



# Linear Voltage Regulator Quick Selector Guide

## Single Output Low-Dropout Linear Regulators (LDOs)

Device	I <sub>out</sub>	Dropout* (typ)	I <sub>q</sub> ** (typ)	PSRR****	Absolute Max Input Voltage	Package(s) - pins	V <sub>out</sub>	Features
MC33761	80 mA	160 mV	180 µA	85 dB	12 V	SOT-23-5	2.5, 2.8, 2.9, 3, 5 V	Enable, Ultra Low Noise
MC78LCxx	80 mA	1.0 V	1.1 µA	–	12 V	SOT-23-5, SOT-89-3	1.5, 1.8, 2.5, 2.7, 2.8, 3, 3.3, 4, 5 V	Ultra Low I <sub>q</sub>
NCP502	80 mA	850 mV	40 µA	55 dB	12 V	SC-70-5	1.5, 1.8, 2.5, 2.7, 2.8, 3, 3.3, 3.5, <b>3.6</b> , 5 V	Enable
NCP512	80 mA	160 mV	40 µA	60 dB	6 V	SC-70-5	<b>1.3</b> , 1.5, 1.8, 2.2, 2.5, 2.7, 2.8, 3, 3.1, 3.3, 5 V	Enable
NCP553	80 mA	650 mV	2.8 µA	25 dB	12 V	SC82AB-4	1.5, 1.8, 2.5, 2.7, 2.8, 3, 3.3, 5 V	Ultra Low I <sub>q</sub> , No Cap
NCP562	80 mA	190 mV	2.5 µA	25 dB	6 V	SC82AB-4	1.5, 1.8, 2.5, 2.7, 2.8, 3, 3.3, 5 V	Enable, Ultra Low I <sub>q</sub>
NCP563	80 mA	190 mV	2.5 µA	25 dB	6 V	SC82AB-4	1.5, 1.8, 2.5, 2.7, 2.8, 3, 3.3, 5 V	Ultra Low I <sub>q</sub>
LM2931A/C/AC	100 mA	160 mV	400 µA (@10mA)	90 dB	40 V	SO-8, TO-92-3, TO-220-3/5, DPAK-3, D2PAK-3/5	Adj, 5 V	High PSRR
LP2950C/AC	100 mA	350 mV	75 µA	62 dB	30 V	DPAK-3, TO-92-3	3, 3.3, 5 V	Tight Line & Load Reg.
LP2951C/AC	100 mA	350 mV	75 µA	62 dB	30 V	SO-8, Micro8, DIP-8	Adj, 3, 3.3, 5 V	Enable, Error Output
L4949	100 mA	300 mV	150 µA	–	28 V	SO-8, DIP-8	5 V	Reset, Input Vol. Sence
NCP612	100 mA	200 mV	40 µA	60 dB	6 V	SC-70-5	1.5, 1.8, 2.5, 2.7, 2.8, 3, 3.1, 3.3, 5 V	Enable
NCP662	100 mA	230 mV	2.5 µA	25 dB	6 V	SC82AB-4	1.5, 1.8, 2.5, 2.7, 2.8, 3, 3.3, 5 V	Enable, Ultra Low I <sub>q</sub>
NCP663	100 mA	230 mV	2.5 µA	25 dB	6 V	SC82AB-4	1.5, 1.8, 2.5, 2.7, 2.8, 3, 3.3, 5 V	Ultra Low I <sub>q</sub>
MC78FC	120 mA	500 mV (@40 mA)	1.1 µA	20 dB	10 V	SOT-89-3	3, 3.3, 4, 5 V	Ultra Low I <sub>q</sub>
NCP580	120 mA	180 mV	90 µA	80 dB	6.5 V	SC82AB-4	1.5, 1.8, 2.5, 2.8, 3, 3.3 V	Enable, Ultra Low Noise
MC78PC	150 mA	200 mV (@100 mA)	35 µA	70 dB	9 V	SOT-23-5	1.8, 2.5, 2.8, 3, 3.3, 5 V	Enable, Ultra Low Noise
NCP400	150 mA	160 mV (@100 mA)	37 µA	50 dB	5.5 V	(1x1.5) Flip-Chip-6	1.8 V	Enable, Reset
NCP500	150 mA	150 mV	175 µA	62 dB	6 V	SOT-23-5, (2x2.2) DFN-6	1.8, 1.85, 2.5, 2.6, 2.7, 2.8, 3, 3.3, 5 V	Enable, Fast Transient
NCP511	150 mA	90 mV (@100 mA)	40 µA	60 dB	6 V	SOT-23-5	1.5, 1.8, 2.5, 2.7, 2.8, 3, 3.3, 5 V	Enable
NCP551	150 mA	40 mV (@ 10 mA)	4.0 µA	25 dB	12 V	SOT-23-5	1.5, 1.8, 2.5, 2.7, 2.8, 3, <b>3.2</b> , 3.3, 5 V	Enable, Ultra Low I <sub>q</sub>
NCP561	150 mA	130 mV	3.0 µA	20 dB	6 V	SOT-23-5	1.5, 1.8, 2.5, 2.7, 2.8, 3, 3.3, 5 V	Ultra Low I <sub>q</sub>
NCP623	150 mA	180 mV	170 µA	90 dB	12 V	Micro8, (3x3) DFN-6	<b>2.5, 2.8, 3</b> , 3.3, 4, 5 V	Enable, Ultra Low Noise
NCP582	150 mA	220 mV	75 µA	70 dB	6.5 V	SOT-563-6, SC82AB-4	1.5, 1.8, 2.5, 2.8, 2.9, 3, 3.3 V	Enable, Ultra Low Noise

\* Voltage dropout was measured at full load for V<sub>out</sub> = 3.3 V where applicable unless noted.

