

5A ADJUSTABLE/FIXED LOW DROPOUT LINEAR REGULATOR

DESCRIPTION

The UTC UZ1084-ADJ/Fixed voltage are low dropout three-terminal regulators with 5A output current capability. These devices have been optimized for low voltage applications including V_{TT} bus termination, where transient response and minimum input voltage are critical.

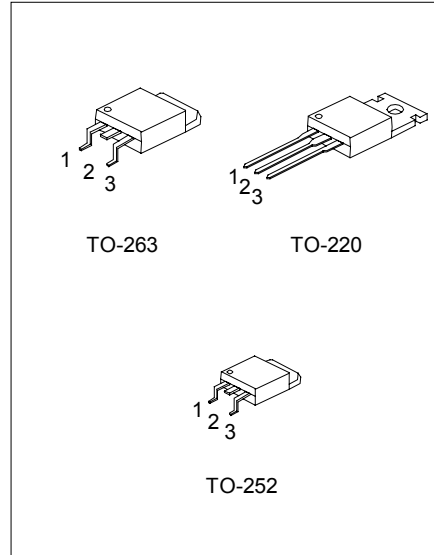
On-chip thermal limiting provides protection against any combination of overload and ambient temperature that would create excessive junction temperatures.

FEATURE

- *Fast transient response
- *Low dropout Voltage at up to 5A
- *Load regulation : 0.5% typical
- *On-chip thermal limiting

APPLICATIONS

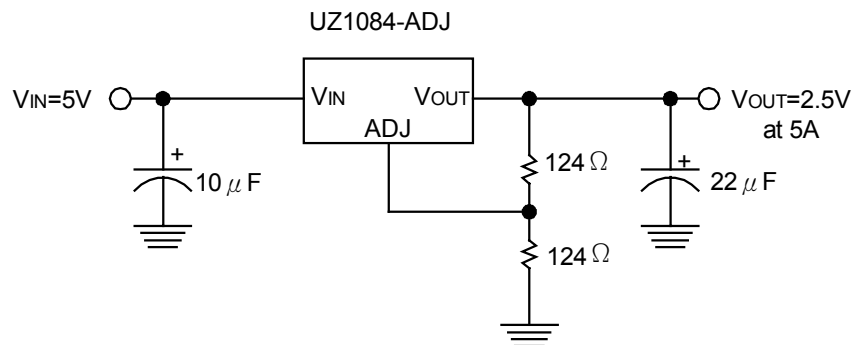
- *Desktop PCs, RISC and embedded processors' supply
- *GTI, SSTL logic Reference bus supply
- *Low voltage VCC logic supply
- *Battery-powered circuitry
- *Post regulator for switching supply
- *Cable and ADSL modems' DSP core supply
- *Set Top Boxes and Web Boxes modules' supply



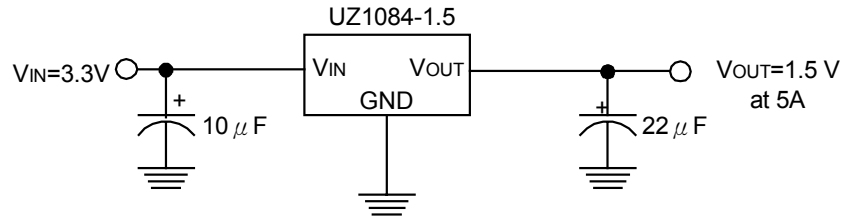
1: ADJ/GND 2: V_{OUT} 3: V_{IN}

TYPICAL APPLICATION CIRCUIT

Adjustable Voltage Regulator



Fixed Voltage Regulator



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MAX	UNIT
Input Supply Voltage	VIN	7	V
Operating Junction Temperature Range	TJ	0 ~ 125	°C
Storage Temperature Range	TSTG	-65 ~ 150	°C
Lead Temperature (soldering, 10 seconds)	TLEAD	300	°C

UTC UZ1084-ADJ(ADJUSTABLE) ELECTRICAL CHARACTERISTICS

(Operating Conditions : $4.75 \leq V_{IN} \leq 5.25$, $T_J = 25^\circ\text{C}$ unless otherwise specified)

PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Reference Voltage	$I_O = 10\text{mA}$	1.23	1.25	1.27	V
Line Regulation	$I_O = 10\text{mA}$		0.5	2	%
Load Regulation	$10\text{mA} \leq I_O \leq 5\text{A}$		0.5	2.5	%
Dropout Voltage	$\Delta V_{REF} = 2\%$, $I_O = 5\text{A}$			1.5	V
Current Limit	$(V_{IN} - V_{OUT}) = 2\text{V}$		5.5		A
Adjust Pin Current			35	100	μA
Minimum Load Current	$1.5\text{V} \leq (V_{IN} - V_{OUT}) \leq 5.75\text{V}$		10		mA
Quiescent Current	$V_{IN} = 5\text{V}$		4		mA
Thermal Resistance, Junction to Case			3		$^\circ\text{C}/\text{W}$
Thermal shutdown			150		$^\circ\text{C}$

UTC UZ1084-X.X(FIXED VOLTAGE) ELECTRICAL CHARACTERISTICS

(Operating Conditions : $4.75 \leq V_{IN} \leq 5.25$, $T_J = 25^\circ\text{C}$ unless otherwise specified)

PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Output Voltage	$I_O = 10\text{mA}$	1.475	1.5	1.525	V
		2.450	2.5	2.550	
		3.234	3.3	3.366	
Line Regulation	$I_O = 10\text{mA}$		0.5	2	%
Load Regulation	$10\text{mA} \leq I_O \leq 5\text{A}$		0.5	2.5	%
Dropout Voltage	$\Delta V_{REF} = 2\%$, $I_O = 5\text{A}$			1.5	V
Current Limit	$(V_{IN} - V_{OUT}) = 2\text{V}$		5.5		A
Minimum Load Current	$1.5\text{V} \leq (V_{IN} - V_{OUT}) \leq 5.75\text{V}$		10		mA
Quiescent Current	$V_{IN} = 5\text{V}$		4		mA
Thermal Resistance, Junction to Case			3		$^\circ\text{C}/\text{W}$
Thermal shutdown			150		$^\circ\text{C}$

TYPICAL PERFORMANCE CHARACTERISTICS

