

LM78XX

LINEAR INTEGRATED CIRCUIT

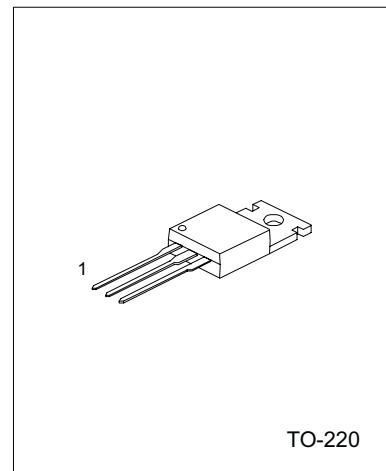
3-TERMINAL 1A POSITIVE VOLTAGE REGULATOR

DESCRIPTION

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

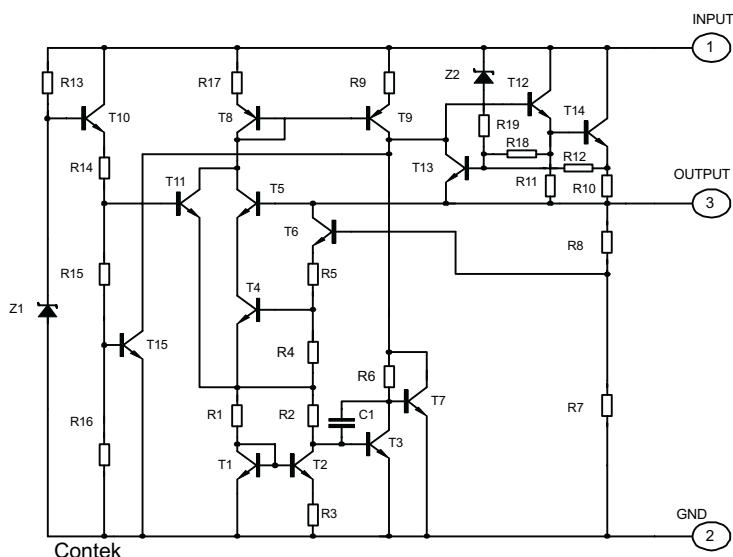
FEATURES

- *Output current up to 1.5 A
- *Fixed output voltage of 5V, 6V, 8V, 9V, 10V, 12V, 15V ,18V and 24V available
- *Thermal overload shutdown protection
- *Short circuit current limiting
- *Output transistor SOA protection



1:Input 2:GND 3:Output

TEST CIRCUIT



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Contek LM7824 ELECTRICAL CHARACTERISTICS

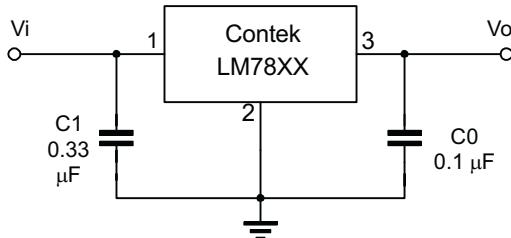
($V_i=33V$, $I_o=0.5A$, $T_j=0$ C - 12 C, $C_1=0.33\mu F$, $C_0=0.1\mu F$, unless otherwise specified) (Note 1)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_j=25$ C, $I_o=5mA$ - 1.0A	23.0	24.0	25.0	V
		$V_i=27V$ to 38V, $I_o=5mA$ - 1.0A	22.8		25.2	V
Load Regulation	ΔV_o	$T_j=25$ C, $I_o=5mA$ - 1.5A		240		mV
		$T_j=25$ C, $I_o=0.25A$ - 0.75A			120	mV
Line regulation	ΔV_o	$V_i=27V$ to 38V, $T_j=25$ C		240		mV
		$V_i=27V$ to 38V, $T_j=25$ C, $I_o=1A$		240		mV
Quiescent Current	I_q	$T_j=25$ C, $I_o=<1A$		8.0		mA
Quiescent Current Change	ΔI_q	$V_i=28V$ to 38V		1.0		mA
		$I_o=5mA$ - 1.0A		0.5		mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100kHz$		170		μV
Temperature coefficient of V_o	$\Delta V_o/\Delta T$	$I_o=5mA$		-2.8		mV/C
Ripple Rejection	RR	$V_i=28V$ - 38V, $f=120Hz$, $T_j=25$ C	50	66		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

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.