JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

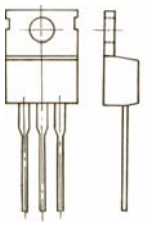
JCST

TO-220 Plastic-Encapsulate Transistors

CJ78M12 Three-terminal positive voltage regulator

TO-220

1. IN
2. GND
3. OUT



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FEATURES

Maximum Output current I_{OM}: 0.5 A

Output voltage V_O: 12V

Continuous total dissipation

P_D: 1.5 W (Ta= 25 ℃)

15 W (Tc= 25 ℃)

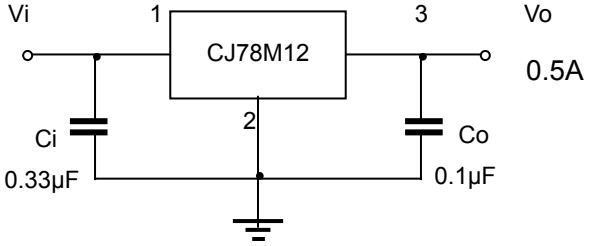
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	25	V
Operating Junction Temperature Range	T_{OPR}	0-+125	℃
Storage Temperature Range	T_{STG}	-65-+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE (Vi=19V,Io=350mA, Ci=0.33μF,Co=0.1μF, unless otherwise specified)

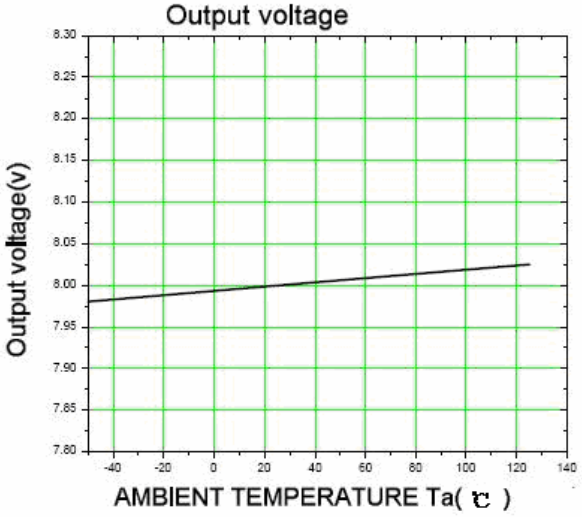
Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25℃	11.5	12	12.5	V
		14.5≤V_i≤27V, Io=5mA-350mA Po≤ 15W	0-125℃	11.4	12	12.6	V
Load Regulation	ΔVo	Io=5mA-500mA	25℃		25	240	mV
		Io=5mA-200mA	25℃		10	120	mV
Line regulation	ΔVo	14.5V≤V_i≤30V, Io=200mA	25℃		10	100	mV
		16V≤V_i≤30V, Io=200mA	25℃		3	50	mV
Quiescent Current	Iq		25℃		4.6	6	mA
Quiescent Current Change	ΔIq	14.5V≤V_i≤30V, Io=200mA	0-125℃			0.8	mA
	ΔIq	5mA≤I_O≤350mA	0-125℃			0.5	mA
Output Noise Voltage	V_N	10Hz≤f ≤100KHz	25℃		75		uV
Ripple Rejection	RR	15≤V_i≤25V,f=120Hz,Io=300mA	0-125℃	55	80		dB
Dropout Voltage	Vd	Io=350mA	25℃		2		V
Short Circuit Current	Isc	Vi=19V	25℃		240		mA
Peak Current	Ipk		25℃		0.5		A

TYPICAL APPLICATION

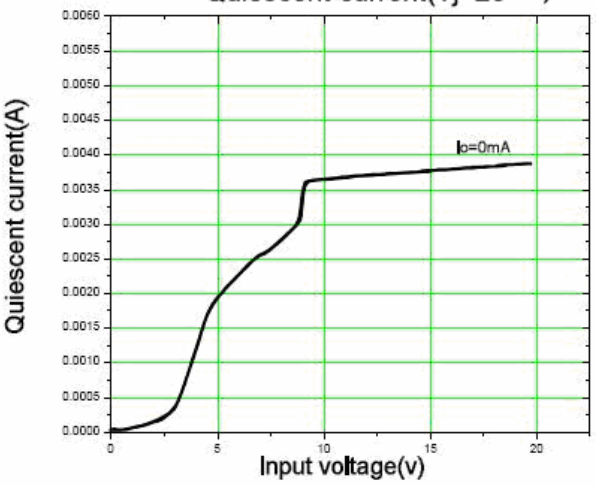


Typical Characteristics

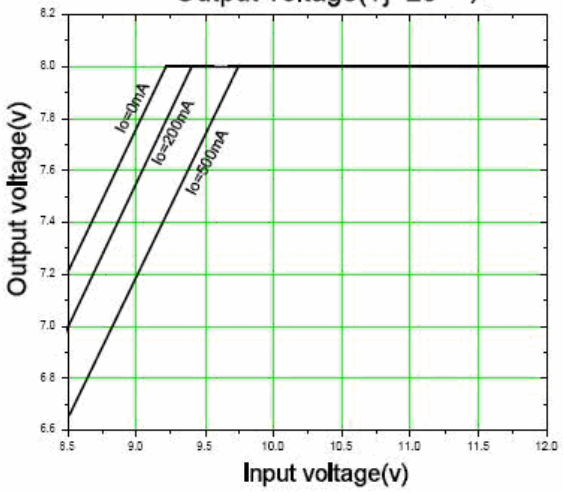
Ambient temperature VS
Output voltage



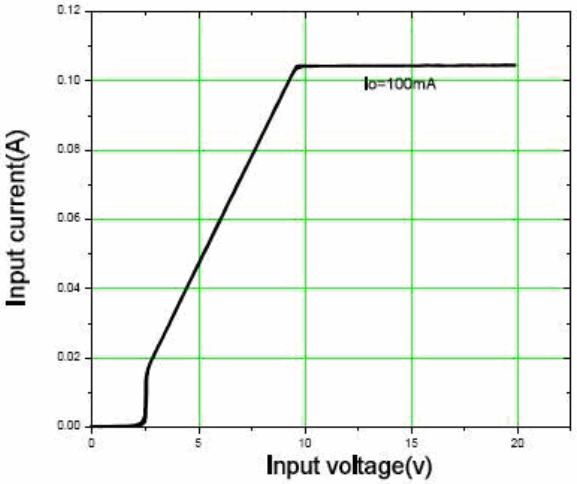
Input voltage VS
Quiescent current(Tj=25 ℃)



Input voltage VS
Output voltage(Tj=25 ℃)



Input voltage VS
Input current(Tj=25 ℃)



PD-TA