

## MC7800

# Linear Voltage Regulator, 1 A, 5 to 24 V, Positive

## Product Overview

For complete documentation, see the data sheet.

The MC7800 Series of positive linear voltage regulators are monolithic integrated circuits designed as fixed-voltage regulators for a wide variety of applications including local, on-card regulation. These regulators employ internal current limiting, thermal shutdown, and safe-area compensation. With adequate heatsinking they can deliver output currents in excess of 1.0 A. Although designed primarily as a fixed voltage regulator, these devices can be used with external components to obtain adjustable voltages and currents. The linear voltage regulator is also available in automotive NCV7800 version.

### Specifications:

	MC7800AB	MC7800AC	MC7800B	MC7800C
Tolerance	2%	2%	4%	4%
Temperature Range	-40°C to +125°C	0°C to +125°C	-40°C to +125°C	0°C to +125°C
Package	D2PAK, TO-220	D2PAK, TO-220	DPAK, D2PAK, TO-220	DPAK, D2PAK, TO-220

## Features

- Output Current in Excess of 1.0 A
- No External Components Required
- Internal Thermal Overload Protection
- Internal Short Circuit Current Limiting
- Output Transistor Safe-Area Compensation
- Output Voltage Offered in 2% and 4% Tolerance
- Pb-Free Packages are Available

## Applications

- LM7805, L7805 alternative

## Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Output	Polarity	V <sub>O</sub> (V)	I <sub>O</sub> Typ (A)	V <sub>I</sub> Min (V)	V <sub>I</sub> Max (V)	V <sub>DO</sub> Typ (V)	I <sub>g</sub> Typ (mA)	PSRR (dB)	Noise (μV <sub>r</sub> ms)	Enable	Power Good	Application	Package Type
MC7805ABD2TR4G	0.3915	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D <sup>2</sup> PAK-3
MC7805ABTG	0.3193	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	TO-220-3
MC7805ACD2TG	0.3271	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D <sup>2</sup> PAK-3
MC7805ACD2TR4G	0.3421	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D <sup>2</sup> PAK-3
MC7805ACTG	0.2968	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	TO-220-3
MC7805BD2TG	0.3201	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D <sup>2</sup> PAK-3
MC7805BD2TR4G	0.3059	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D <sup>2</sup> PAK-3
MC7805BDTG	0.2331	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	DPAK-3
MC7805BDTRK G	0.1995	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	DPAK-3
MC7805BTG	0.2835	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	TO-220-3
MC7805CD2TG	0.2857	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D <sup>2</sup> PAK-3
MC7805CD2TR4G	0.2855	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D <sup>2</sup> PAK-3
MC7805CDTG	0.2111	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	DPAK-3
MC7805CDTRK G	0.1972	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	DPAK-3
MC7805CTG	0.2485	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	TO-220-3
MC7808CTG	0.2525	 	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	Industrial	TO-220-3
MC7809ABTG		 	Active	Single	Positive	9	1	11	35	2	3.3	61	10	No	No	Industrial	TO-220-3
MC7809CTG	0.2331	 	Active	Single	Positive	9	1	11	35	2	3.4	61	10	No	No	Industrial	TO-220-3
MC7812ABD2TR4G	0.3997	 	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	Industrial	D <sup>2</sup> PAK-3
MC7812ACD2TR4G	0.3183	 	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	Industrial	D <sup>2</sup> PAK-3
MC7812ACTG	0.2865	 	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	Industrial	TO-220-3
MC7812BD2TR4G	0.3581	 	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	Industrial	D <sup>2</sup> PAK-3
MC7812BDTG	0.234	 	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	Industrial	DPAK-3

MC7812BDTRK G	0.2848	 	Active	Sing le	Posi tive	12	1	14	35	2	3.4	60	10	No	No	Indu stria l	DPA K-3
MC7812BTG	0.2539	 	Active	Sing le	Posi tive	12	1	14	35	2	3.4	60	10	No	No	Indu stria l	TO-220-3
MC7812CD2TR4 G	0.3137	 	Active	Sing le	Posi tive	12	1	14	35	2	3.4	60	10	No	No	Indu stria l	D <sup>2</sup> P AK-3
MC7812CDTRK G	0.2592	 	Active	Sing le	Posi tive	12	1	14	35	2	3.4	60	10	No	No	Indu stria l	DPA K-3
MC7812CTG	0.2432	 	Active	Sing le	Posi tive	12	1	14	35	2	3.4	60	10	No	No	Indu stria l	TO-220-3
MC7815ABD2TR4 G	0.3915	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	80	10	No	No	Indu stria l	D <sup>2</sup> P AK-3
MC7815ABTG	0.2655	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	80	10	No	No	Indu stria l	TO-220-3
MC7815ACTG	0.2655	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	80	10	No	No	Indu stria l	TO-220-3
MC7815BD2TR4 G	0.3196	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	58	10	No	No	Indu stria l	D <sup>2</sup> P AK-3
MC7815BDTRK G	0.2635	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	58	10	No	No	Indu stria l	DPA K-3
MC7815BTG	0.2793	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	58	10	No	No	Indu stria l	TO-220-3
MC7815CD2TG	0.4215	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	58	10	No	No	Indu stria l	D <sup>2</sup> P AK-3
MC7815CD2TR4 G	0.3051	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	58	10	No	No	Indu stria l	D <sup>2</sup> P AK-3
MC7815CDTRK G	0.2516	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	58	10	No	No	Indu stria l	DPA K-3
MC7815CTG	0.2589	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	58	10	No	No	Indu stria l	TO-220-3
MC7818BTG	0.2712	 	Active	Sing le	Posi tive	18	1	20	35	2	3.5	57	10	No	No	Indu stria l	TO-220-3
MC7818CD2TR4 G	0.2864	 	Active	Sing le	Posi tive	18	1	20	35	2	3.5	57	10	No	No	Indu stria l	D <sup>2</sup> P AK-3
MC7818CTG	0.2732	 	Active	Sing le	Posi tive	18	1	20	35	2	3.5	57	10	No	No	Indu stria l	TO-220-3
MC7824ACTG	0.3335	 	Active	Sing le	Posi tive	24	1	26	40	2	3.6	54	10	No	No	Indu stria l	TO-220-3
MC7824BTG	0.252	 	Active	Sing le	Posi tive	24	1	26	40	2	3.6	54	10	No	No	Indu stria l	TO-220-3
MC7824CD2TR4 G	0.31	 	Active	Sing le	Posi tive	24	1	26	40	2	3.6	54	10	No	No	Indu stria l	D <sup>2</sup> P AK-3
MC7824CTG	0.274	 	Active	Sing le	Posi tive	24	1	26	40	2	3.6	54	10	No	No	Indu stria l	TO-220-3