



79DXXAR

LINEAR INTEGRATED CIRCUIT

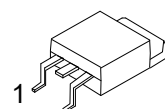
3 TERMINAL 1A NEGATIVE VOLTAGE REGULATOR

DESCRIPTION

The UTC 79DXXAR 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 1A
- * -5V, -12V output voltage available
- * Thermal overload protection
- * Green Product



TO-252

NORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
79DXXARG-TN3-R	TO-252	G	I	O	Tape Reel

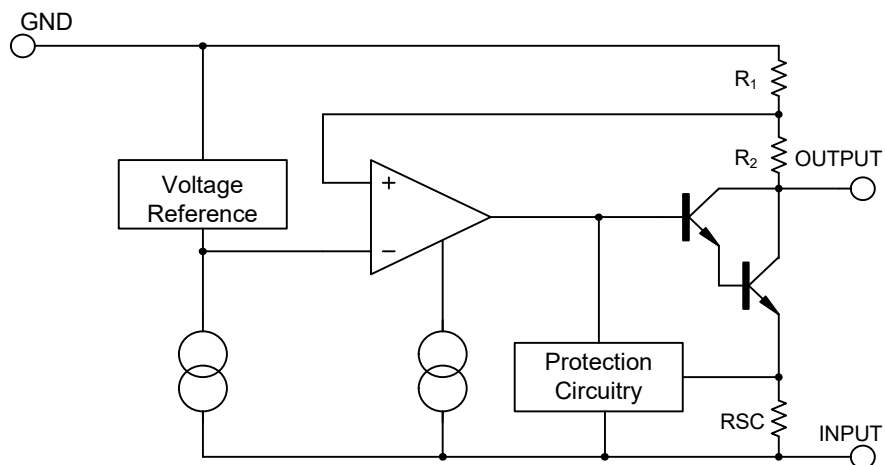
Note: Pin Assignment: G: GND I: Input O: Output

79DXXARG-TN3-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) TN3: TO-252
	(3)Green Package	(3) G: Halogen Free and Lead Free
	(4)Output Voltage Code	(4) XX: refer to Marking Information

MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
TO-252	05:-5V 12:-12V	UTC 79DXXARG Voltage Code Lot Code Date Code

BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Input Voltage	V _{IN}	-35	V
Output Current	I _{OUT}	1	A
Power Dissipation	P _D	0.89	W
Operating Temperature	T _{OPR}	-40 ~ +125	°C
Storage Temperature	T _{STG}	-65 ~ +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.

■ THERMAL DATA

PARAMETER	SYMBOL	RATING	UNIT
Junction to Ambient	θ _{JA}	112	°C/W
Junction to Case	θ _{JC}	12.5	°C/W

■ ELECTRICAL CHARACTERISTICS

(I_{OUT}=0.5A, T_J=0°C~125°C, C_I=2.2μF, C_O=1μF, C_I and C_O use Electrolytic capacitor, unless otherwise specified)

For UTC 79D05AR (V_{IN}=-10V)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V _{OUT}	T _J =25°C	-4.80	-5.0	-5.20	V
		V _{IN} =-7V~-20V, I _{OUT} =5mA~1A	-4.75		-5.25	V
Dropout Voltage	V _D	I _{OUT} =1A, T _J =25°C		2		V
Line Regulation	ΔV _{OUT}	V _{IN} =-7V~-25V, T _J =25°C		10	100	mV
		V _{IN} =-8V~-12V, T _J =25°C		5	60	mV
Load Regulation	ΔV _{OUT}	I _{OUT} =5mA~1A, T _J =25°C		10	100	mV
		I _{OUT} =250mA~750mA, T _J =25°C		3	50	mV
Quiescent Current	I _Q	T _J =25°C		3	6	mA
Quiescent Current Change	ΔI _Q	I _{OUT} =5mA~1A		0.05	0.5	mA
		V _{IN} =-7V~-25V		0.1	1.3	mA
Output Noise Voltage	e _N	f=10Hz~100kHz, T _A =25°C		100		μV
Output Voltage Drift	ΔV _{OUT} /ΔT	I _{OUT} =5mA		-0.4		mV/°C
Ripple Rejection	RR	V _{IN} =-8V~-18V, f=120Hz	54	60		dB
Peak Current	I _{PEAK}	T _J =25°C		2.2		A

