



79DXXAA

LINEAR INTEGRATED CIRCUIT

3 TERMINAL 1.5A NEGATIVE VOLTAGE REGULATOR

DESCRIPTION

The UTC **79DXXAA** series of three-terminal negative regulators is available several fixed output voltage, making them useful in a wide range of application. Each type employs internal current limiting, thermal shut-down, making it essentially indestructible.

FEATURES

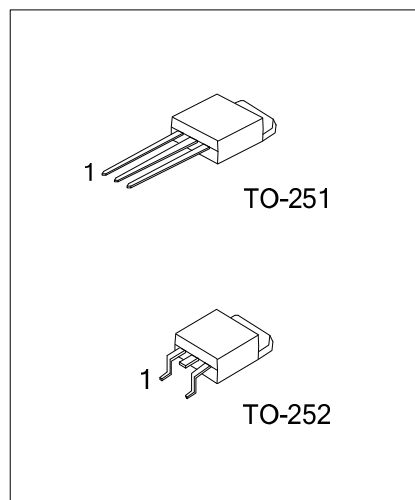
- * Output current up to 1.5A
- * -5V, -12V output voltage available
- * Thermal overload protection

NORDERING INFORMATIO

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
79DXXAAL-TM3-T	79DXXAAG-TM3-T	TO-251	G	I	O	Tube
79DXXAAL-TN3-T	79DXXAAG-TN3-T	TO-252	G	I	O	Tube
79DXXAAL-TN3-R	79DXXAAG-TN3-R	TO-252	G	I	O	Tape Reel

Note: Pin Assignment : G: GND I: Input O: Output

	<p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Lead Plating</p> <p>(4)Output Voltage Code</p>	<p>(1) T: Tube, R: Tape Reel</p> <p>(2) TM3: TO-251, TN3: TO-252</p> <p>(3) L: Lead Free, G: Halogen Free</p> <p>(4) xx: refer to Marking Information</p>
--	--	---



MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
TO-251 TO-252	05:-5V 12:-12V	

BLOCK DIAGRAM

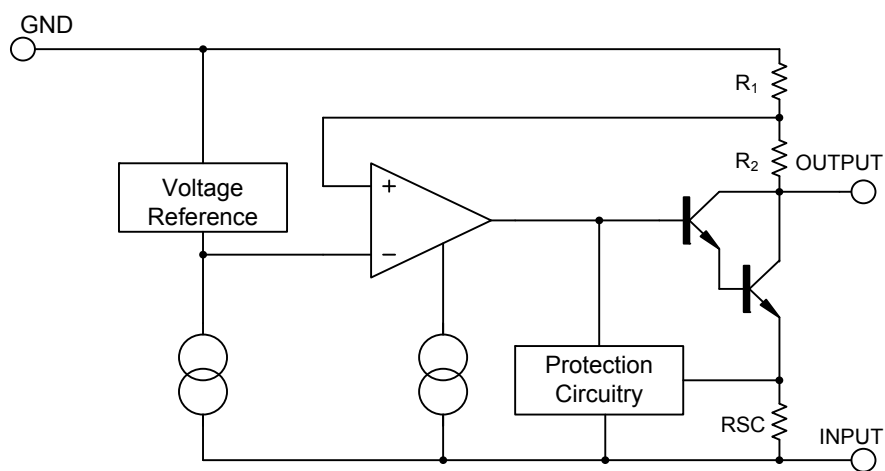


Fig.1

■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

PARAMETER	SYMBOL	RATING	UNIT
Input Voltage	V_{IN}	-35	V
Output Current	I_{OUT}	1.5	A
Power Dissipation	P_D	Internally Limited	W
Operating Temperature	T_{OPR}	0 ~ +125	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-65 ~ +150	$^{\circ}\text{C}$

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.

■ THERMAL DATA

PARAMETER	SYMBOL	RATING	UNIT
Junction to Ambient	θ_{JA}	112	$^{\circ}\text{C/W}$
Junction to Case	θ_{JC}	12.5	$^{\circ}\text{C/W}$

■ ELECTRICAL CHARACTERISTICS

($I_{OUT}=0.5\text{A}$, $T_J=0^{\circ}\text{C}\sim 125^{\circ}\text{C}$, $C_I=2.2\mu\text{F}$, $C_O=1\mu\text{F}$, unless otherwise specified)

