

Product Overview

MC78M: Linear Voltage Regulator, 500 mA, 5 to 24 V, High PSRR, Positive

For complete documentation, see the data sheet.

The MC78M00/MC78M00A positive linear voltage regulator is identical to the popular MC7800 Series devices, except it is specified for only half the output current. Like the MC7800 device, the MC78M00 three-terminal regulators are intended for local, on-card voltage regulation. Internal current limiting, thermal shutdown circuitry and safe-area compensation for the internal pass transistor combine to make these linear voltage regulators remarkably rugged under most operating conditions. Maximum output current, with adequate heatsinking is 500 mA.

Specifications:

	MC78M00AB	MC78M00AC	MC78M00B	MC78M00C
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	DPAK-3, TO-220	DPAK-3, TO-220	DPAK-3, TO-220	DPAK-3, TO-220

Features

- No External Components Required
- Internal Thermal Overload Protection
- Internal Short Circuit Current Limiting
- Output Transistor Safe-Area Compensation
- MC78M00A High Accuracy (+/-2%) Available for 5.0 V, 8.0 V, 12 V and 15 V
- Pb-Free Packages are Available*

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Output	Polarity	V _O (V)	I _O Typ (A)	V _{Min} (V)	V _{Max} (V)	V _{DO} Typ (V)	I _q Typ (mA)	PSR R (dB)	Noise (μV _{rms})	Enable	PowerGood	Package Type
MC78M05ABDTG	0.2275	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	DPA K-3
MC78M05ABDTRKG	0.2443	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	DPA K-3
MC78M05ABTG	0.2245	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	TO-220-3
MC78M05ACDTG	0.2056	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	DPA K-3
MC78M05ACDTRKG	0.2739	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	DPA K-3
MC78M05ACTG	0.1956	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	TO-220-3
MC78M05BDTG	0.2108	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	DPA K-3
MC78M05BDTRKG	0.1509	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	DPA K-3
MC78M05BDTT5G	0.2348	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	DPA K-3
MC78M05BTG	0.1533	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	TO-220-3
MC78M05CDTG	0.1292	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	DPA K-3
MC78M05CDTRKG	0.1292	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	DPA K-3
MC78M05CDTT5G	0.206	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	DPA K-3
MC78M05CTG	0.1792	Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	TO-220-3
MC78M06BDTRKG	0.1453	Pb-free Halide free	Active	Single	Positive	6	0.5	8	35	2	3.2	80	45	No	No	DPA K-3
MC78M06BTG	0.2127	Pb-free Halide free	Active	Single	Positive	6	0.5	8	35	2	3.2	80	45	No	No	TO-220-3
MC78M08ABDTG	0.2127	Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	DPA K-3
MC78M08ABDTRKG	0.2261	Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	DPA K-3
MC78M08ABTG	0.27	Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	TO-220-3
MC78M08ACDTG	0.3023	Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	DPA K-3
MC78M08ACDTRKG	0.2348	Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	DPA K-3
MC78M08ACTG	0.1956	Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	TO-220-3
MC78M08BDTG	0.1511	Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	DPA K-3
MC78M08BDTRKG	0.1735	Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	DPA K-3
MC78M08BTG	0.1871	Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	TO-220-3
MC78M08CDTG	0.1263	Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	DPA K-3

MC78M08CDTRKG	0.1443	Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	DPA K-3
MC78M08CTG	0.1591	Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	TO- 220-3
MC78M09BDTG	0.2052	Pb-free Halide free	Active	Single	Positive	9	0.5	11	35	2	3.2	80	52	No	No	DPA K-3
MC78M09BDTRKG	0.2171	Pb-free Halide free	Active	Single	Positive	9	0.5	11	35	2	3.2	80	52	No	No	DPA K-3
MC78M09CDTG	0.1325	Pb-free Halide free	Active	Single	Positive	9	0.5	11	35	2	3.2	80	52	No	No	DPA K-3
MC78M09CDTRKG	0.12	Pb-free Halide free	Active	Single	Positive	9	0.5	11	35	2	3.2	80	52	No	No	DPA K-3
MC78M09CTG	0.1563	Pb-free Halide free	Active	Single	Positive	9	0.5	11	35	2	3.2	80	52	No	No	TO- 220-3
MC78M12ABDTG	0.2152	Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	DPA K-3
MC78M12ABDTRKG	0.232	Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	DPA K-3
MC78M12ABTG	0.2269	Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	TO- 220-3
MC78M12ACDTG	0.216	Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	DPA K-3
MC78M12ACDTRKG	0.216	Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	DPA K-3
MC78M12ACTG	0.1956	Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	TO- 220-3
MC78M12BDTG	0.1741	Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	DPA K-3
MC78M12BDTRKG	0.1823	Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	DPA K-3
MC78M12BTG	0.2025	Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	TO- 220-3
MC78M12CDTG	0.1295	Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	DPA K-3
MC78M12CDTRKG	0.1412	Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	DPA K-3
MC78M12CTG	0.1685	Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	TO- 220-3
MC78M15ABDTG	0.2148	Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	DPA K-3
MC78M15ABDTRKG	0.2271	Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	DPA K-3
MC78M15ABTG	0.232	Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	TO- 220-3
MC78M15ACDTG	0.2159	Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	DPA K-3
MC78M15ACDTRKG	0.1533	Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	DPA K-3
MC78M15ACTG	0.2127	Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	TO- 220-3
MC78M15BDTG	0.18	Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	DPA K-3
MC78M15BDTRKG	0.196	Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	DPA K-3

MC78M15BTG	0.1873	Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	TO-220-3
MC78M15CDTG	0.1263	Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	DPA K-3
MC78M15CDTRKG	0.1276	Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	DPA K-3
MC78M15CTG	0.1629	Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	TO-220-3
MC78M18BTG	0.1956	Pb-free Halide free	Active	Single	Positive	18	0.5	20	35	2	3.2	70	100	No	No	TO-220-3
MC78M18CDTG	0.1292	Pb-free Halide free	Active	Single	Positive	18	0.5	20	35	2	3.2	70	100	No	No	DPA K-3
MC78M18CDTRKG	0.1296	Pb-free Halide free	Active	Single	Positive	18	0.5	20	35	2	3.2	70	100	No	No	DPA K-3
MC78M18CTG	0.1689	Pb-free Halide free	Active	Single	Positive	18	0.5	20	35	2	3.2	70	100	No	No	TO-220-3
MC78M20CTG	0.1564	Pb-free Halide free	Active	Single	Positive	20	0.5	22	40	2	3.2	70	110	No	No	TO-220-3
MC78M24BTG	0.1759	Pb-free Halide free	Active	Single	Positive	24	0.5	26	40	2	3.2	70	170	No	No	TO-220-3
MC78M24CTG	0.1641	Pb-free Halide free	Active	Single	Positive	24	0.5	26	40	2	3.2	70	170	No	No	TO-220-3
NCV78M05ABDTRKG	0.2512	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.5	7	35	2	3.2	80	40	No	No	DPA K-3
NCV78M08BDTRKG	0.2139	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	8	0.5	10	35	2	3.2	80	52	No	No	DPA K-3
NCV78M09BDTRKG	0.2065	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	9	0.5	11	35	2	3.2	80	52	No	No	DPA K-3
NCV78M12BDTRKG	0.2035	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	12	0.5	14	35	2	3.2	80	75	No	No	DPA K-3
NCV78M15BDTG	0.2065	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	DPA K-3
NCV78M15BDTRKG	0.2871	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	15	0.5	17	35	2	3.2	70	90	No	No	DPA K-3

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