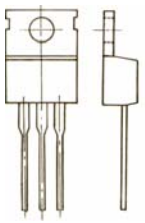
SHENZHEN HAOCHANG SEMICONDUCTOR CO.,LTD.

TO-220 Plastic-Encapsulate Voltage Regulator

L7808 Three-terminal positive voltage regulator

TO-220

1. IN
2. GND
3. OUT



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FEATURES

Maximum Output current I_{OM}: 1.5 A
Output voltage V_o: 8 V
Continuous total dissipation
P_D: 1.5 W (T_a= 25 ℃)
15W (T_c=25 ℃)

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

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal resistance junction-air	$R_{\theta JA}$	65	℃/W
Thermal resistance junction-cases	$R_{\theta JC}$	5	℃/W
Operating Junction Temperature Range	T_{OPR}	0-125	℃
Storage Temperature Range	T_{STG}	-65-150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE (Vi=14V,Io=500mA, Ci=0.33μF, Co=0.1μF, unless otherwise specified)

Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25℃	7.7	8	8.3	V
		10.5V≤V_i≤23V, Io=5mA-1A, P≤15W	0-125℃	7.6	8	8.4	V
Load Regulation	ΔVo	Io=5mA-1.5A	25℃		12	160	mV
		Io=250mA-750mA	25℃		4	80	mV
Line regulation	ΔVo	10.5V≤V_i≤25V	25℃		6	160	mV
		11V≤V_i≤17V	25℃		2	80	mV
Quiescent Current	Iq		25℃		4.3	8	mA
Quiescent Current Change	ΔIq	10.5V≤V_i≤25V	0-125℃			1	mA
		5mA≤I_O≤1A	0-125℃			0.5	mA
Output voltage drift	$\Delta V_O/\Delta T$	I_O=5mA	0-125℃		-0.8		mV/℃
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		52		uV
Ripple Rejection	RR	11.5V≤V_i≤21.5V,f=120Hz	0-125℃	55	72		dB
Dropout Voltage	Vd	Io=1A	25℃		2		V
Output resistance	R_O	f=1KH_Z	25℃		10		mΩ
Short Circuit Current	Isc		25℃		450		mA
Peak Current	Ipk		25℃		2.2		A

TYPICAL APPLICATION