7907T/AN7907F (–7V Type)

Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V_O	T_j=25˚C	–6.7	–7	–7.3	V
Output voltage tolerance	V_O	V_I=–79 to –22V, I_O=5mA to 1A, P_D≦*	–6.65	—	–7.35	V
Line regulation	REG_{IN}	V_I=–9 to –25V, T_j=25˚C	—	5	140	mV
		V_I=–10 to –14V, T_j=25˚C	—	1.5	70	mV
Load regulation	REG_L	I_O=5mA to 1.5A, T_j=25˚C	—	12	140	mV
		I_O=250 to 750mA, T_j=25˚C	—	4	70	mV
Bias current	I_{bias}	T_j=25˚C	—	2	4	mA
Input bias fluctuation	$\Delta I_{bias\ (IN)}$	V_I=–9 to –25V, T_j=25˚C	—	—	1.3	mA
Load bias current fluctuation	$\Delta I_{bias\ (L)}$	I_O=5mA to 1A, T_j=25˚C	—	—	0.5	mA
Output noise voltage	V_{no}	f=10Hz to 100kHz, Ta=25˚C	—	48	—	μV
Ripple rejection ratio	RR	V_I=–10 to –20V, I_O=100mA, f=120Hz	58	72	—	dB
Minimum input/output voltage difference	$V_{DIF\ (min.)}$	I_O=1A, T_j=25˚C	—	1.1	—	V
Peak output current	$I_{O\ (Peak)}$	T_j=25˚C	—	2.1	—	A
Output voltage temperature coefficient	ΔV_O/Ta	I_O=5mA, T_j=0 to 125˚C	—	– 0.5	—	mV/˚C

Note 1) The specified condition T_j=25˚C means that the test should be carried out with the test time so short (within 10ms) that the drift in characteristic value due to the rise in chip junction temperature can be ignored.
Note 2) Unless otherwise specified, V_I=–12V, I_O=500mA, C_I=2μF, C_O=1μF, T_j=0 to 125˚C
* AN7900T series : 15W, AN7900F series : 10.25W

■ Electrical Characteristics (Ta=25˚C) (continued)

• AN7908T/AN7908F (–8V Type)

Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V_O	T_j=25˚C	–7.7	–8	–8.3	V
Output voltage tolerance	V_O	V_I=–10 to –23V, I_O=5mA to 1A, P_D≦*	–7.6	—	–8.4	V
Line regulation	REG_{IN}	V_I=–10.5 to –25V, T_j=25˚C	—	6	160	mV
		V_I=–11 to –17V, T_j=25˚C	—	2	80	mV
Load regulation	REG_L	I_O=5mA to 1.5A, T_j=25˚C	—	12	160	mV
		I_O=250 to 750mA, T_j=25˚C	—	4	80	mV
Bias current	I_{bias}	T_j=25˚C	—	2.2	4.5	mA
Input bias fluctuation	$\Delta I_{bias\ (IN)}$	V_I=–10.5 to –25V, T_j=25˚C	—	—	1	mA
Load bias current fluctuation	$\Delta I_{bias\ (L)}$	I_O=5mA to 1A, T_j=25˚C	—	—	0.5	mA
Output noise voltage	V_{no}	f=10Hz to 100kHz, Ta=25˚C	—	52	—	μV
Ripple rejection ratio	RR	V_I=–11 to –21V, I_O=100mA, f=120Hz	56	71	—	dB
Minimum input/output voltage difference	$V_{DIF\ (min.)}$	I_O=1A, T_j=25˚C	—	1.1	—	V
Peak output current	$I_{O\ (Peak)}$	T_j=25˚C	—	2.1	—	A
Output voltage temperature coefficient	ΔV_O/Ta	I_O=5mA, T_j=0 to 125˚C	—	– 0.6	—	mV/˚C

