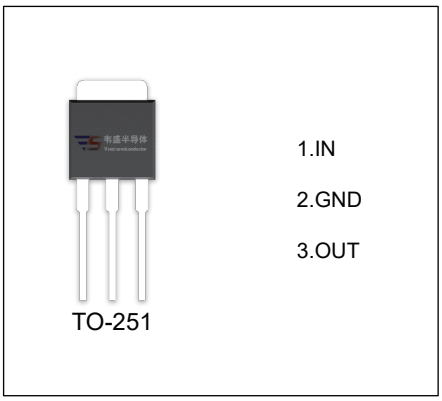
VS78M12 Three-terminal positive voltage regulator



FEATURES

Maximum Output current I_{OM}: 0.5 A
Output voltage V_O: 12V
Continuous total dissipation
P_D: 1.25 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	35	V
Operating Junction Temperature Range	T_{OPR}	-40-+125	℃
Storage Temperature Range	T_{STG}	-65-+150	℃

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	Vo	T_J=25℃	11.64	12	12.36	V
		14.5≤V_i≤27V, Io=5mA-350mA Po≤ 1.25W	11.4	12	12.6	V
Load Regulation	ΔVo	Io=5mA-500mA,T_J=25℃		25	240	mV
		Io=5mA-200mA,T_J=25℃		10	120	mV
Line Regulation	ΔVo	14.5V≤V_i≤30V, Io=200mA,T_J=25℃		10	100	mV
		16V≤V_i≤30V, Io=200mA,T_J=25℃		3	50	mV
Quiescent Current	Iq	T_J=25℃		4.6	6	mA
Quiescent Current Change	ΔIq	14.5V≤V_i≤30V, Io=200mA			0.8	mA
	ΔIq	5mA≤I_O≤350mA			0.5	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz,T_J=25℃		75		μV
Ripple Rejection	RR	15≤V_i≤25V,f=120Hz,Io=300mA	55	80		dB
Dropout Voltage	Vd	Io=350mA,T_J=25℃		2		V
Short Circuit Current	Isc	Vi=19V ,T_J=25℃		240		mA
Peak Current	Ipk	T_J=25℃		0.7		A

TYPICAL APPLICATION