SM Technology Co., Limited

TO-92 Encapsulate Three-terminal Voltage Regulator

78L12 Three-terminal positive voltage regulator

TO-92

1.OUT

2.GND

3.IN

1 2 3

FEATURES

Maximum Output current

$I_{OM:}$ 0.1A

Output voltage

V_o: 12 V

Continuous total dissipation

P_D: 0.625 W

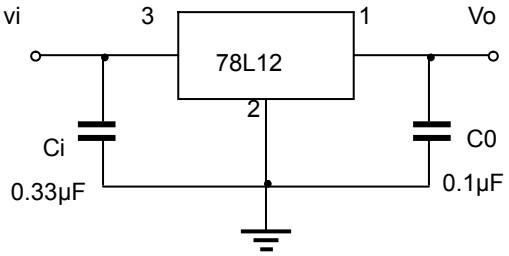
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_I	35	V
Operating Junction Temperature Range	T_{OPR}	0-+125	℃
Storage Temperature Range	T_{STG}	-55-+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE(V_I=19V, Io=40mA, C_i=0.33μF,Co=0.1μF, unless otherwise specified)

Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25℃	11.5	12	12.5	V
		14V≤V_I≤27V, Io=1mA-40mA	0-125℃	11.4	12	12.6	V
		Io=1mA-70mA		11.4	12	12.6	V
Load Regulation	△Vo	Io=1mA-100mA	25℃		22	100	mV
		Io=1mA-40mA	25℃		13	50	mV
Line regulation	△Vo	14.5V≤V_I≤27V	25℃		55	250	mV
		16V≤V_I≤27V	25℃		49	200	mV
Quiescent Current	Iq		25℃		4.3	6.5	mA
Quiescent Current Change	△Iq	16V≤V_I≤27V	0-125℃			1.5	mA
	△Iq	1mA≤I_O≤40mA	0-125℃			0.1	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		70		uV
Ripple Rejection	RR	15V≤V_I≤25V,f=120Hz	0-125℃	37	42		dB
Dropout Voltage	Vd		25℃		1.7		V

TYPICAL APPLICATION



Note : Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.