Note 1) The specified condition T_j=25˚C means that the test should be carried out with the test time so short (within 10ms) that the drift in characteristic value due to the rise in chip junction temperature can be ignored.
Note 2) Unless otherwise specified, V_I=–14V, I_O=500mA, C_I=2μF, C_O=1μF, T_j=0 to 125˚C
* AN7900T series : 15W, AN7900F series : 10.25W

• AN7909T/AN7909F (–9V Type)

Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V_O	T_j=25˚C	–8.65	–9	–9.35	V
Output voltage tolerance	V_O	V_I=–11.5 to –24V, I_O=5mA to 1A, P_D≦*	–8.55	—	–9.45	V
Line regulation	REG_{IN}	V_I=–11.5 to –26V, T_j=25˚C	—	7	180	mV
		V_I=–12 to –18V, T_j=25˚C	—	2	90	mV
Load regulation	REG_L	I_O=5mA to 1.5A, T_j=25˚C	—	12	180	mV
		I_O=250 to 750mA, T_j=25˚C	—	4	90	mV
Bias current	I_{bias}	T_j=25˚C	—	2.2	4.5	mA
Input bias fluctuation	$\Delta I_{bias\ (IN)}$	V_I=–11.5 to –26V, T_j=25˚C	—	—	1	mA
Load bias current fluctuation	$\Delta I_{bias\ (L)}$	I_O=5mA to 1A, T_j=25˚C	—	—	0.5	mA
Output noise voltage	V_{no}	f=10Hz to 100kHz, Ta=25˚C	—	58	—	μV
Ripple rejection ratio	RR	V_I=–12 to –22V, I_O=100mA, f=120Hz	56	71	—	dB
Minimum input/output voltage difference	$V_{DIF\ (min.)}$	I_O=1A, T_j=25˚C	—	1.1	—	V
Peak output current	$I_{O\ (Peak)}$	T_j=25˚C	—	2.1	—	A
Output voltage temperature coefficient	ΔV_O/Ta	I_O=5mA, T_j=0 to 125˚C	—	–0.6	—	mV/˚C

Note 1) The specified condition T_j=25˚C means that the test should be carried out with the test time so short (within 10ms) that the drift in characteristic value due to the rise in chip junction temperature can be ignored.
Note 2) Unless otherwise specified, V_I=–15V, I_O=500mA, C_I=2μF, C_O=1μF, T_j=0 to 125˚C
* AN7900T series : 15W, AN7900F series : 10.25W

■ Electrical Characteristics (Ta=25˚C) (continued)

• AN7910T/AN7910F (–10V Type)

Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V_O	T_j=25˚C	–9.6	–10	–10.4	V
Output voltage tolerance	V_O	V_I=–12.5 to –25V, I_O=5mA to 1A, P_D≦*	–9.5	—	–10.5	V
Line regulation	REG_{IN}	V_I=–12.5 to –27V, T_j=25˚C	—	8	200	mV
		V_I=–13 to –19V, T_j=25˚C	—	2.5	100	mV
Load regulation	REG_L	I_O=5mA to 1.5A, T_j=25˚C	—	12	200	mV
		I_O=250 to 750mA, T_j=25˚C	—	4	100	mV
Bias current	I_{bias}	T_j=25˚C	—	2.5	5	mA
Input bias fluctuation	$\Delta I_{bias\ (IN)}$	V_I=–12.5 to –27V, T_j=25˚C	—	—	1	mA
Load bias current fluctuation	$\Delta I_{bias\ (L)}$	I_O=5mA to 1A, T_j=25˚C	—	—	0.5	mA
Output noise voltage	V_{no}	f=10Hz to 100kHz, Ta=25˚C	—	64	—	µV
Ripple rejection ratio	RR	V_I=–13 to –23V, I_O=100mA, f=120Hz	56	71	—	dB
Minimum input/output voltage difference	$V_{DIF\ (min.)}$	I_O=1A, T_j=25˚C	—	1.1	—	V
Peak output current	$I_{O\ (Peak)}$	T_j=25˚C	—	2.1	—	A
Output voltage temperature coefficient	ΔV_O/Ta	I_O=5mA, T_j=0 to 125˚C	—	– 0.7	—	mV/˚C

