ARK Component

Product specification

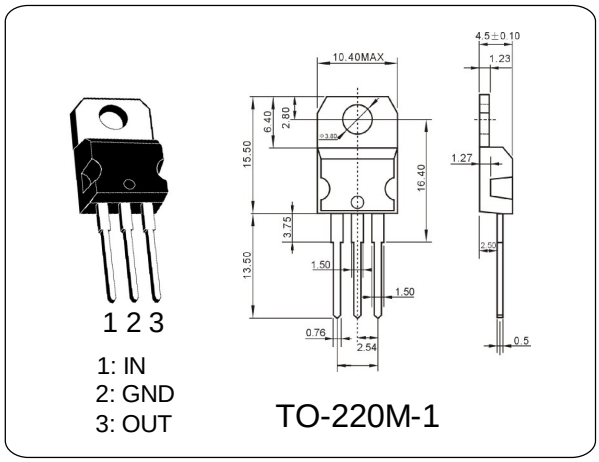
3-Terminal 1A Positive Voltage Regulator — L7818CV

GENERAL DESCRIPTION

The L7818 series of three terminal positive regulators are available in the TO-220 package and with several fixed output voltages, making them useful in a wide range of applications. Each type employs internal current limiting, thermal shut down and safe operating area protection, making it essentially indestructible. If adequate heat sinking is provided, they can deliver over 1.0A output current. Although designed primarily as fixed voltage regulators, these devices can be used with external components to obtain adjustable voltages and currents.

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

Parameter	Symbol	Typ	Unit
Input Voltage	V_I	35	V
Output Voltage	V_O	18	V
Peak Current	I_{PK}	2.2	A
Operating Temperature Range	T_{OPR}	0~125	°C
Storage Temperature Rang	T_{STG}	-65~150	°C



1: IN
2: GND
3: OUT

TO-220M-1

ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

(Refer to test circuit, Io = 500mA, Vi = 27V, Ci= 0.33uF, Co=0.1uF unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_O	Tj = 25℃ V_I = 21V ~ 33V I_O = 5.0mA~1.0A, P_D<15W	17.3	18.0	18.7	V
Line Regulation (Note1)	$\triangle V_o$	Tj = 25℃, Vi=21V ~ 33V	—	—	180	mV
		Tj = 25℃, V_I = 24V ~ 30V	—	—	100	
Load Regulation (Note1)	$\triangle V_o$	Tj = 25℃, I_O = 5.0mA ~1.0A	—	—	100	mV
		Tj = 25℃ I_O = 250mA ~ 750mA	—	—	50	
Quiescent Current	I_Q	T_J =+25 °C	—	—	8	mA
Quiescent Current Change	$\triangle IQ$	Io = 5.0mA ~ 1.0A			0.5	mA
		Tj = 25℃, Vi=21V ~ 30V			1.0	mA
Output voltage drift	$\triangle Vo/\triangle T$	Io = 5.0mA		-1.0		mV/℃
Ripple Rejection	RR	f = 120Hz, V_O = 18.5V to 28.5V	—	58	—	dB
Dropout Voltage	V_{Drop}	I_O = 1A, T_J =+25 °C	—	2	—	V
Output Resistance	R_O	f = 1KHz	—	0.02	—	Ω
Short Circuit Current	I_{SC}	V_I = 35V, T_A =+25 °C	—	200	—	mA
Peak Current	I_{PK}	T_J =+25 °C	—	—	2.2	A