



UNISONIC TECHNOLOGIES CO., LTD

## 78TXXA

LINEAR INTEGRATED CIRCUIT

### 3-Terminal 1A Positive Voltage Regulator

#### ■ DESCRIPTION

The UTC 78TXXA family is monolithic fixed voltage regulator integrated circuit. They are suitable for applications that required supply current up to 1 A.

#### ■ FEATURES

- \*Peak output current up to 1 A
- \*Fixed output voltage of 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

#### ■ ORDERING INFORMATION

Order Number		Pin Assignment			Package	Packing
Normal	Lead Free Plating	1	2	3		
78TxxA-TQ2-R	78TxxAL-TQ2-R	I	G	O	TO-263	Tape Reel
78TxxA-TQ3-R	78TxxAL-TQ3-R	I	G	O	TO-263-3	Tape Reel

Note: 1. xx: output voltage, refer to Marking Information

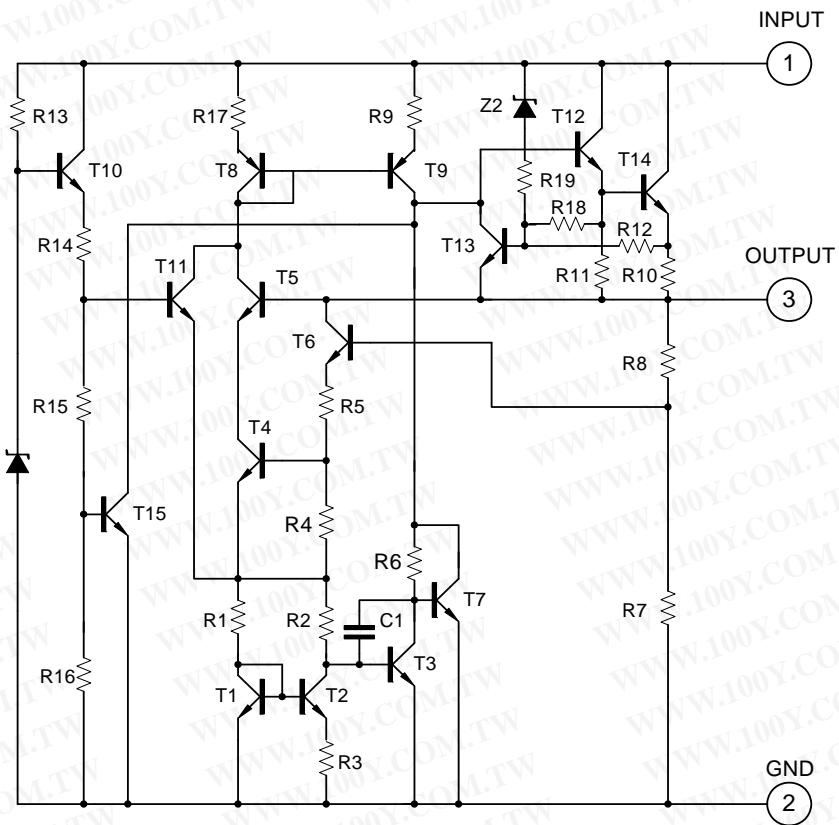
2. Pin Code: I: Input G: GND O: Output

#### ■ MARKING INFORMATION

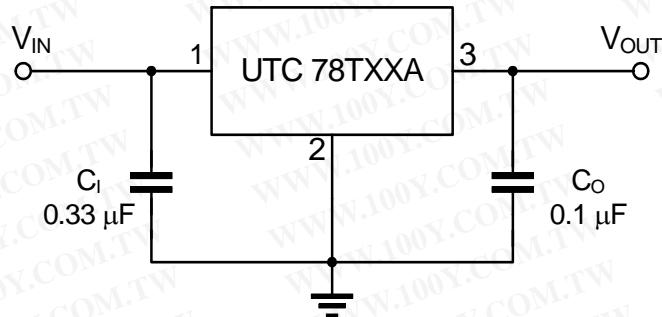
PACKAGE	VOLTAGE CODE	MARKING
TO-263 TO-263-3	47 :4.7V	
	05 :5.0V	
	06 :6.0V	
	07 :7.0V	
	08 :8.0V	
	09 :9.0V	
	10 :10V	
	12 :12V	
	15 :15V	
	18 :18V	
	24 :24V	