\*\* I<sub>q</sub> was measured at 0 or 0.1 mA load unless noted

\*\*\* Release to Market in Q3-2006

\*\*\*\* PSRR was measured at f = 120 Hz for V<sub>out</sub> = 3.3 @ full load unless otherwise noted.

**Bold** Denotes NEW Products, Packages, and/or Voltage Options

Contact an ON Sales Representative for other voltage options or for automotive grade regulators.

## Single Output Low-Dropout Linear Regulators (LDOs)

Device	I <sub>out</sub>	Dropout* (typ)	I <sub>q</sub> ** (typ)	PSRR****	Absolute Max Input Voltage	Package(s)-pins	V <sub>out</sub>	Features
NCP583	150 mA	250 mV	1.0 µA	45 dB	6.5 V	SOT-563-6, SC82AB-4	1.5, 1.8, 2.5, 2.8, 2.9, 3, 3.3 V	Enable, Ultra Low I <sub>q</sub>
<b>NCP600***</b>	150 mA	100 mV	175 µA	62 dB	6 V	SOT-23-5	Adj, <b>1.5, 1.8, 2.8, 3, 3.3, 5 V</b>	Enable, Fast Turn-ON
NCP5426	150 mA	150 mV	120 µA	70 dB	12 V	SOT-23-5	1.3 V	Enable, Vibrator Driver
NCP584	200 mA	200 mV	3.5 µA	75 dB	6.5 V	SOT-23-5	0.9, 1.2, 1.5, 1.8, <b>2.5, 2.6, 3, 3.1, 3.3 V</b>	Enable, Tri-Mode
MC33275	300 mA	260 mV	125 µA	75 dB	13 V	SO-8, DPAK-3, SOT-223-3, (4x4) DFN-8	2.5, 3, 3.3, 5 V	Tight Line & Load Reg.
MC33375	300 mA	260 mV	125 µA	75 dB	13 V	SO-8, SOT-223-3	1.8, 2.5, 3, 3.3, 5 V	Enable
NCP585	300 mA	310 mV	3.5 µA	75 dB	6.5 V	SOT-23-5, HSON-6	0.9, 1.2, 1.8, <b>2.5, 3, 3.3 V</b>	Enable, Tri-Mode
NCP2860	300 mA	150 mV	355 µA	70 dB	6 V	Micro8	Adj, 2.77 V	Low Noise, Enable, Flag
<b>NCP5500</b>	500 mA	300 mV	300 µA	75 dB	18 V	DPAK-5	Adj, <b>1.5, 5 V</b>	Enable, Low Noise
<b>NCP5501</b>	500 mA	300 mV	300 µA	75 dB	18 V	DPAK-3	1.5, 5 V	Low Noise
<b>NCP3334</b>	500 mA	340 mV (max)	190 µA	75 dB	16 V	SO-8	Adj	Enable, High Accuracy
NCP3335A	500 mA	340 mV (max)	190 µA	75 dB	16 V	Micro8, (3x3) DFN-10	Adj, 2.5, 2.85, 3.3, 5 V	Enable, High Accuracy
MC33269	800 mA	1.1 V	5.5 mA	55 dB	20 V	SO-8, DPAK-3, SOT-223-3, TO-220-3	Adj, 3.3, 5, 12 V	Current Limit Protection
MC34268	800 mA	950 mV (@490mA)	3.0 mA	55 dB	15 V	SO-8, DPAK-3, SOT-223-3	2.85 V	SCSI-2 Active Terminator
NCP1117	1.0 A	1.07 V	3.6 mA	64 dB	20 V	DPAK-3, SOT-223-3	Adj, 1.5, 1.8, <b>1.9, 2, 2.5, 2.85, 3.3, 5, 12 V</b>	Current Limit Protection
NCP5661	1.0 A	1.0 V	1.3 mA (@1 A)	70 dB	18 V	DPAK-5, ( <b>3x3.3</b> ) DFN-6***	Adj, 1.2, 3.3 V	Enable, Fast Transient
NCP565	1.5 A	900 mV	1.1 mA (@1.5 A)	85 dB	18 V	D2PAK-3/5, <b>SOT-223-3*** (3x3.3) DFN-6***</b>	Adj, 1.2, <b>3.3 V</b>	Fast Transient
NCP1086	1.5 A	1.05 V	5 mA (@10 mA)	80 dB	7 V	D2PAK-3, TO-220-3, SOT-223-3	Adj, 3.3 V	Fast Transient
NCP5662	2.0 A	1.0 V	1.3 mA (@2 A)	70 dB	18 V	D2PAK-5, (4x4) <b>DFN-8***</b>	Adj, 1.5, <b>3.3*** V</b>	Enable, Fast Transient
CS5253/B	3.0 A	400 mV	–	80 dB	13 V	D2PAK-5	Adj, 2.5 V	Control, Sense
NCP630	3.0 A	1.0 V	0.4 mA (@300 mA)	88 dB	12 V	D2PAK-5	Adj, 3.47 V	Enable, Fast Transient
NCP631	3.0 A	1.0 V	0.4 mA (@300 mA)	76 dB	9 V	D2PAK-5	3.47 V	Enable, Soft Start
NCP5663	3.0 A	1.0 V	1.3 mA (@3 A)	70 dB	18 V	D2PAK-5	Adj, 1.5 V	Enable, Fast Transient

