

UTC LM78XX LINEAR INTEGRATED CIRCUIT

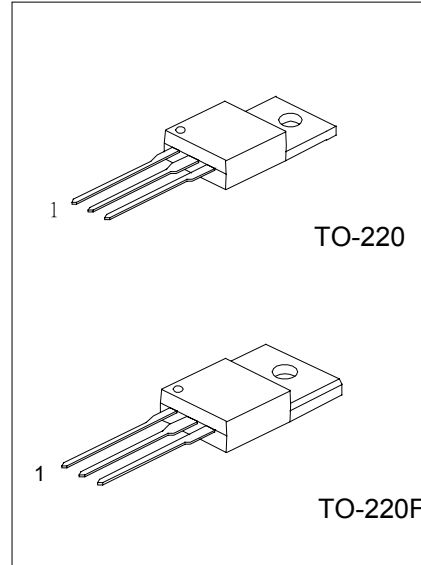
3-TERMINAL 1A POSITIVE VOLTAGE REGULATOR

DESCRIPTION

The UTC LM78XX family is monolithic fixed voltage regulator integrated circuit. They are suitable for applications that required supply current up to 1 A.

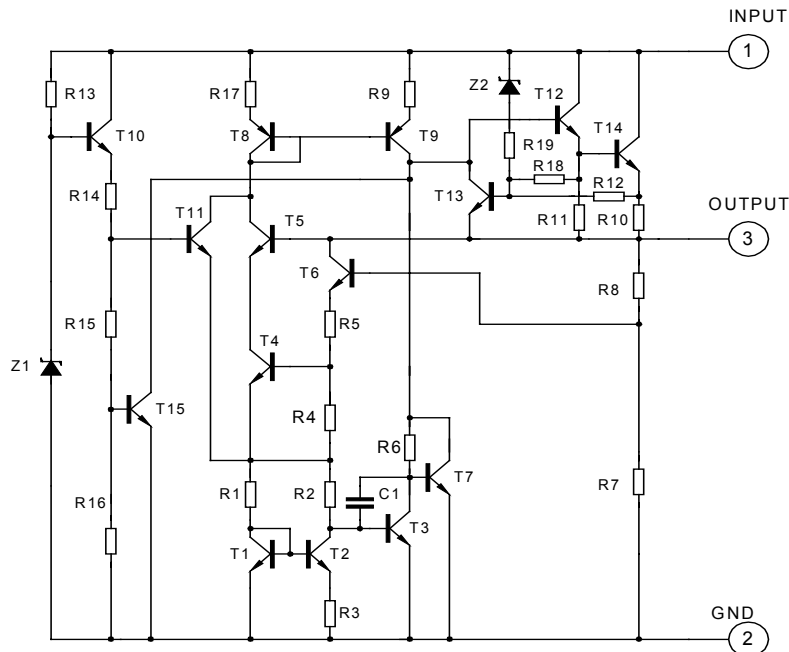
FEATURES

- *Output current up to 1A
- *Fixed output voltage of 3.3V, 4.7V, 5V, 6V, 7V, 8V, 9V, 10V, 12V, 15V, 18V and 24V available
- *Thermal overload shutdown protection
- *Short circuit current limiting
- *Output transistor SOA protection



*Pb-free plating product number: LM78XXL

TEST CIRCUIT



UTC LM78XX LINEAR INTEGRATED CIRCUIT

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Input voltage (for $V_o=3.3\sim 18V$) (for $V_o=24V$)	V_i	35	V
		40	V
Output Current	I_o	1	A
Power Dissipation	P_D	Internally Limited	W
Thermal Resistance Junction-Air	$R_{\theta JA}$	65	$^{\circ}C/W$
Thermal Resistance Junction-Cases	$R_{\theta JC}$	5	$^{\circ}C/W$
Operating Junction Temperature Range	T_{opr}	-20 ~ +150	$^{\circ}C$
Storage Temperature Range	T_{stg}	-55 ~ +150	$^{\circ}C$