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## ■ TEST CIRCUIT



## ■ APPLICATION CIRCUIT



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

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

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

PARAMETER	SYMBOL	RATING	UNIT
Input Voltage	$V_{IN}=4.7\sim18V$	35	V
	$V_{IN}=24V$	40	V
Output Current	$I_{OUT}$	1	A
Power Dissipation	$P_D$	Internally Limited	W
Junction Temperature	$T_J$	+125	°C
Operating Junction Temperature	$T_{OPR}$	0~+70	°C
Storage Temperature	$T_{STG}$	-40~+150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

## ■ ELECTRICAL CHARACTERISTICS

( $T_J=0^{\circ}C\sim125^{\circ}C, C_I=0.33\mu F, C_O=0.1\mu F$ ,unless otherwise specified) (Note 1)

FOR 78T47A ( $V_{IN}=9.7V, I_{OUT}=0.5A$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$T_J=25^{\circ}C, I_{OUT}=5mA-1.0A$	4.512	4.70	4.888	V
		$V_{IN}=7.2V\sim19.7V, I_{OUT}=5mA-1.0A, P_D\leq15W$	4.465		4.935	V
Load Regulation	$\Delta V_{OUT}$	$T_J=25^{\circ}C, I_{OUT}=5mA-1.0A$			47	mV
		$T_J=25^{\circ}C, I_{OUT}=0.25A-0.75A$			24	mV
Line regulation	$\Delta V_{OUT}$	$V_{IN}=7.2V\sim19.7V, T_J=25^{\circ}C$			47	mV
		$V_{IN}=7.2V\sim19.7V, T_J=25^{\circ}C, I_{OUT}=1.0A$			47	mV
Quiescent Current	$I_Q$	$T_J=25^{\circ}C, I_{OUT}\leq1.0A$			8.0	mA
Quiescent Current Change	$\Delta I_Q$	$V_{IN}=7.2V\sim19.7V$			1.0	mA
		$I_{OUT}=5mA-1.0A$			0.5	mA
Output Noise Voltage	$e_N$	$10Hz \leq f \leq 100kHz$			40	$\mu V$
Temperature coefficient of $V_o$	$\Delta V_o/\Delta T$	$I_{OUT}=5mA$			-0.6	$mV/^{\circ}C$
Ripple Rejection	RR	$V_{IN}=7.7V\sim17.7V, f=120Hz, T_J=25^{\circ}C$	62	80		dB
Peak Output Current	$I_{PEAK}$	$T_J=25^{\circ}C$			1.8	A
Short-Circuit Current	$I_{SC}$	$V_{IN}=35V, T_J=25^{\circ}C$			250	mA
Dropout Voltage	$V_D$	$T_J=25^{\circ}C$			2.0	V

FOR 78T05A ( $V_{IN}=10V, I_{OUT}=0.5A$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$T_J=25^{\circ}C, I_{OUT}=5mA - 1.0A$	4.80	5.0	5.20	V
		$V_{IN}=7.5V\sim20V, I_{OUT}=5mA-1.0A, P_D\leq15W$	4.75		5.25	V
Load Regulation	$\Delta V_{OUT}$	$T_J=25^{\circ}C, I_{OUT}=5mA-1.0A$			50	mV
		$T_J=25^{\circ}C, I_{OUT}=0.25A-0.75A$			25	mV
Line regulation	$\Delta V_{OUT}$	$V_{IN}=7V\sim25V, T_J=25^{\circ}C$			50	mV
		$V_{IN}=7.5V\sim20V, T_J=25^{\circ}C, I_{OUT}=1.0A$			50	mV
Quiescent Current	$I_Q$	$T_J=25^{\circ}C, I_{OUT}\leq1.0A$			8.0	mA
Quiescent Current Change	$\Delta I_Q$	$V_{IN}=7.5V\sim20V$			1.0	mA
		$I_{OUT}=5mA-1.0A$			0.5	mA
Output Noise Voltage	$e_N$	$10Hz \leq f \leq 100kHz$			40	$\mu V$
Temperature coefficient of $V_o$	$\Delta V_o/\Delta T$	$I_{OUT}=5mA$			-0.6	$mV/^{\circ}C$
Ripple Rejection	RR	$V_{IN}=8V\sim18V, f=120Hz, T_J=25^{\circ}C$	62	80		dB
Peak Output Current	$I_{PEAK}$	$T_J=25^{\circ}C$			1.8	A
Short-Circuit Current	$I_{SC}$	$V_{IN}=35V, T_J=25^{\circ}C$			250	mA
Dropout Voltage	$V_D$	$T_J=25^{\circ}C$			2.0	V