For UTC 79D12AR (V_{IN}=-18V)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V _{OUT}	T _J =25°C	-11.52	-12.0	-12.48	V
		V _{IN} =-14.5V~-27V, I _{OUT} =5mA~1A	-11.40		-12.60	V
Dropout Voltage	V _D	I _{OUT} =1A, T _J =25°C		2		V
Line Regulation	ΔV _{OUT}	V _{IN} =-14.5V~-30V, T _J =25°C		12	240	mV
		V _{IN} =-16V~-22V, T _J =25°C		6	120	mV
Load Regulation	ΔV _{OUT}	I _{OUT} =5mA~1A, T _J =25°C		12	240	mV
		I _{OUT} =250mA~750mA, T _J =25°C		4	120	mV
Quiescent Current	I _Q	T _J =25°C		3	6	mA
Quiescent Current Change	ΔI _Q	I _{OUT} =5mA~1A		0.05	0.5	mA
		V _{IN} =-14.5V~-30V		0.1	1.0	mA
Output Noise Voltage	e _N	f=10Hz~100kHz, T _A =25°C		200		μV
Output Voltage Drift	ΔV _{OUT} /ΔT	I _{OUT} =5mA		-0.8		mV/°C
Ripple Rejection	RR	V _{IN} =-15V~-25V, f=120Hz	54	60		dB
Peak Current	I _{PEAK}	T _J =25°C		2.2		A

Note: Thermal resistance test board.

■ **APPLICATION CIRCUITS** (C_1 and C_0 please use electrolytic capacitor)

