

THREE-TERMINAL POSITIVE VOLTAGE REGULATOR

FEATURES

Maximum output current

$$I_{OM} : 1.5A$$

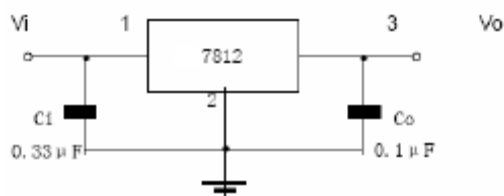
Output voltage

 $V_O : 12 \text{ V}$

Continuous total dissipation

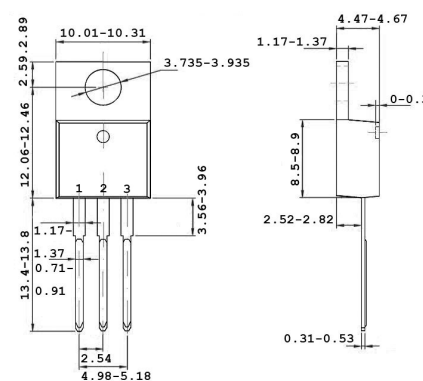
$$P_D: 2W (T_J=25^{\circ}\text{C})$$
15W ($T_C=25^{\circ}\text{C}$)

TYPICAL APPLICATION



TO-220

1. IN
2. GND
3. OUT



UNIT:mm

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

Parameters	Symbols	Value	UNITS
Input Voltage	V_I	35	V
Thermal Resistance Junction - Air	$R_{\theta JA}$	65	$^{\circ}\text{C/W}$
Thermal Resistance Junction - Cases	$R_{\theta JC}$	5	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	0~+150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

(Vi=19V, Io=500mA, 0°C<Tj<125°C, Ci=0.33μF, Co=0.1μF, unless otherwise specified)

Parameters	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output Voltage	V_O	$T_J=25^{\circ}\text{C}$	11.5	12.0	12.5	V
		$14.5\text{V}\leq V_i\leq 27\text{V}$, $I_o=5\text{mA}-1\text{A}$ $P<15\text{W}$	11.4	12	12.6	V
Load Regulation	ΔV_O	$T_J=25^{\circ}\text{C}$, $14.5\text{V}\leq V_i\leq 30\text{V}$ $T_J=25^{\circ}\text{C}$, $16\text{V}\leq V_i\leq 22\text{V}$		10 3	240 120	mV mV
Line Regulation	ΔV_O	$T_J=25^{\circ}\text{C}$, $I_o=5\text{mA}-1.5\text{A}$ $T_J=25^{\circ}\text{C}$, $I_o=250\text{mA}-750\text{mA}$		12 4	240 120	mV mV
Quiescent Current	I_q	$T_J=25^{\circ}\text{C}$		4.3	8	mA
Quiescent Current Change	ΔI_q	$5.0\text{mA}\leq I_o\leq 1.0\text{A}$ $14.5\text{V}\leq V_i\leq 30\text{V}$			0.5 1.0	mA mA
Output Voltage Drift	$\Delta V_O/\Delta T$	$I_o=5\text{mA}$		-1		mV/ $^{\circ}\text{C}$
Output Noise Voltage	V_N	$f=10\text{Hz}$ to 100KHz , $T_J=25^{\circ}\text{C}$		75		μV
Ripple Rejection	RR	$15\text{V}\leq V_i\leq 25\text{V}$, $f=120\text{Hz}$	55	71		dB
Dropout Voltage	V_d	$T_J=25^{\circ}\text{C}$, $I_o=1.0\text{A}$		2		V
Output Resistance	R_o	$f=1\text{KHz}$		18		m Ω
Short Circuit Current	I_{sc}	$V_i=35\text{V}$, $T_J=25^{\circ}\text{C}$		350		mA
Peak Current	I_{pk}	$T_J=25^{\circ}\text{C}$		2.2		A