Note 1) The specified condition T_j=25˚C means that the test should be carried out with the test time so short (within 10ms) that the drift in characteristic value due to the rise in chip junction temperature can be ignored.
Note 2) Unless otherwise specified, V_I=–16V, I_O=500mA, C_I=2µF, C_O=1µF, T_j=0 to 125˚C
* AN7900T series : 15W, AN7900F series : 10.25W

• AN7912T/AN7912F (–12V Type)

Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V_O	T_j=25˚C	–11.5	–12	–12.5	V
Output voltage tolerance	V_O	V_I=–14.5 to –27V, I_O=5mA to 1A, P_D≦*	–11.4	—	–12.6	V
Line regulation	REG_{IN}	V_I=–14.5 to –30V, T_j=25˚C	—	10	240	mV
		V_I=–16 to –22V, T_j=25˚C	—	3	120	mV
Load regulation	REG_L	I_O=5mA to 1.5A, T_j=25˚C	—	12	240	mV
		I_O=250 to 750mA, T_j=25˚C	—	4	120	mV
Bias current	I_{bias}	T_j=25˚C	—	2.5	5	mA
Input bias fluctuation	$\Delta I_{bias\ (IN)}$	V_I=–14.5 to –30V, T_j=25˚C	—	—	1	mA
Load bias current fluctuation	$\Delta I_{bias\ (L)}$	I_O=5mA to 1A, T_j=25˚C	—	—	0.5	mA
Output noise voltage	V_{no}	f=10Hz to 100kHz, Ta=25˚C	—	75	—	µV
Ripple rejection ratio	RR	V_I=–15 to –25V, I_O=100mA, f=120Hz	55	70	—	dB
Minimum input/output voltage difference	$V_{DIF\ (min.)}$	I_O=1A, T_j=25˚C	—	1.1	—	V
Peak output current	$I_{O\ (Peak)}$	T_j=25˚C	—	2.1	—	A
Output voltage temperature coefficient	ΔV_O/Ta	I_O=5mA, T_j=0 to 125˚C	—	– 0.8	—	mV/˚C

Note 1) The specified condition T_j=25˚C means that the test should be carried out with the test time so short (within 10ms) that the drift in characteristic value due to the rise in chip junction temperature can be ignored.
Note 2) Unless otherwise specified, V_I=–19V, I_O=500mA, C_I=2µF, C_O=1µF, T_j=0 to 125˚C
* AN7900T series : 15W, AN7900F series : 10.25W

■ Electrical Characteristics (Ta=25˚C) (continued)

• AN7915T/AN7915F (–15V Type)

Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V_O	T_j=25˚C	–14.4	–15	–15.6	V
Output voltage tolerance	V_O	V_I=–17.5 to –30V, I_O=5mA to 1A, P_D≦*	–14.25	—	–15.75	V
Line regulation	REG_{IN}	V_I=–17.5 to –30V, T_j=25˚C	—	11	300	mV
		V_I=–20 to –26V, T_j=25˚C	—	3	150	mV
Load regulation	REG_L	I_O=5mA to 1.5A, T_j=25˚C	—	12	300	mV
		I_O=250 to 750mA, T_j=25˚C	—	4	150	mV
Bias current	I_{bias}	T_j=25˚C	—	2.5	5	mA
Input bias fluctuation	$\Delta I_{bias\ (IN)}$	V_I=–17.5 to –30V, T_j=25˚C	—	—	1	mA
Load bias current fluctuation	$\Delta I_{bias\ (L)}$	I_O=5mA to 1A, T_j=25˚C	—	—	0.5	mA
Output noise voltage	V_{no}	f=10Hz to 100kHz, Ta=25˚C	—	90	—	μV
Ripple rejection ratio	RR	V_I=–18.5 to –28.5V, I_O=100mA, f=120Hz	54	69	—	dB
Minimum input/output voltage difference	$V_{DIF\ (min.)}$	I_O=1A, T_j=25˚C	—	1.1	—	V
Peak output current	$I_{O\ (Peak)}$	T_j=25˚C	—	2.1	—	A
Output voltage temperature coefficient	ΔV_O/Ta	I_O=5mA, T_j=0 to 125˚C	—	–0.9	—	mV/˚C

