

Product Overview

MC7800: Linear Voltage Regulator, 1 A, 5 to 24 V, Positive

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

Part Electrical Specifications

Product	Compliance	Status	Output	Polarity	V _O (V)	I _O Typ (A)	V _I Min (V)	V _I Max (V)	V _{DO} Typ (V)	I _Q Typ (mA)	PSRR (dB)	Noise (μV _{rms})	Enable	Power Good	Package Type
MC7805ABD2TG	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	D ² PAK-3
MC7805ABD2TR4G	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	D ² PAK-3
MC7805ABTG	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	TO-220-3
MC7805ACD2TG	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	D ² PAK-3
MC7805ACD2TR4G	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	D ² PAK-3
MC7805ACTG	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	TO-220-3
MC7805BD2TG	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	D ² PAK-3
MC7805BD2TR4G	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	D ² PAK-3
MC7805BDTG	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	DPAK-3
MC7805BDTRKG	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	DPAK-3
MC7805BTG	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	TO-220-3
MC7805CD2TG	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	D ² PAK-3
MC7805CD2TR4G	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	D ² PAK-3
MC7805CDTG	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	DPAK-3
MC7805CDTRKG	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	DPAK-3
MC7805CTG	Pb-free Halide free	Active	Single	Positive	5	1	7	35	2	3.2	68	10	No	No	TO-220-3
MC7806ACTG	Pb-free Halide free	Active	Single	Positive	6	1	8	35	2	3.3	65	10	No	No	TO-220-3
MC7806BD2TG	Pb-free Halide free	Active	Single	Positive	6	1	8	35	2	3.3	65	10	No	No	D ² PAK-3
MC7806BD2TR4G	Pb-free Halide free	Active	Single	Positive	6	1	8	35	2	3.3	65	10	No	No	D ² PAK-3
MC7806BTG	Pb-free Halide free	Active	Single	Positive	6	1	8	35	2	3.3	65	10	No	No	TO-220-3
MC7806CTG	Pb-free Halide free	Active	Single	Positive	6	1	8	35	2	3.3	65	10	No	No	TO-220-3
MC7808ABD2TG	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	D ² PAK-3
MC7808ABD2TR4G	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	D ² PAK-3
MC7808ABTG	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	TO-220-3
MC7808ACTG	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	TO-220-3
MC7808BD2TG	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	D ² PAK-3

MC7808BD2TR4G	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	D ² PAK -3
MC7808BDTG	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	DPAK- 3
MC7808BDTRKG	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	DPAK- 3
MC7808BTG	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	TO- 220-3
MC7808CD2TG	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	D ² PAK -3
MC7808CD2TR4G	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	D ² PAK -3
MC7808CDTG	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	DPAK- 3
MC7808CDTRKG	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	DPAK- 3
MC7808CDTT5G	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	DPAK- 3
MC7808CTG	Pb-free Halide free	Active	Single	Positive	8	1	10	35	2	3.3	62	10	No	No	TO- 220-3
MC7809ABTG	Pb-free Halide free	Active	Single	Positive	9	1	11	35	2	3.3	61	10	No	No	TO- 220-3
MC7809ACTG	Pb-free Halide free	Active	Single	Positive	9	1	11	35	2	3.3	61	10	No	No	TO- 220-3
MC7809BTG	Pb-free Halide free	Active	Single	Positive	9	1	11	35	2	3.4	61	10	No	No	TO- 220-3
MC7809CD2TG	Pb-free Halide free	Active	Single	Positive	9	1	11	35	2	3.4	61	10	No	No	D ² PAK -3
MC7809CD2TR4G	Pb-free Halide free	Active	Single	Positive	9	1	11	35	2	3.4	61	10	No	No	D ² PAK -3
MC7809CTG	Pb-free Halide free	Active	Single	Positive	9	1	11	35	2	3.4	61	10	No	No	TO- 220-3
MC7812ABD2TG	Pb-free Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	D ² PAK -3
MC7812ABD2TR4G	Pb-free Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	D ² PAK -3
MC7812ABTG	Pb-free Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	TO- 220-3
MC7812ACD2TG	Pb-free Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	D ² PAK -3
MC7812ACD2TR4G	Pb-free Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	D ² PAK -3
MC7812ACTG	Pb-free Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	TO- 220-3
MC7812BD2TG	Pb-free Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	D ² PAK -3
MC7812BD2TR4G	Pb-free Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	D ² PAK -3
MC7812BDTG	Pb-free Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	DPAK- 3
MC7812BDTRKG	Pb-free Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	DPAK- 3
MC7812BTG	Pb-free Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	TO- 220-3