UTC LM7833 ELECTRICAL CHARACTERISTICS

($V_i=5.8V$, $I_o=0.5A$, $T_j=0^{\circ}C - 125^{\circ}C$, $C_1=0.33\mu F$, $C_o=0.1\mu F$, unless otherwise specified)(Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_j=25^{\circ}C$, $I_o=5mA - 1.0A$	3.168	3.30	3.432	V
		$V_i=5.8V$ to 18.3V, $I_o=5mA - 1.0A$, $P_D \leq 15W$	3.135		3.465	V
Load Regulation	ΔV_o	$T_j=25^{\circ}C$, $I_o=5mA - 1.0A$			33	mV
		$T_j=25^{\circ}C$, $I_o=0.25A - 0.75A$			17	mV
Line regulation	ΔV_o	$V_i=5.8V$ to 18.3V, $T_j=25^{\circ}C$			33	mV
		$V_i=5.8V$ to 18.3V, $T_j=25^{\circ}C$, $I_o=1.0A$			33	mV
Quiescent Current	I_q	$T_j=25^{\circ}C$, $I_o \leq 1.0A$			8.0	mA
Quiescent Current Change	ΔI_q	$V_i=5.8V$ to 18.3V			1.0	mA
		$I_o=5mA - 1.0A$			0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100kHz$		55		μV
Temperature coefficient of V_o	$\Delta V_o/\Delta T$	$I_o=5mA$		-0.4		$mV/^{\circ}C$
Ripple Rejection	RR	$V_i=6.3V - 16.3V$, $f=120Hz$, $T_j=25^{\circ}C$		57		dB
Peak Output Current	I_{PK}	$T_j=25^{\circ}C$		1.8		A
Short-Circuit Current	I_{SC}	$V_i=35V$, $T_j=25^{\circ}C$		250		mA
Dropout Voltage	V_d	$T_j=25^{\circ}C$		2.0		V

UTC LM7847 ELECTRICAL CHARACTERISTICS

($V_i=9.7V$, $I_o=0.5A$, $T_j=0^{\circ}C - 125^{\circ}C$, $C_1=0.33\mu F$, $C_o=0.1\mu F$, unless otherwise specified)(Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_j=25^{\circ}C$, $I_o=5mA - 1.0A$	4.512	4.70	4.888	V
		$V_i=7.2V$ to 19.7V, $I_o=5mA - 1.0A$, $P_D \leq 15W$	4.465		4.935	V
Load Regulation	ΔV_o	$T_j=25^{\circ}C$, $I_o=5mA - 1.0A$			47	mV
		$T_j=25^{\circ}C$, $I_o=0.25A - 0.75A$			24	mV
Line regulation	ΔV_o	$V_i=7.2V$ to 19.7V, $T_j=25^{\circ}C$			47	mV
		$V_i=7.2V$ to 19.7V, $T_j=25^{\circ}C$, $I_o=1.0A$			47	mV
Quiescent Current	I_q	$T_j=25^{\circ}C$, $I_o \leq 1.0A$			8.0	mA
Quiescent Current Change	ΔI_q	$V_i=7.2V$ to 19.7V			1.0	mA
		$I_o=5mA - 1.0A$			0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100kHz$		40		μV
Temperature coefficient of V_o	$\Delta V_o/\Delta T$	$I_o=5mA$		-0.6		$mV/^{\circ}C$

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PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Ripple Rejection	RR	$V_i = 7.7V - 17.7V, f = 120Hz, T_j = 25^\circ C$	62	80		dB
Peak Output Current	I_{PK}	$T_j = 25^\circ C$		1.8		A
Short-Circuit Current	I_{SC}	$V_i = 35V, T_j = 25^\circ C$		250		mA
Dropout Voltage	V_d	$T_j = 25^\circ C$		2.0		V