Note 1) The specified condition T_j=25˚C means that the test should be carried out with the test time so short (within 10ms) that the drift in characteristic value due to the rise in chip junction temperature can be ignored.
Note 2) Unless otherwise specified, V_I=–23V, I_O=500mA, C_I=2μF, C_O=1μF, T_j=0 to 125˚C
* AN7900T series : 15W, AN7900F series : 10.25W

• AN7918T/AN7918F (–18V Type)

Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V_O	T_j=25˚C	–17.3	–18	–18.7	V
Output voltage tolerance	V_O	V_I=–21 to –33V, I_O=5mA to 1A, P_D≦*	–17.1	—	–18.9	V
Line regulation	REG_{IN}	V_I=–21 to –33V, T_j=25˚C	—	15	360	mV
		V_I=–24 to –30V, T_j=25˚C	—	5	180	mV
Load regulation	REG_L	I_O=5mA to 1.5A, T_j=25˚C	—	12	360	mV
		I_O=250 to 750mA, T_j=25˚C	—	4	180	mV
Bias current	I_{bias}	T_j=25˚C	—	2.5	5	mA
Input bias fluctuation	$\Delta I_{bias\ (IN)}$	V_I=–21 to –33V, T_j=25˚C	—	—	1	mA
Load bias current fluctuation	$\Delta I_{bias\ (L)}$	I_O=5mA to 1A, T_j=25˚C	—	—	0.5	mA
Output noise voltage	V_{no}	f=10Hz to 100kHz, Ta=25˚C	—	110	—	μV
Ripple rejection ratio	RR	V_I=–22 to –32V, I_O=100mA, f=120Hz	53	68	—	dB
Minimum input/output voltage difference	$V_{DIF\ (min.)}$	I_O=1A, T_j=25˚C	—	1.1	—	V
Peak output current	$I_{O\ (Peak)}$	T_j=25˚C	—	2.1	—	A
Output voltage temperature coefficient	ΔV_O/Ta	I_O=5mA, T_j=0 to 125˚C	—	–1	—	mV/˚C

Note 1) The specified condition T_j=25˚C means that the test should be carried out with the test time so short (within 10ms) that the drift in characteristic value due to the rise in chip junction temperature can be ignored.
Note 2) Unless otherwise specified, V_I=–27V, I_O=500mA, C_I=2μF, C_O=1μF, T_j=0 to 125˚C
* AN7900T series : 15W, AN7900F series : 10.25W

■ Electrical Characteristics (Ta=25˚C) (continued)

• AN7920T/AN7920F (–20V Type)

Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V_O	T_j=25˚C	–19.2	–20	–20.8	V
Output voltage tolerance	V_O	V_I=–23 to –35V, I_O=5mA to 1A, P_D≦*	–19	—	–21	V
Line regulation	REG_{IN}	V_I=–23 to –35V, T_j=25˚C	—	16	400	mV
		V_I=–26 to –32V, T_j=25˚C	—	5.5	200	mV
Load regulation	REG_L	I_O=5mA to 1.5A, T_j=25˚C	—	12	400	mV
		I_O=250 to 750mA, T_j=25˚C	—	4	200	mV
Bias current	I_{bias}	T_j=25˚C	—	3	5	mA
Input bias fluctuation	$\Delta I_{bias\ (IN)}$	V_I=–23 to –35V, T_j=25˚C	—	—	1	mA
Load bias current fluctuation	$\Delta I_{bias\ (L)}$	I_O=5mA to 1A, T_j=25˚C	—	—	0.5	mA
Output noise voltage	V_{no}	f=10Hz to 100kHz, Ta=25˚C	—	135	—	μV
Ripple rejection ratio	RR	V_I=–24 to –34V, I_O=100mA, f=120Hz	52	67	—	dB
Minimum input/output voltage difference	$V_{DIF\ (min.)}$	I_O=1A, T_j=25˚C	—	1.1	—	V
Peak output current	$I_{O\ (Peak)}$	T_j=25˚C	—	2.1	—	A
Output voltage temperature coefficient	ΔV_O/Ta	I_O=5mA, T_j=0 to 125˚C	—	–1	—	mV/˚C

