



TO-251/TO-252-2L Plastic-Encapsulate Transistors

CJ78M06 Three-terminal positive voltage regulator

FEATURES

Maximum Output current

$$I_{OM}: 0.5\text{ A}$$

Output voltage

$$V_O: 6\text{ V}$$

TO-251
TO-252-2L



1.IN

2.GND

3.OUT



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	°C
Storage Temperature Range	T_{STG}	-65-+150	°C

ELECTRICAL CHARACTERISTICS ($V_i=11\text{V}$, $I_o=350\text{mA}$, $0^\circ\text{C}<T_j<125^\circ\text{C}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_j=25^\circ\text{C}$	5.75	6	6.25	V
		$8\leq V_i\leq 21\text{V}$, $I_o=5\text{mA}-350\text{mA}$ $P_o\leq 15\text{W}$	5.7	6	6.3	V
Load Regulation	ΔV_o	$T_j=25^\circ\text{C}$, $I_o=5\text{mA}-0.5\text{A}$		18	120	mV
		$T_j=25^\circ\text{C}$, $I_o=5\text{mA}-200\text{mA}$		10	60	mV
Line regulation	ΔV_o	$8\text{V}\leq V_i\leq 25\text{V}$, $I_o=200\text{mA}$		5	100	mV
		$9\text{V}\leq V_i\leq 25\text{V}$, $I_o=200\text{mA}$		1.5	50	mV
Quiescent Current	I_q	$T_j=25^\circ\text{C}$		4.3	6	mA
Quiescent Current Change	ΔI_q	$9\text{V}\leq V_i\leq 25\text{V}$, $I_o=200\text{mA}$			0.8	mA
	ΔI_q	$5\text{mA}\leq I_o\leq 350\text{mA}$			0.5	mA
Output Noise Voltage	V_N	$10\text{Hz}\leq f\leq 100\text{KHz}$		45		μV
Ripple Rejection	RR	$9\text{V}\leq V_i\leq 19\text{V}$, $f=120\text{Hz}$, $I_o=300\text{mA}$ $T_j=25^\circ\text{C}$	59	80		dB
Dropout Voltage	V_d	$T_j=25^\circ\text{C}$, $I_o=350\text{mA}$		2		V
Short Circuit Current	I_{sc}	$V_i=11\text{V}$, $T_a=25^\circ\text{C}$		270		mA
Peak Current	I_{pk}	$T_j=25^\circ\text{C}$		0.7		A

TYPICAL APPLICATION