UTC LM7805 ELECTRICAL CHARACTERISTICS

($V_i = 10V, I_o = 0.5A, T_j = 0^\circ C - 125^\circ C, C_1 = 0.33\mu F, C_o = 0.1\mu F$, unless otherwise specified)(Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_j = 25^\circ C, I_o = 5mA - 1.0A$	4.80	5.0	5.20	V
		$V_i = 7.5V \text{ to } 20V, I_o = 5mA - 1.0A, P_D \leq 15W$	4.75		5.25	V
Load Regulation	ΔV_o	$T_j = 25^\circ C, I_o = 5mA - 1.0A$			50	mV
		$T_j = 25^\circ C, I_o = 0.25A - 0.75A$			25	mV
Line regulation	ΔV_o	$V_i = 7V \text{ to } 25V, T_j = 25^\circ C$			50	mV
		$V_i = 7.5V \text{ to } 20V, T_j = 25^\circ C, I_o = 1.0A$			50	mV
Quiescent Current	I_q	$T_j = 25^\circ C, I_o \leq 1.0A$			8.0	mA
Quiescent Current Change	ΔI_q	$V_i = 7.5V \text{ to } 20V$			1.0	mA
		$I_o = 5mA - 1.0A$			0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100kHz$		40		μV
Temperature coefficient of V_o	$\Delta V_o / \Delta T$	$I_o = 5mA$		-0.6		$mV/^\circ C$
Ripple Rejection	RR	$V_i = 8V - 18V, f = 120Hz, T_j = 25^\circ C$	62	80		dB
Peak Output Current	I_{PK}	$T_j = 25^\circ C$		1.8		A
Short-Circuit Current	I_{SC}	$V_i = 35V, T_j = 25^\circ C$		250		mA
Dropout Voltage	V_d	$T_j = 25^\circ C$		2.0		V

UTC LM7806 ELECTRICAL CHARACTERISTICS

($V_i = 11V, I_o = 0.5A, T_j = 0^\circ C - 125^\circ C, C_1 = 0.33\mu F, C_o = 0.1\mu F$, unless otherwise specified)(Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_j = 25^\circ C, I_o = 5mA - 1.0A$	5.76	6.0	6.24	V
		$V_i = 8.5V \text{ to } 21V, I_o = 5mA - 1.0A, P_D \leq 15W$	5.70		6.30	V
Load Regulation	ΔV_o	$T_j = 25^\circ C, I_o = 5mA - 1.0A$			60	mV
		$T_j = 25^\circ C, I_o = 0.25A - 0.75A$			30	mV
Line regulation	ΔV_o	$V_i = 8V \text{ to } 25V, T_j = 25^\circ C$			60	mV
		$V_i = 8.5V \text{ to } 21V, T_j = 25^\circ C, I_o = 1.0A$			60	mV
Quiescent Current	I_q	$T_j = 25^\circ C, I_o \leq 1.0A$			8.0	mA
Quiescent Current Change	ΔI_q	$V_i = 8.5V \text{ to } 21V$			1.0	mA
		$I_o = 5mA - 1.0A$			0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100kHz$		45		μV
Temperature coefficient of V_o	$\Delta V_o / \Delta T$	$I_o = 5mA$		-0.7		$mV/^\circ C$
Ripple Rejection	RR	$V_i = 9V - 19V, f = 120Hz, T_j = 25^\circ C$	59	75		dB
Peak Output Current	I_{PK}	$T_j = 25^\circ C$		1.8		A
Short-Circuit Current	I_{SC}	$V_i = 35V, T_j = 25^\circ C$		250		mA
Dropout Voltage	V_d	$T_j = 25^\circ C$		2.0		V

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UTC LM7807 ELECTRICAL CHARACTERISTICS