Note 1) The specified condition T_j=25˚C means that the test should be carried out with the test time so short (within 10ms) that the drift in characteristic value due to the rise in chip junction temperature can be ignored.
Note 2) Unless otherwise specified, V_I=–29V, I_O=500mA, C_I=2μF, C_O=1μF, T_j=0 to 125˚C
* AN7900T series : 15W, AN7900F series : 10.25W

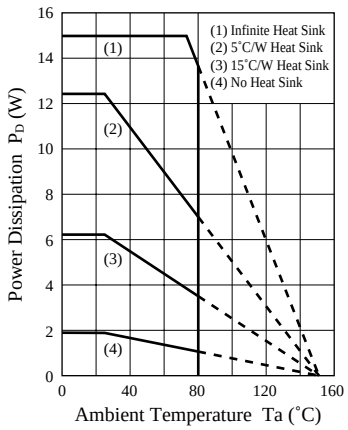
• AN7924T/AN7924F (–24V Type)

Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V_O	T_j=25˚C	–23	–24	–25	V
Output voltage tolerance	V_O	V_I=–27 to –38V, I_O=5mA to 1A, P_D≦*	–22.8	—	–25.2	V
Line regulation	REG_{IN}	V_I=–27 to –38V, T_j=25˚C	—	18	480	mV
		V_I=–30 to –36V, T_j=25˚C	—	6	240	mV
Load regulation	REG_L	I_O=5mA to 1.5A, T_j=25˚C	—	12	480	mV
		I_O=250 to 750mA, T_j=25˚C	—	4	240	mV
Bias current	I_{bias}	T_j=25˚C	—	3	5	mA
Input bias fluctuation	$\Delta I_{bias\ (IN)}$	V_I=–27 to –38V, T_j=25˚C	—	—	1	mA
Load bias current fluctuation	$\Delta I_{bias\ (L)}$	I_O=5mA to 1A, T_j=25˚C	—	—	0.5	mA
Output noise voltage	V_{no}	f=10Hz to 100kHz, Ta=25˚C	—	170	—	μV
Ripple rejection ratio	RR	V_I=–28 to –38V, I_O=100mA, f=120Hz	50	65	—	dB
Minimum input/output voltage difference	$V_{DIF\ (min.)}$	I_O=1A, T_j=25˚C	—	1.1	—	V
Peak output current	$I_{O\ (Peak)}$	T_j=25˚C	—	2.1	—	A
Output voltage temperature coefficient	ΔV_O/Ta	I_O=5mA, T_j=0 to 125˚C	—	–1	—	mV/˚C

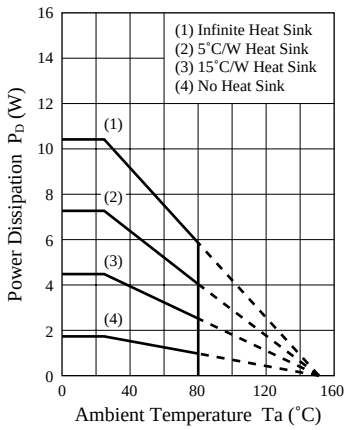
Note 1) The specified condition T_j=25˚C means that the test should be carried out with the test time so short (within 10ms) that the drift in characteristic value due to the rise in chip junction temperature can be ignored.
Note 2) Unless otherwise specified, V_I=–33V, I_O=500mA, C_I=2μF, C_O=1μF, T_j=0 to 125˚C
* AN7900T series : 15W, AN7900F series : 10.25W