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# 78TXXA

## LINEAR INTEGRATED CIRCUIT

### ELECTRICAL CHARACTERISTICS(Cont.)

FOR 78T06A ( $V_{IN}=11V$ ,  $I_{OUT}=0.5A$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$	5.76	6.0	6.24	V
		$V_{IN}=8.5V\sim21V$ , $I_{OUT}=5mA-1.0A$ , $P_D \leq 15W$	5.70		6.30	V
Load Regulation	$\Delta V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$			60	mV
		$T_J=25^{\circ}C$ , $I_{OUT}=0.25A-0.75A$			30	mV
Line regulation	$\Delta V_{OUT}$	$V_{IN}=8V\sim25V$ , $T_J=25^{\circ}C$			60	mV
		$V_{IN}=8.5V\sim21V$ , $T_J=25^{\circ}C$ , $I_{OUT}=1.0A$			60	mV
Quiescent Current	$I_Q$	$T_J=25^{\circ}C$ , $I_{OUT} \leq 1.0A$			8.0	mA
Quiescent Current Change	$\Delta I_Q$	$V_{IN}=8.5V\sim21V$			1.0	mA
		$I_{OUT}=5mA-1.0A$			0.5	mA
Output Noise Voltage	$eN$	$10Hz \leq f \leq 100kHz$		45		$\mu V$
Temperature coefficient of $V_o$	$\Delta V_o/\Delta T$	$I_{OUT}=5mA$		-0.7		$mV/{}^{\circ}C$
Ripple Rejection	RR	$V_{IN}=9V\sim19V$ , $f=120Hz$ , $T_J=25^{\circ}C$	59	75		dB
Peak Output Current	$I_{PEAK}$	$T_J=25^{\circ}C$			1.8	A
Short-Circuit Current	$I_{SC}$	$V_{IN}=35V$ , $T_J=25^{\circ}C$			250	mA
Dropout Voltage	$V_D$	$T_J=25^{\circ}C$			2.0	V

FOR 78T07A ( $V_{IN}=13V$ ,  $I_{OUT}=0.5A$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$	6.72	7.0	7.28	V
		$V_{IN}=9.5V\sim22V$ , $I_{OUT}=5mA-1.0A$ , $P_D \leq 15W$	6.65		7.35	V
Load Regulation	$\Delta V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$			70	mV
		$T_J=25^{\circ}C$ , $I_{OUT}=0.25A-0.75A$			35	mV
Line regulation	$\Delta V_{OUT}$	$V_{IN}=9V\sim25V$ , $T_J=25^{\circ}C$			70	mV
		$V_{IN}=9.5V\sim22V$ , $T_J=25^{\circ}C$ , $I_{OUT}=1.0A$			70	mV
Quiescent Current	$I_Q$	$T_J=25^{\circ}C$ , $I_{OUT} \leq 1.0A$			8.0	mA
Quiescent Current Change	$\Delta I_Q$	$V_{IN}=9.5V\sim22V$			1.0	mA
		$I_{OUT}=5mA-1.0A$			0.5	mA
Output Noise Voltage	$eN$	$10Hz \leq f \leq 100kHz$		50		$\mu V$
Temperature coefficient of $V_o$	$\Delta V_o/\Delta T$	$I_{OUT}=5mA$		-0.8		$mV/{}^{\circ}C$
Ripple Rejection	RR	$V_{IN}=10V\sim20V$ , $f=120Hz$ , $T_J=25^{\circ}C$	59	75		dB
Peak Output Current	$I_{PEAK}$	$T_J=25^{\circ}C$			1.7	A
Short-Circuit Current	$I_{SC}$	$V_{IN}=35V$ , $T_J=25^{\circ}C$			250	mA
Dropout Voltage	$V_D$	$T_J=25^{\circ}C$			2.0	V