($V_I=13V$, $I_o=0.5A$, $T_j=0^\circ C - 125^\circ C$, $C_1=0.33\mu F$, $C_o=0.1\mu F$, unless otherwise specified)(Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_j=25^\circ C$, $I_o=5mA - 1.0A$	6.72	7.0	7.28	V
		$V_I=9.5V$ to 22V, $I_o=5mA - 1.0A$, $P_D \leq 15W$	6.65		7.35	V
Load Regulation	ΔV_o	$T_j=25^\circ C$, $I_o=5mA - 1.0A$			70	mV
		$T_j=25^\circ C$, $I_o=0.25A - 0.75A$			35	mV
Line regulation	ΔV_o	$V_I=9V$ to 25V, $T_j=25^\circ C$			70	mV
		$V_I=9.5V$ to 22V, $T_j=25^\circ C$, $I_o=1.0A$			70	mV
Quiescent Current	I_q	$T_j=25^\circ C$, $I_o \leq 1.0A$			8.0	mA
Quiescent Current Change	ΔI_q	$V_I=9.5V$ to 22V			1.0	mA
		$I_o=5mA - 1.0A$			0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100kHz$		50		μV
Temperature coefficient of V_o	$\Delta V_o/\Delta T$	$I_o=5mA$		-0.8		$mV/^\circ C$
Ripple Rejection	RR	$V_I=10V - 20V$, $f=120Hz$, $T_j=25^\circ C$	59	75		dB
Peak Output Current	I_{PK}	$T_j=25^\circ C$		1.7		A
Short-Circuit Current	I_{SC}	$V_I=35V$, $T_j=25^\circ C$		250		mA
Dropout Voltage	V_d	$T_j=25^\circ C$		2.0		V

UTC LM7808 ELECTRICAL CHARACTERISTICS

($V_I=14V$, $I_o=0.5A$, $T_j=0^\circ C - 125^\circ C$, $C_1=0.33\mu F$, $C_o=0.1\mu F$, unless otherwise specified)(Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_j=25^\circ C$, $I_o=5mA - 1.0A$	7.68	8.0	8.32	V
		$V_I=10.5V$ to 23V, $I_o=5mA - 1.0A$, $P_D \leq 15W$	7.60		8.40	V
Load Regulation	ΔV_o	$T_j=25^\circ C$, $I_o=5mA - 1.0A$			80	mV
		$T_j=25^\circ C$, $I_o=0.25A - 0.75A$			40	mV
Line regulation	ΔV_o	$V_I=10.5V$ to 25V, $T_j=25^\circ C$			80	mV
		$V_I=10.5V$ to 23V, $T_j=25^\circ C$, $I_o=1.0A$			80	mV
Quiescent Current	I_q	$T_j=25^\circ C$, $I_o \leq 1.0A$			8.0	mA
Quiescent Current Change	ΔI_q	$V_I=10.5V$ to 23V			1.0	mA
		$I_o=5mA - 1.0A$			0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100kHz$		58		μV
Temperature coefficient of V_o	$\Delta V_o/\Delta T$	$I_o=5mA$		-0.9		$mV/^\circ C$
Ripple Rejection	RR	$V_I=11.5V$ to 21.5V, $f=120Hz$, $T_j=25^\circ C$	56	72		dB
Peak Output Current	I_{PK}	$T_j=25^\circ C$		1.8		A
Short-Circuit Current	I_{SC}	$V_I=35V$, $T_j=25^\circ C$		250		mA
Dropout Voltage	V_d	$T_j=25^\circ C$		2.0		V

UTC LM7809 ELECTRICAL CHARACTERISTICS

($V_I=15V$, $I_o=0.5A$, $T_j=0^\circ C - 125^\circ C$, $C_1=0.33\mu F$, $C_o=0.1\mu F$, unless otherwise specified)(Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_j=25^\circ C$, $I_o=5mA - 1.0A$	8.64	9.0	9.36	V
		$V_I=11.5V$ to 24V, $I_o=5mA - 1.0A$, $P_D \leq 15W$	8.55		9.45	V
Load Regulation	ΔV_o	$T_j=25^\circ C$, $I_o=5mA - 1.0A$			90	mV

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PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
		T _j =25°C, I _o =0.25A - 0.75A			45	mV
Line regulation	ΔV _o	V _i = 11.5V to 25 V, T _j =25°C			90	mV
		V _i = 11.5V to 24V, T _j =25°C, I _o =1.0A			90	mV
Quiescent Current	I _q	T _j =25°C, I _o ≅ 1.0A			8.0	mA
Quiescent Current Change	ΔI _q	V _i = 11.5V to 24V			1.0	mA
		I _o =5mA - 1.0A			0.5	mA
Output Noise Voltage	V _N	10Hz ≅ f ≅ 100kHz		58		μV
Temperature coefficient of V _o	ΔV _o /ΔT	I _o =5mA		-1.1		mV/°C
Ripple Rejection	RR	V _i = 12.5V to 22.5V, f=120Hz, T _j =25°C	56	72		dB
Peak Output Current	I _{PK}	T _j =25°C		1.8		A
Short-Circuit Current	I _{sc}	V _i =35V, T _j =25°C		250		mA
Dropout Voltage	V _d	T _j =25°C		2.0		V

