

MICRO ELECTRONICS

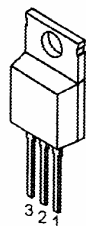
ML7800 SERIES

3-TERMINAL POSITIVE VOLTAGE REGULATOR

The ML7800 series are 3-Terminal Positive Voltage Regulators. These regulators employ internal current-limiting, thermal-shutdown and safe-area compensation, making them essentially indestructible. If adequate heat sinking is provided, they can deliver over 1A output current (Please refer to the "thermal design" portion of application note). They are intended as fixed voltage regulations in a wide range of applications including local (on-card) regulation for elimination of distribution problems associated with single point regulation. In addition to use as fixed voltage regulators, these devices can be used with external components to obtain adjustable output voltages and currents.

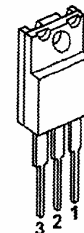
■ Package Outline

TO-220



1. OUT
2. GND
3. IN

TO-220F



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	Maximum Rating		UNIT	
Input Voltage	V _{IN}	ML7805 to ML7809	35	V	
		ML7812 to ML7820	35		
		ML7824	40		
Storage Temperature Range	T _{stg}	-40 to +125		°C	
Operating Temperature Range		Operating Junction Temperature	T _j	-30 to +150	°C
		Operating Ambient Temperature	T _{opr}	-30 to +75	
Power Dissipation	P _D	15(T _c ≤ 70°C)		W	

THERMAL RESISTANCE

Thermal Resistance	Junction-to-Ambient Temperature	θ _{ja}	60	°C/W
	Junction-to-Case	θ _{jc}	5	

ELECTRICAL CHARACTERISTICS (T_j=25°C, C₁=0.33 μF, C_o=0.1 μF)

Measurement is to be conducted in pulse testing.

PARAMETER	SYMBOL	TEST CONDITIONS		MIN.	TYP.	MAX.	UNIT
ML7805A / ML7805FA							
Output Voltage	V _o	V _{IN} =10V	I _o =0.5A	4.8	5.0	5.2	V
Quiescent Current	I _Q	V _{IN} =10V	I _o =0mA	-	4.2	8.0	mA
Load Regulation	ΔV _o I _o	V _{IN} =10V	I _o =0.005A to 1.5A	-	15	100	mV
Line Regulation	ΔV _o V _{in}	V _{IN} =7 to 25V	I _o =0.5A	-	3	100	mV
Ripple Rejection	RR	V _{IN} =10V	I _o =0.5A	62	78	-	dB
Output Noise Voltage	V _{NO}	V _{IN} =10V	BW=10Hz to 100KHz	-	40	-	μV
Average Temperature coefficient of Output Voltage	ΔV _o / ΔT	V _{IN} =10V	I _o =0.5A	-	-1.1	-	mV/°C



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