FOR 78T08A ( $V_{IN}=14V$ ,  $I_{OUT}=0.5A$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$	7.68	8.0	8.32	V
		$V_{IN}=10.5V\sim23V$ , $I_{OUT}=5mA-1.0A$ , $P_D \leq 15W$	7.60		8.40	V
Load Regulation	$\Delta V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$			80	mV
		$T_J=25^{\circ}C$ , $I_{OUT}=0.25A-0.75A$			40	mV
Line regulation	$\Delta V_{OUT}$	$V_{IN}=10.5V\sim25V$ , $T_J=25^{\circ}C$			80	mV
		$V_{IN}=10.5V\sim23V$ , $T_J=25^{\circ}C$ , $I_{OUT}=1.0A$			80	mV
Quiescent Current	$I_Q$	$T_J=25^{\circ}C$ , $I_{OUT} \leq 1.0A$			8.0	mA
Quiescent Current Change	$\Delta I_Q$	$V_{IN}=10.5V\sim23V$			1.0	mA
		$I_{OUT}=5mA-1.0A$			0.5	mA
Output Noise Voltage	$eN$	$10Hz \leq f \leq 100kHz$		58		$\mu V$
Temperature coefficient of $V_o$	$\Delta V_o/\Delta T$	$I_{OUT}=5mA$		-0.9		$mV/{}^{\circ}C$
Ripple Rejection	RR	$V_{IN}=11.5V\sim21.5V$ , $f=120Hz$ , $T_J=25^{\circ}C$	56	72		dB
Peak Output Current	$I_{PEAK}$	$T_J=25^{\circ}C$			1.8	A
Short-Circuit Current	$I_{SC}$	$V_{IN}=35V$ , $T_J=25^{\circ}C$			250	mA
Dropout Voltage	$V_D$	$T_J=25^{\circ}C$			2.0	V



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## ■ ELECTRICAL CHARACTERISTICS(Cont.)

FOR 78T09A ( $V_{IN}=15V$ ,  $I_{OUT}=0.5A$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA - 1.0A$	8.64	9.0	9.36	V
		$V_{IN}=11.5V \sim 24V$ , $I_{OUT}=5mA-1.0A$ , $P_D \leq 15W$	8.55		9.45	V
Load Regulation	$\Delta V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$			90	mV
		$T_J=25^{\circ}C$ , $I_{OUT}=0.25A-0.75A$			45	mV
Line regulation	$\Delta V_{OUT}$	$V_{IN}=11.5V \sim 25V$ , $T_J=25^{\circ}C$			90	mV
		$V_{IN}=11.5V \sim 24V$ , $T_J=25^{\circ}C$ , $I_{OUT}=1.0A$			90	mV
Quiescent Current	$I_Q$	$T_J=25^{\circ}C$ , $I_{OUT} \leq 1.0A$			8.0	mA
Quiescent Current Change	$\Delta I_Q$	$V_{IN}=11.5V \sim 24V$			1.0	mA
		$I_{OUT}=5mA-1.0A$			0.5	mA
Output Noise Voltage	$eN$	$10Hz \leq f \leq 100kHz$		58		$\mu V$
Temperature coefficient of Vo	$\Delta V_o/\Delta T$	$I_{OUT}=5mA$		-1.1		$mV/{}^{\circ}C$
Ripple Rejection	RR	$V_{IN}=12.5V \sim 22.5V$ , $f=120Hz$ , $T_J=25^{\circ}C$	56	72		dB
Peak Output Current	$I_{PEAK}$	$T_J=25^{\circ}C$		1.8		A
Short-Circuit Current	$I_{SC}$	$V_{IN}=35V$ , $T_J=25^{\circ}C$		250		mA
Dropout Voltage	$V_D$	$T_J=25^{\circ}C$		2.0		V