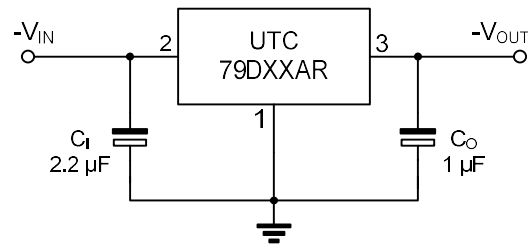


Fig.1 Fixed output regulator

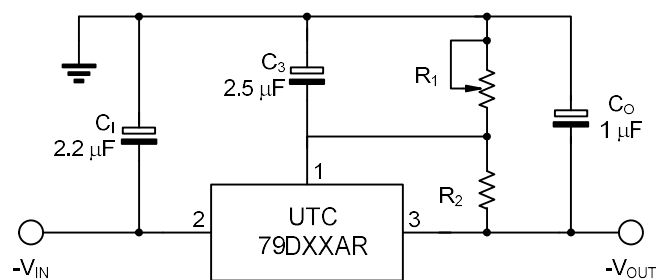
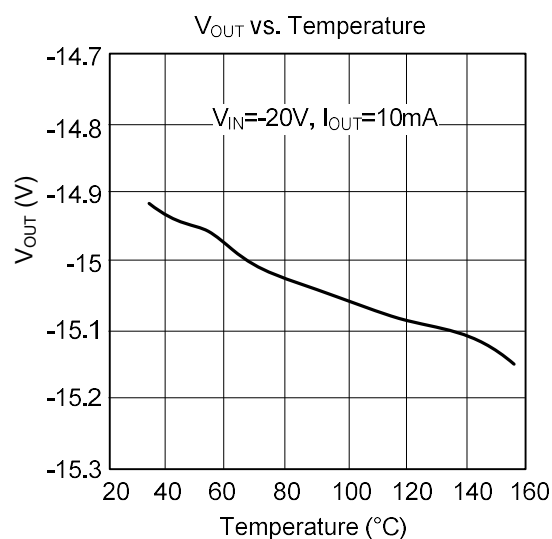
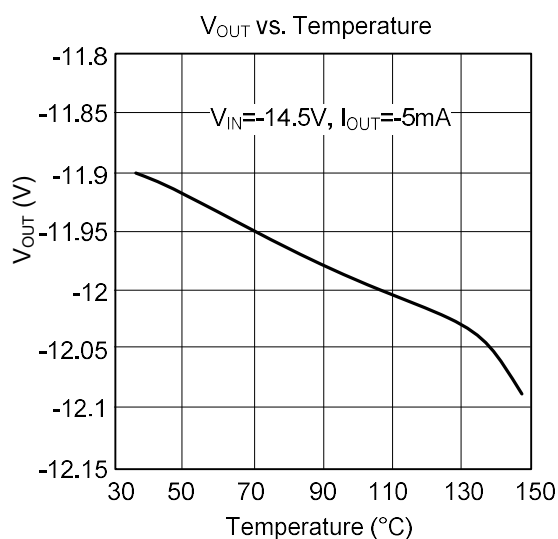
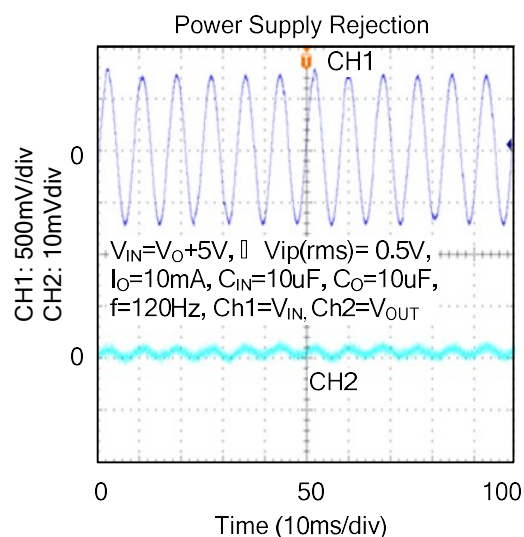
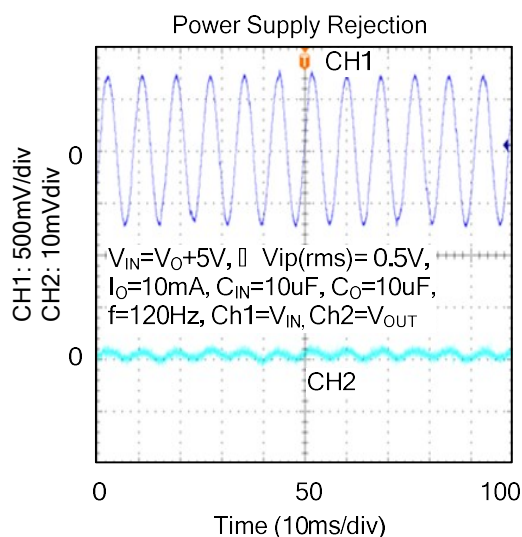
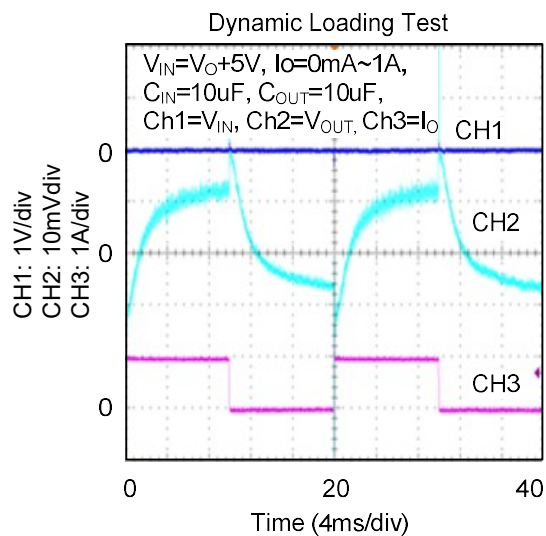
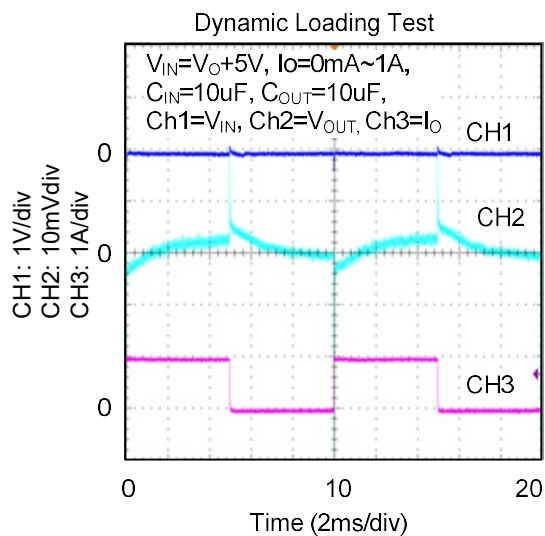
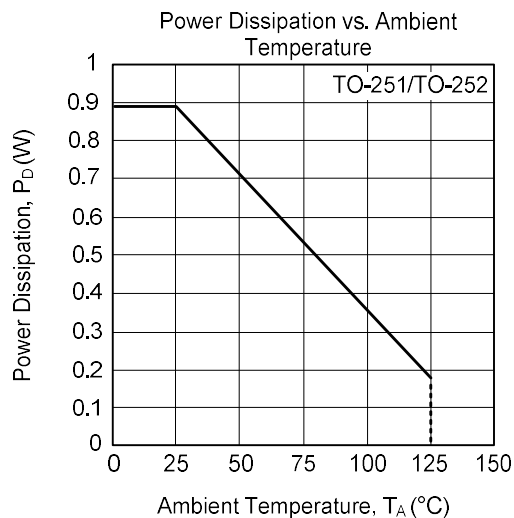
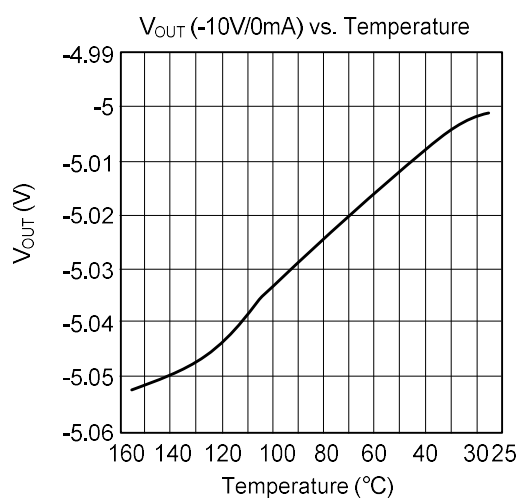


Fig.2 Circuit for increasing output voltage

■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS



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