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\*\*\* Release to Market in Q3-2006

\*\*\*\* PSRR was measured at f = 120 Hz for V<sub>out</sub> = 3.3 @ full load unless otherwise noted.

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## Multiple Output Low-Dropout Linear Regulators (LDOs)

Device	I <sub>out</sub>	Dropout (typ)	Total I <sub>q</sub> (typ)	Max Input Voltage	Package(s)	V <sub>out</sub>	Features
MC33567 (Dual)	Aux. Drive	110, 110 mV	6.3 mA	12.5 V	S0-8	1.2, 1.5, 1.8, 2.3 V	Enable, Drive, Undervoltage Detection
NCP4672 (Dual)	30, 80 mA	150 mV, –	1.0 mA	18 V	S0-8	1.8, 3.5 V	Programmable Delay, Reset
MC33762 (Dual)	80, 80 mA	160, 160 mV	180 μA	12 V	Micro8	2.5, 2.8, 3 V	Enable, Fast Off to On, Low Noise
NCP4523 (Triple)	150, 80, 80 mA	220, 160, 160 mV	210 μA	7 V	SSOP-8	2.35, 2.8, 3 V	Tight Line & Load Reg, High PSRR
MC33765 (5 Outputs)	30, 40, 50, 150, 60 mA	110, 110, 110, 170, 110 mV	470 μA	5.3 V	TSSOP-16	2.8 V	Enable, Byp Pin, Low Noise
NCP5504 (Dual)	250, 250 mA	250, 250 mV	370 μA	18 V	DPAK-5	Adj, 3.3V	Low Noise, High PSRR

## Linear Regulators

Device	I <sub>out</sub>	Dropout (typ)	Max Input Voltage	Package(s)	V <sub>out</sub>	Features
LM317L	100 mA	2.0 V	40 V	S0-8, T0-92-3	Adj	Current & Thermal Protection
MC33160	100 mA	2.0 V	40 V	S0-16, DIP-16	5 V	Enable, Sense, Reset
MC34160	100 mA	2.0 V	40 V	S0-16, DIP-16	5 V	Enable, Sense, Reset
MC78LxxA	100 mA	1.7 V	40 V	S0-8, T0-92-3	5, 8, 9, 12, 15, 18, 24 V	Current & Thermal Protection
MC79LxxA	100 mA	1.7 V	-40 V	S0-8, T0-92-3	-(5, 12, 15, 18, 24) V	Current & Thermal Protection
MC33565	200 mA	2.3 V	7 V	S0-8, Micro8	3.3 V	Auxiliary Control, Sense
LM317M	500 mA	2.2 V	40 V	T0-220-3, DPAK-3, SOT-223-3	Adj.	Current & Thermal Protection
MC78Mxx /A	500 mA	2.0 V	40 V	T0-220-3, DPAK-3	5, 6, 8, 9, 12, 15, 18, 20, 24 V	Current & Thermal Protection
MC79Mxx	500 mA	1.1 V	-35 V	T0-220-3, DPAK-3	-(5, 8, 12, 15) V	Current & Thermal Protection
MC78xx /A	1.0 A	2.0 V	40 V	D2PAK-3, T0-220-3, DPAK-3	5, 6, 8, 9, 12, 15, 18, 24 V	Current & Thermal Protection
MC79xx /A	1.0 A	1.3 V	-40 V	T0-220-3, D2PAK-3	-(5, 5.2, 6, 8, 12, 15, 18, 24) V	Current & Thermal Protection
LM317	1.5 A	2.25 V	40 V	D2PAK-3, T0-220-3	Adj.	Current & Thermal Protection
LM337	1.5 A	2.3 V	-40 V	T0-220-3, D2PAK-3	Adj.	Current & Thermal Protection
LM323 /A	3.0 A	2.0 V	20 V	T0-220-3	5 V	Low Noise, High PSRR
LM350	3.0 A	2.5 V	35 V	T0-220-3	Adj.	Current & Thermal Protection



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