FOR 78T10A ( $V_{IN}=16V$ ,  $I_{OUT}=0.5A$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$	9.60	10.0	10.40	V
		$V_{IN}=12.5V \sim 25V$ , $I_{OUT}=5mA-1.0A$ , $P_D \leq 15W$	9.50		10.50	V
Load Regulation	$\Delta V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$			100	mV
		$T_J=25^{\circ}C$ , $I_{OUT}=0.25A-0.75A$			50	mV
Line regulation	$\Delta V_{OUT}$	$V_{IN}=13V \sim 25V$ , $T_J=25^{\circ}C$			100	mV
		$V_{IN}=13V \sim 25V$ , $T_J=25^{\circ}C$ , $I_{OUT}=1.0A$			100	mV
Quiescent Current	$I_Q$	$T_J=25^{\circ}C$ , $I_{OUT} \leq 1.0A$			8.0	mA
Quiescent Current Change	$\Delta I_Q$	$V_{IN}=12.6V \sim 25V$			1.0	mA
		$I_{OUT}=5mA-1.0A$			0.5	mA
Output Noise Voltage	$eN$	$10Hz \leq f \leq 100kHz$		58		$\mu V$
Temperature coefficient of Vo	$\Delta V_o/\Delta T$	$I_{OUT}=5mA$		-1.1		$mV/{}^{\circ}C$
Ripple Rejection	RR	$V_{IN}=13V \sim 23V$ , $f=120Hz$ , $T_J=25^{\circ}C$	56	72		dB
Peak Output Current	$I_{PEAK}$	$T_J=25^{\circ}C$		1.8		A
Short-Circuit Current	$I_{SC}$	$V_{IN}=35V$ , $T_J=25^{\circ}C$		250		mA
Dropout Voltage	$V_D$	$T_J=25^{\circ}C$		2.0		V

FOR 78T12A ( $V_{IN}=19V$ ,  $I_{OUT}=0.5A$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$	11.52	12.0	12.48	V
		$V_{IN}=14.5V \sim 27V$ , $I_{OUT}=5mA-1.0A$ , $P_D \leq 15W$	11.40		12.60	V
Load Regulation	$\Delta V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$			120	mV
		$T_J=25^{\circ}C$ , $I_{OUT}=0.25A-0.75A$			60	mV
Line regulation	$\Delta V_{OUT}$	$V_{IN}=14.5V \sim 30V$ , $T_J=25^{\circ}C$			120	mV
		$V_{IN}=14.6V \sim 27V$ , $T_J=25^{\circ}C$ , $I_{OUT}=1.0A$			120	mV
Quiescent Current	$I_Q$	$T_J=25^{\circ}C$ , $I_{OUT} \leq 1.0A$			8.0	mA
Quiescent Current Change	$\Delta I_Q$	$V_{IN}=14.5V \sim 30V$			1.0	mA
		$I_{OUT}=5mA-1.0A$			0.5	mA
Output Noise Voltage	$eN$	$10Hz \leq f \leq 100kHz$		75		$\mu V$
Temperature coefficient of Vo	$\Delta V_o/\Delta T$	$I_{OUT}=5mA$		-1.5		$mV/{}^{\circ}C$
Ripple Rejection	RR	$V_{IN}=15V \sim 25V$ , $f=120Hz$ , $T_J=25^{\circ}C$	55	72		dB
Peak Output Current	$I_{PEAK}$	$T_J=25^{\circ}C$		1.8		A
Short-Circuit Current	$I_{SC}$	$V_{IN}=35V$ , $T_J=25^{\circ}C$		250		mA
Dropout Voltage	$V_D$	$T_J=25^{\circ}C$		2.0		V



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## ■ ELECTRICAL CHARACTERISTICS(Cont.)

