

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 _O (V)	I _O Typ (A)	V _I Min (V)	V _I Max (V)	V _{DO} Typ (V)	I _g Typ (mA)	PSRR (dB)	Noise (μV _r ms)	Enable	PowerGood	Application	Package Type
MC7805ABD2TR4G	0.2933	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D ² PAK-3
MC7805ABTG	0.2661	 	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 ² PAK-3
MC7805ACD2TR4G	0.3271	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D ² PAK-3
MC7805ACTG	0.2473	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	TO-220-3
MC7805BD2TG	0.2783	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D ² PAK-3
MC7805BD2TR4G	0.344	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D ² PAK-3
MC7805BDTG	0.2235	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	DPAK-3
MC7805BDTRK	0.2007	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	DPAK-3
MC7805BTG	0.3867	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	TO-220-3
MC7805CD2TG	0.2389	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D ² PAK-3
MC7805CD2TR4G	0.2561	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	D ² PAK-3
MC7805CDTG	0.1835	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	DPAK-3
MC7805CDTRK	0.2047	 	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	Industrial	DPAK-3
MC7805CTG	0.2443	 	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
MC7809CTG	0.1908	 	Active	Single	Positive	9	1	11	35	2	3.4	61	10	No	No	Industrial	TO-220-3
MC7812ABD2TR4G	0.4397	 	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	Industrial	D ² PAK-3
MC7812ACD2TR4G	0.3501	 	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	Industrial	D ² PAK-3
MC7812ACTG	0.2667	 	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 ² PAK-3
MC7812BDTG	0.234	 	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	Industrial	DPAK-3
MC7812BDTRK	0.2373	 	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	Industrial	DPAK-3

MC7812BTG	0.2435	 	Active	Sing le	Posi tive	12	1	14	35	2	3.4	60	10	No	No	Indu stria l	TO-220-3
MC7812CD2TR4G	0.2727	 	Active	Sing le	Posi tive	12	1	14	35	2	3.4	60	10	No	No	Indu stria l	D ² P AK-3
MC7812CDTRKG	0.2484	 	Active	Sing le	Posi tive	12	1	14	35	2	3.4	60	10	No	No	Indu stria l	DPA K-3
MC7812CTG	0.2525	 	Active	Sing le	Posi tive	12	1	14	35	2	3.4	60	10	No	No	Indu stria l	TO-220-3
MC7815ABD2TR4G	0.3403	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	80	10	No	No	Indu stria l	D ² 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
MC7815BD2TR4G	0.3196	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	58	10	No	No	Indu stria l	D ² P AK-3
MC7815BDTRKG	0.2289	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	58	10	No	No	Indu stria l	DPA K-3
MC7815BTG	0.2328	 	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 ² P AK-3
MC7815CD2TR4G	0.2596	 	Active	Sing le	Posi tive	15	1	17	35	2	3.5	58	10	No	No	Indu stria l	D ² P AK-3
MC7815CDTRKG	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	0.2501	 	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
MC7818CD2TR4G	0.2864	 	Active	Sing le	Posi tive	18	1	20	35	2	3.5	57	10	No	No	Indu stria l	D ² 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
MC7824CD2TR4G	0.31	 	Active	Sing le	Posi tive	24	1	26	40	2	3.6	54	10	No	No	Indu stria l	D ² P AK-3
MC7824CTG	0.2243	 	Active	Sing le	Posi tive	24	1	26	40	2	3.6	54	10	No	No	Indu stria l	TO-220-3