■ Characteristic Curve

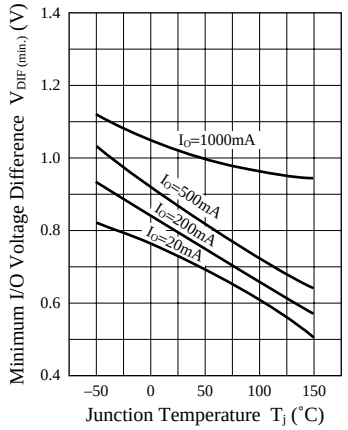
P_D–Ta (AN7900T Series)



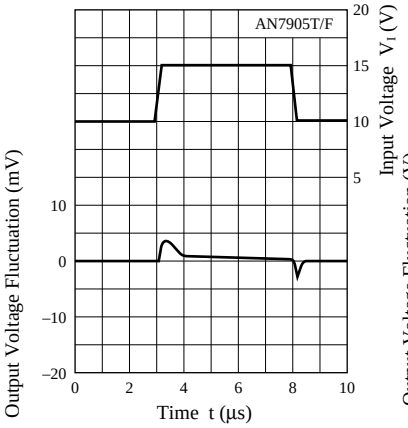
P_D–Ta (AN7900F Series)



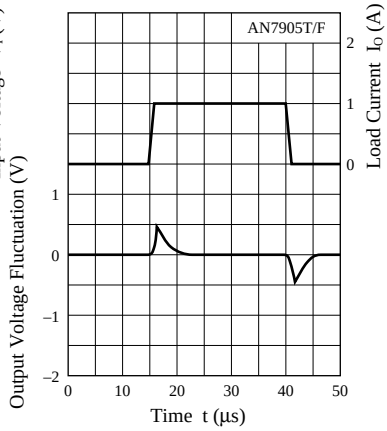
$V_{DIF\ (min.)}$–T_j



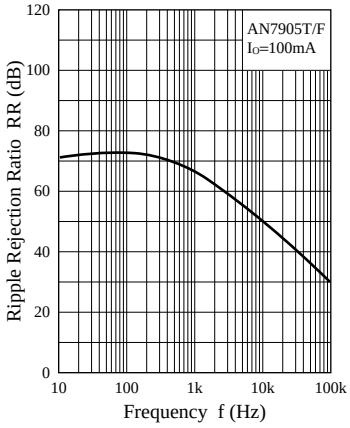
Input Transient Response



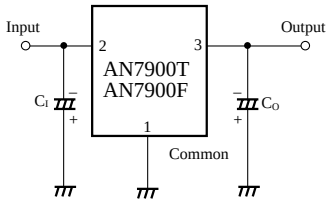
Load Transient Response



RR– f



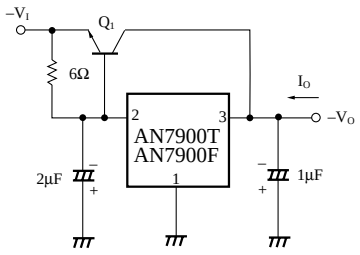
■ Basic Regulator Circuit



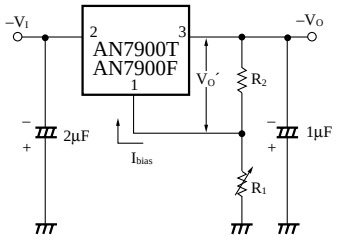
C_I : Required when the input line is long
C_O : Improves the transient response.

■ Application Circuit

1) Current Bootstrap Circuit



2) Adjustable Output Regulator



$$|V_O| = V_O' + \left(I_{bias} + \frac{V_O'}{R_2}\right) R_1$$