FOR 78T15A ( $V_{IN}=23V$ ,  $I_{OUT}=0.5A$ )

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

FOR 78T18A ( $V_{IN}=27V$ ,  $I_{OUT}=0.5A$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$	17.28	18.0	18.72	V
		$V_{IN}=21V-33V$ , $I_{OUT}=5mA-1.0A$ , $P_D \leq 15W$	17.10		18.90	V
Load Regulation	$\Delta V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA-1.0A$			180	mV
		$T_J=25^{\circ}C$ , $I_{OUT}=0.25A-0.75A$			90	mV
Line regulation	$\Delta V_{OUT}$	$V_{IN}=21V-33V$ , $T_J=25^{\circ}C$			180	mV
		$V_{IN}=21V-33V$ , $T_J=25^{\circ}C$ , $I_{OUT}=1.0A$			180	mV
Quiescent Current	$I_Q$	$T_J=25^{\circ}C$ , $I_{OUT} \leq 1.0A$			8.0	mA
Quiescent Current Change	$\Delta I_Q$	$V_{IN}=21.5V-33V$			1.0	mA
		$I_{OUT}=5mA-1.0A$			0.5	mA
Output Noise Voltage	eN	$10Hz \leq f \leq 100kHz$			110	$\mu V$
Temperature coefficient of Vo	$\Delta V_o/\Delta T$	$I_{OUT}=5mA$		-2.2		$mV/^{\circ}C$
Ripple Rejection	RR	$V_{IN}=22V-32V$ , $f=120Hz$ , $T_J=25^{\circ}C$	53	69		dB
Peak Output Current	$I_{PEAK}$	$T_J=25^{\circ}C$			1.8	A
Short-Circuit Current	$I_{SC}$	$V_{IN}=35V$ , $T_J=25^{\circ}C$			250	mA
Dropout Voltage	$V_D$	$T_J=25^{\circ}C$			2.0	V

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## ■ ELECTRICAL CHARACTERISTICS(Cont.)

FOR 78T24A ( $V_{IN}=33V$ ,  $I_{OUT}=0.5A$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$T_J=25^\circ C$ , $I_{OUT}=5mA-1.0A$	23.04	24.0	24.96	V
		$V_{IN}=27V-38V$ , $I_{OUT}=5mA-1.0A$ , $P_D \leq 15W$	22.80		25.20	V
Load Regulation	$\Delta V_{OUT}$	$T_J=25^\circ C$ , $I_{OUT}=5mA-1.0A$			240	mV
		$T_J=25^\circ C$ , $I_{OUT}=0.25A-0.75A$			120	mV
Line regulation	$\Delta V_{OUT}$	$V_{IN}=27V-38V$ , $T_J=25^\circ C$			240	mV
		$V_{IN}=27V-38V$ , $T_J=25^\circ C$ , $I_{OUT}=1.0A$			240	mV
Quiescent Current	$I_Q$	$T_J=25^\circ C$ , $I_{OUT} \leq 1.0A$			8.0	mA
Quiescent Current Change	$\Delta I_Q$	$V_{IN}=28V-38V$			1.0	mA
		$I_{OUT}=5mA-1.0A$			0.5	mA
Output Noise Voltage	$e_N$	$10Hz \leq f \leq 100kHz$		170		$\mu V$
Temperature coefficient of $V_o$	$\Delta V_o/\Delta T$	$I_{OUT}=5mA$		-2.8		$mV/^\circ C$
Ripple Rejection	RR	$V_{IN}=28V-38V$ , $f=120Hz$ , $T_J=25^\circ C$	50	66		dB
Peak Output Current	$I_{PEAK}$	$T_J=25^\circ C$		1.8		A
Short-Circuit Current	$I_{SC}$	$V_{IN}=35V$ , $T_J=25^\circ C$		250		mA
Dropout Voltage	$V_D$	$T_J=25^\circ C$		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

勝特力材料 886-3-5753170  
 胜特力电子(上海) 86-21-34970699  
 胜特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

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