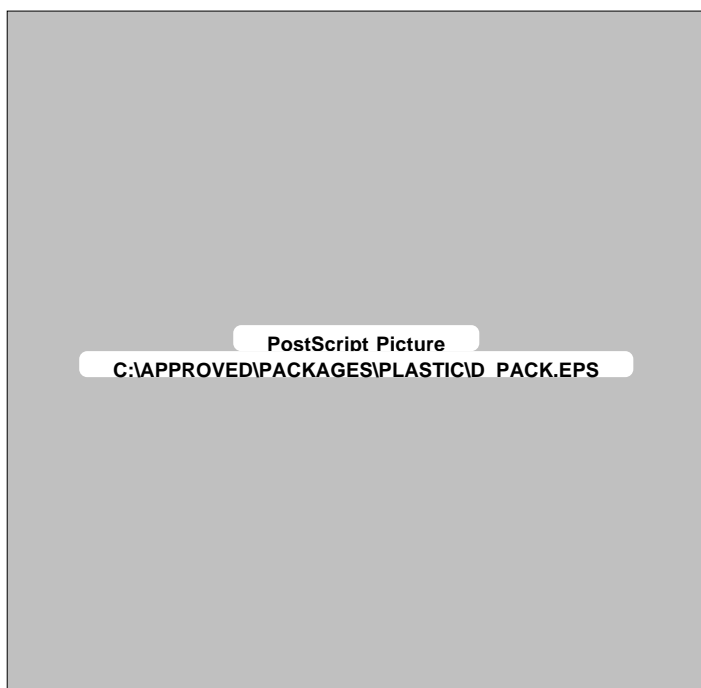


MECHANICAL DATA

Dimensions in mm (inches)



**3 TERMINAL
LOW CURRENT
15 VOLT POSITIVE
VOLTAGE REGULATOR**

FEATURES

- 0.01%/V LINE REGULATION
- 0.3%/A LOAD REGULATION
- THERMAL OVERLOAD PROTECTION
- SHORT CIRCUIT PROTECTION
- SAFE OPERATING AREA PROTECTION
- 1% OUTPUT VOLTAGE TOLERANCE

D-PACK — TO251 plastic package

Pin 1 - V_{IN} Pin 2 - GND Pin 3 - V_{OUT}

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_I	DC Input Voltage	35V
P_D	Power Dissipation	Internally limited
T_j	Operating Junction Temperature Range	0°C to 125°C
	Maximum Junction Temperature	125°C
T_{stg}	Storage Temperature Range	-65°C to +150°C
T_L	Lead Temperature (Soldering, 10 sec)	300°C

ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$ unless stated)

Parameter	Test Conditions	IP78M15ADP			IP78M15DP			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	
V_O Output Voltage*	$I_O = 100\text{mA}$ $V_{IN} = 23\text{V}$	14.85	15	15.15	14.4	15	15.15	V
	$I_O = 5\text{mA to } 350\text{mA}$ $V_{IN} = 18 \text{ to } 30\text{V}$ $T_j = 0 \text{ to } 125^\circ\text{C}$ $P_D \leq P_{MAX}$	14.55		15.45	14.25		15.75	
ΔV_O Line Regulation*	$I_O = 200\text{mA}$ $V_{IN} = 17.5 \text{ to } 30\text{V}$		4	22			60	mV
	$I_O = 200\text{mA}$ $V_{IN} = 20 \text{ to } 30\text{V}$ $T_j = 0 \text{ to } 125^\circ\text{C}$		4	22			30	
	$I_O = 500\text{mA}$ $V_{IN} = 20 \text{ to } 26\text{V}$		4	22			150	
ΔV_O Load Regulation*	$I_O = 5\text{mA to } 500\text{mA}$ $V_{IN} = 23\text{V}$ $T_j = 0 \text{ to } 125^\circ\text{C}$		12	75			150	mV
I_d Quiescent Current*	$I_O = 350\text{mA}$ $V_{IN} = 23\text{V}$ $T_j = 0 \text{ to } 125^\circ\text{C}$		4	6		4	6	mA
ΔI_Q Quiescent Current Change*	$I_O = 5 \text{ to } 500\text{mA}$ $V_{IN} = 23\text{V}$ $T_j = 0 \text{ to } 125^\circ\text{C}$		0.1	0.5			0.5	mA
	$I_O = 200\text{mA}$ $V_{IN} = 20 \text{ to } 30\text{V}$ $T_j = 0 \text{ to } 125^\circ\text{C}$		0.2	0.8			0.8	
V_N Output Noise Voltage	$f = 10\text{Hz to } 100\text{kHz}$		90	600		90	600	μV
$\frac{\Delta V_{IN}}{\Delta V_O}$ Ripple Rejection	$V_{IN} = 18.5 \text{ to } 28.5\text{V}$ $f = 120\text{Hz}$ $I_O = 300\text{mA}$	57	70		54			dB
	$V_{IN} = 18.5 \text{ to } 28.5\text{V}$ $f = 120\text{Hz}$ $I_O = 100\text{mA}$ $T_j = 0 \text{ to } 125^\circ\text{C}$	57	70		54			
Dropout Voltage*	$I_O = 350\text{mA}$		2	2.5			2.5	V
I_{SC} Short Circuit Current*	$V_{IN} = 35\text{V}$		300	600		300	600	mA
I_{PK} Peak Output Current*	$V_{IN} = 23\text{V}$	0.7	1.0	1.4	0.7	1.0	1.6	A
Average Temperature Coefficient of Output Voltage*	$I_O = 5\text{mA}$		1.5	6.0		1.5		$\text{mV} / ^\circ\text{C}$

* Pulse Test: $t_p \leq 10\text{ms}$, $\delta \leq 5\%$.

All characteristics are measured with a capacitor across the input of $0.22\mu\text{F}$ and a capacitor across the output of $0.1\mu\text{F}$. Output Voltage changes due to changes in internal temperature must be taken into account separately.