UTC LM7810 ELECTRICAL CHARACTERISTICS

(V_i=16V, I_o=0.5A, T_j= 0°C - 125°C, C₁=0.33μF, C_o=0.1μF, unless otherwise specified)(Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V _o	T _j =25°C, I _o =5mA - 1.0A	9.60	10.0	10.40	V
		V _i = 12.5V to 25V, I _o =5mA - 1.0A, P _D ≅ 15W	9.50		10.50	V
Load Regulation	ΔV _o	T _j =25°C, I _o =5mA - 1.0A			100	mV
		T _j =25°C, I _o =0.25A - 0.75A			50	mV
Line regulation	ΔV _o	V _i = 13V to 25V, T _j =25°C			100	mV
		V _i = 13V to 25V, T _j =25°C, I _o =1.0A			100	mV
Quiescent Current	I _q	T _j =25°C, I _o ≅ 1.0A			8.0	mA
Quiescent Current Change	ΔI _q	V _i = 12.6V to 25V			1.0	mA
		I _o =5mA - 1.0A			0.5	mA
Output Noise Voltage	V _N	10Hz ≅ f ≅ 100kHz		58		μV
Temperature coefficient of V _o	ΔV _o /ΔT	I _o =5mA		-1.1		mV/°C
Ripple Rejection	RR	V _i = 13V - 23V, f=120Hz, T _j =25°C	56	72		dB
Peak Output Current	I _{PK}	T _j =25°C		1.8		A
Short-Circuit Current	I _{sc}	V _i =35V, T _j =25°C		250		mA
Dropout Voltage	V _d	T _j =25°C		2.0		V

UTC LM7812 ELECTRICAL CHARACTERISTICS

(V_i=19V, I_o=0.5A, T_j= 0°C - 125°C, C₁=0.33μF, C_o=0.1μF, unless otherwise specified)(Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V _o	T _j =25°C, I _o =5mA - 1.0A	11.52	12.0	12.48	V
		V _i = 14.5V to 27V, I _o =5mA - 1.0A, P _D ≅ 15W	11.40		12.60	V
Load Regulation	ΔV _o	T _j =25°C, I _o =5mA - 1.0A			120	mV
		T _j =25°C, I _o =0.25A - 0.75A			60	mV
Line regulation	ΔV _o	V _i = 14.5V to 30V, T _j =25°C			120	mV
		V _i = 14.6V to 27V, T _j =25°C, I _o =1.0A			120	mV
Quiescent Current	I _q	T _j =25°C, I _o ≅ 1.0A			8.0	mA
Quiescent Current Change	ΔI _q	V _i = 14.5V to 30V			1.0	mA

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PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
		$I_o=5mA - 1.0A$			0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100kHz$		75		μV
Temperature coefficient of V_o	$\Delta V_o/\Delta T$	$I_o=5mA$		-1.5		$mV/^\circ C$
Ripple Rejection	RR	$V_i = 15V - 25V, f=120Hz, T_j=25^\circ C$	55	72		dB
Peak Output Current	I_{PK}	$T_j=25^\circ C$		1.8		A
Short-Circuit Current	I_{SC}	$V_i=35V, T_j=25^\circ C$		250		mA
Dropout Voltage	V_d	$T_j=25^\circ C$		2.0		V