MC7812CD2TG	<u>Pb-free</u> Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	D ² PAK -3
MC7812CD2TR4G	<u>Pb-free</u> Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	D ² PAK -3
MC7812CDTG	<u>Pb-free</u> Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	DPAK- 3
MC7812CDTRKG	<u>Pb-free</u> Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	DPAK- 3
MC7812CTG	<u>Pb-free</u> Halide free	Active	Single	Positive	12	1	14	35	2	3.4	60	10	No	No	TO- 220-3
MC7815ABD2TG	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	80	10	No	No	D ² PAK -3
MC7815ABD2TR4G	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	80	10	No	No	D ² PAK -3
MC7815ABTG	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	80	10	No	No	TO- 220-3
MC7815ACD2TG	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	80	10	No	No	D ² PAK -3
MC7815ACTG	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	80	10	No	No	TO- 220-3
MC7815BD2TG	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	58	10	No	No	D ² PAK -3
MC7815BD2TR4G	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	58	10	No	No	D ² PAK -3
MC7815BDTG	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	58	10	No	No	DPAK- 3
MC7815BDTRKG	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	58	10	No	No	DPAK- 3
MC7815BTG	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	58	10	No	No	TO- 220-3
MC7815CD2TG	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	58	10	No	No	D ² PAK -3
MC7815CD2TR4G	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	58	10	No	No	D ² PAK -3
MC7815CDTG	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	58	10	No	No	DPAK- 3
MC7815CDTRKG	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	58	10	No	No	DPAK- 3
MC7815CTG	<u>Pb-free</u> Halide free	Active	Single	Positive	15	1	17	35	2	3.5	58	10	No	No	TO- 220-3
MC7818ACTG	<u>Pb-free</u> Halide free	Active	Single	Positive	18	1	20	35	2	3.5	57	10	No	No	TO- 220-3
MC7818BTG	<u>Pb-free</u> Halide free	Active	Single	Positive	18	1	20	35	2	3.5	57	10	No	No	TO- 220-3
MC7818CD2TR4G	<u>Pb-free</u> Halide free	Active	Single	Positive	18	1	20	35	2	3.5	57	10	No	No	D ² PAK -3
MC7818CTG	<u>Pb-free</u> Halide free	Active	Single	Positive	18	1	20	35	2	3.5	57	10	No	No	TO- 220-3
MC7824ACTG	<u>Pb-free</u> Halide free	Active	Single	Positive	24	1	26	40	2	3.6	54	10	No	No	TO- 220-3
MC7824BD2TG	<u>Pb-free</u> Halide free	Active	Single	Positive	24	1	26	40	2	3.6	54	10	No	No	D ² PAK -3
MC7824BD2TR4G	<u>Pb-free</u> Halide free	Active	Single	Positive	24	1	26	40	2	3.6	54	10	No	No	D ² PAK -3

MC7824BTG	Pb-free Halide free	Active	Single	Positive	24	1	26	40	2	3.6	54	10	No	No	TO-220-3
MC7824CD2TG	Pb-free Halide free	Active	Single	Positive	24	1	26	40	2	3.6	54	10	No	No	D ² PAK-3
MC7824CD2TR4G	Pb-free Halide free	Active	Single	Positive	24	1	26	40	2	3.6	54	10	No	No	D ² PAK-3
MC7824CTG	Pb-free Halide free	Active	Single	Positive	24	1	26	40	2	3.6	54	10	No	No	TO-220-3
NCV7815BTG	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	15	1	17	35	2	3.5	58	150	No	No	TO-220-3

For more information please contact your local sales support at www.onsemi.com.

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