For UTC 79D05AA ($V_{IN}=-10\text{V}$)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_{OUT}	$T_J=25^{\circ}\text{C}$	-4.80	-5.0	-5.20	V
		$V_{IN}=-7\text{V}\sim -20\text{V}$ $I_{OUT}=5\text{mA}\sim 1.5\text{A}$, $P_D \leq 15\text{W}$	-4.75		-5.25	V
Dropout Voltage	V_D	$I_{OUT}=1.5\text{A}$, $T_J=25^{\circ}\text{C}$		2		V
Line Regulation	ΔV_{OUT}	$V_{IN}=-7\text{V}\sim -25\text{V}$, $T_J=25^{\circ}\text{C}$		10	100	mV
		$V_{IN}=-8\text{V}\sim -12\text{V}$, $T_J=25^{\circ}\text{C}$		4	50	mV
Load Regulation	ΔV_{OUT}	$I_{OUT}=5\text{mA}\sim 1.5\text{A}$, $T_J=25^{\circ}\text{C}$		10	100	mV
		$I_{OUT}=250\text{mA}\sim 750\text{mA}$, $T_J=25^{\circ}\text{C}$		3	50	mV
Quiescent Current	I_Q	$T_J=25^{\circ}\text{C}$		3	6	mA
Output Noise Voltage	eN	$f=10\text{Hz}\sim 100\text{kHz}$, $T_A=25^{\circ}\text{C}$		100		μV
Output Voltage Drift	$\Delta V_{OUT}/\Delta T$	$I_{OUT}=5\text{mA}$		-0.4		mV/ $^{\circ}\text{C}$
Ripple Rejection	RR	$V_{IN}=-8\text{V}\sim -18\text{V}$, $f=120\text{Hz}$	54	60		dB
Peak Current	I_{PEAK}	$T_J=25^{\circ}\text{C}$		2.2		A

For UTC 79D12AA ($V_{IN}=-18\text{V}$)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_{OUT}	$T_J=25^{\circ}\text{C}$	-11.52	-12.0	-12.48	V
		$V_{IN}=-14.5\text{V}\sim -27\text{V}$, $I_{OUT}=5\text{mA}\sim 1.5\text{A}$, $P_D \leq 15\text{W}$	-11.40		-12.60	V
Dropout Voltage	V_D	$I_{OUT}=1.5\text{A}$, $T_J=25^{\circ}\text{C}$		2		V
Line Regulation	ΔV_{OUT}	$V_{IN}=-14.5\text{V}\sim -30\text{V}$, $T_J=25^{\circ}\text{C}$		12	240	mV
		$V_{IN}=-16\text{V}\sim -22\text{V}$, $T_J=25^{\circ}\text{C}$		6	120	mV
Load Regulation	ΔV_{OUT}	$I_{OUT}=5\text{mA}\sim 1.5\text{A}$, $T_J=25^{\circ}\text{C}$		12	240	mV
		$I_{OUT}=250\text{mA}\sim 750\text{mA}$, $T_J=25^{\circ}\text{C}$		4	120	mV
Quiescent Current	I_Q	$T_J=25^{\circ}\text{C}$		3	6	mA
Output Noise Voltage	eN	$f=10\text{Hz}\sim 100\text{kHz}$, $T_a=25^{\circ}\text{C}$		200		μV
Output Voltage Drift	$\Delta V_{OUT}/\Delta T$	$I_{OUT}=5\text{mA}$		-0.8		mV/ $^{\circ}\text{C}$
Ripple Rejection	RR	$V_{IN}=-15\text{V}\sim -25\text{V}$, $f=120\text{Hz}$	54	60		dB
Peak Current	I_{PEAK}	$T_J=25^{\circ}\text{C}$		2.2		A

■ APPLICATION CIRCUITS

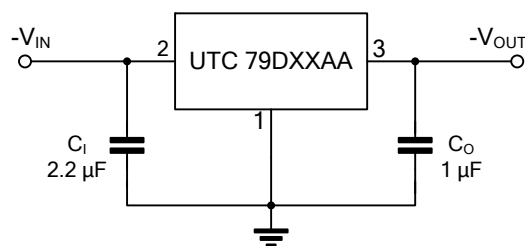


Fig.1 Fixed output regulator

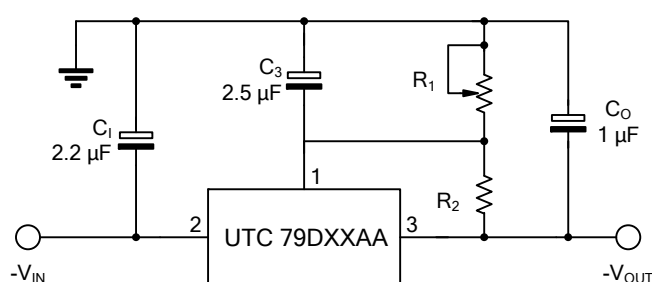


Fig.2 Circuit for increasing output voltage

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.