UTC LM7815 ELECTRICAL CHARACTERISTICS

($V_i=23V, I_o=0.5A, T_j= 0^\circ C - 125^\circ C, C_1=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)(Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_j=25^\circ C, I_o=5mA - 1.0A$	14.40	15.0	15.60	V
		$V_i = 17.5V$ to 30V, $I_o=5mA - 1.0A, P_D \leq 15W$	14.25		15.75	V
Load Regulation	ΔV_o	$T_j=25^\circ C, I_o=5mA - 1.0A$			150	mV
		$T_j=25^\circ C, I_o=0.25A - 0.75A$			75	mV
Line regulation	ΔV_o	$V_i = 18.5V$ to 30V, $T_j=25^\circ C$			150	mV
		$V_i = 17.7V$ to 30V, $T_j=25^\circ C, I_o = 1.0A$			150	mV
Quiescent Current	I_q	$T_j=25^\circ C, I_o \leq 1.0A$			8.0	mA
Quiescent Current Change	ΔI_q	$V_i = 17.5V$ to 30V			1.0	mA
		$I_o=5mA - 1.0A$			0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100kHz$		90		μV
Temperature coefficient of V_o	$\Delta V_o/\Delta T$	$I_o=5mA$		-1.8		$mV/^\circ C$
Ripple Rejection	RR	$V_i = 18.5V$ to 28.5V $f=120Hz, T_j=25^\circ C$	54	70		dB
Peak Output Current	I_{PK}	$T_j=25^\circ C$		1.8		A
Short-Circuit Current	I_{SC}	$V_i=35V, T_j=25^\circ C$		250		mA
Dropout Voltage	V_d	$T_j=25^\circ C$		2.0		V

UTC LM7818 ELECTRICAL CHARACTERISTICS

($V_i=27V, I_o=0.5A, T_j= 0^\circ C - 125^\circ C, C_1=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)(Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_j=25^\circ C, I_o=5mA - 1.0A$	17.28	18.0	18.72	V
		$V_i = 21V$ to 33V, $I_o=5mA - 1.0A, P_D \leq 15W$	17.10		18.90	V
Load Regulation	ΔV_o	$T_j=25^\circ C, I_o=5mA - 1.0A$			180	mV
		$T_j=25^\circ C, I_o=0.25A - 0.75A$			90	mV
Line regulation	ΔV_o	$V_i = 21V$ to 33V, $T_j=25^\circ C$			180	mV
		$V_i = 21V$ to 33V, $T_j=25^\circ C, I_o = 1.0A$			180	mV
Quiescent Current	I_q	$T_j=25^\circ C, I_o \leq 1.0A$			8.0	mA
Quiescent Current Change	ΔI_q	$V_i = 21.5V$ to 33V			1.0	mA
		$I_o=5mA - 1.0A$			0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100kHz$		110		μV
Temperature coefficient of V_o	$\Delta V_o/\Delta T$	$I_o=5mA$		-2.2		$mV/^\circ C$
Ripple Rejection	RR	$V_i = 22V - 32V, f=120Hz, T_j=25^\circ C$	53	69		dB

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PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Peak Output Current	I_{PK}	$T_j=25^\circ\text{C}$		1.8		A
Short-Circuit Current	I_{SC}	$V_I=35\text{V}, T_j=25^\circ\text{C}$		250		mA
Dropout Voltage	V_d	$T_j=25^\circ\text{C}$		2.0		V

UTC LM7824 ELECTRICAL CHARACTERISTICS

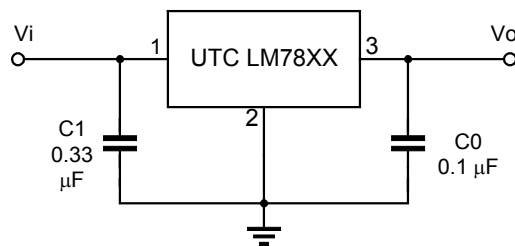
($V_I=33\text{V}, I_o=0.5\text{A}, T_j=0^\circ\text{C} - 125^\circ\text{C}, C_1=0.33\mu\text{F}, C_o=0.1\mu\text{F}$, unless otherwise specified)(Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_j=25^\circ\text{C}, I_o=5\text{mA} - 1.0\text{A}$	23.04	24.0	24.96	V
		$V_I=27\text{V to }38\text{V}, I_o=5\text{mA} - 1.0\text{A}, P_D \leq 15\text{W}$	22.80		25.20	V
Load Regulation	ΔV_o	$T_j=25^\circ\text{C}, I_o=5\text{mA} - 1.0\text{A}$			240	mV
		$T_j=25^\circ\text{C}, I_o=0.25\text{A} - 0.75\text{A}$			120	mV
Line regulation	ΔV_o	$V_I=27\text{V to }38\text{V}, T_j=25^\circ\text{C}$			240	mV
		$V_I=27\text{V to }38\text{V}, T_j=25^\circ\text{C}, I_o=1.0\text{A}$			240	mV
Quiescent Current	I_q	$T_j=25^\circ\text{C}, I_o \leq 1.0\text{A}$			8.0	mA
Quiescent Current Change	ΔI_q	$V_I=28\text{V to }38\text{V}$			1.0	mA
		$I_o=5\text{mA} - 1.0\text{A}$			0.5	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{kHz}$		170		μV
Temperature coefficient of V_o	$\Delta V_o/\Delta T$	$I_o=5\text{mA}$		-2.8		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$V_I=28\text{V} - 38\text{V}, f=120\text{Hz}, T_j=25^\circ\text{C}$	50	66		dB
Peak Output Current	I_{PK}	$T_j=25^\circ\text{C}$		1.8		A
Short-Circuit Current	I_{SC}	$V_I=35\text{V}, T_j=25^\circ\text{C}$		250		mA
Dropout Voltage	V_d	$T_j=25^\circ\text{C}$		2.0		V

Note 1: The Maximum steady state usable output current are dependent on input voltage, heat sinking, lead length of the package and copper pattern of PCB. The data above represents pulse test conditions with junction temperatures specified at the initiation of test.

Note 2: Power dissipation < 0.5W

APPLICATION CIRCUIT



Note 1: To specify an output voltage, substitute voltage value for "XX".

Note 2: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

UTC LM78XX LINEAR INTEGRATED CIRCUIT

Fig.1 Ambient temperature vs. Power dissipation

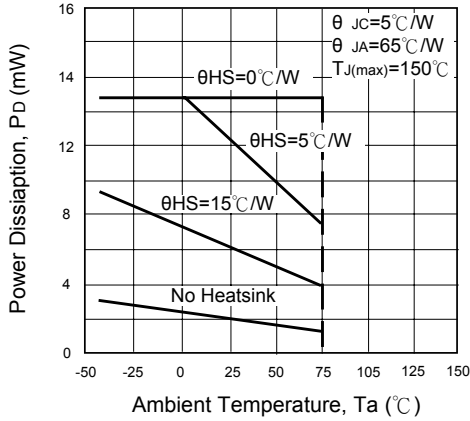


Fig.2 Output Voltage vs. Ambient temperature

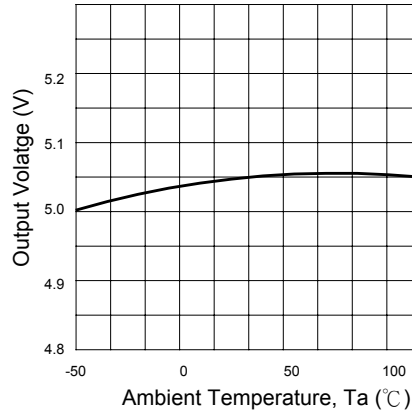
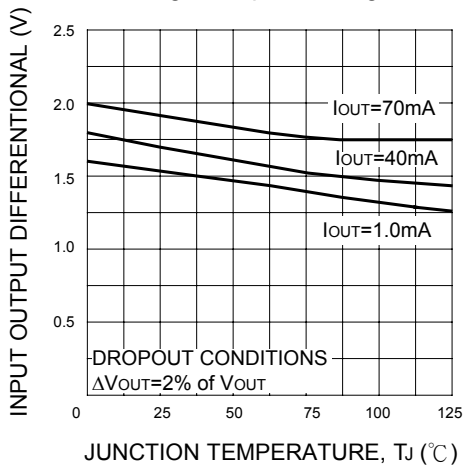


Fig.3 Dropout Voltage



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