

Powering Cortex M0 MCUs with NXP LDOs

## Ultra small, highly effective power supplies for driving Cortex M0 microcontrollers

NXP's low dropout regulators (LDOs) are ideal for powering microcontrollers in many applications. In particular, our advanced linear portfolio is optimized for applications with challenging space requirements, high battery lifetime demands and a need for superior operating stability. The selection table below gives an overview of the recommended LDO products for different Cortex M0 microcontroller types including the M0+ family.

	Single 3.3 V su	pply voltage	Ultra Small Diamond™ package	Single 3.3 V supply and 5 V for CAN		
Power architecture	LD68 3 V <sub>DD</sub> Cortex M Cortex M	5 3 V 10 0+	LD6835 1.8 V V <sub>DD</sub> Cortex M0	PMU LD6836 3.3 V 5 V V <sub>DD</sub> V <sub>DD-CAN</sub> Cortex M0		
Cortex M0 types	LPC1102 LPC11 LPC111x LPC11 LPC11Axx LPC12 LPC11Exx LPC12	Jxx LPC810 Dxx LPC811 2x LPC812 Dxx	LPC11xxLV	LPC11Cxx		
Recommended LDOs	LD6815TD/33 LD6806TD/33 LD6836TD/33	H (150mA) H (200mA) H (300mA)	LD6835K/18H	LD6836TD/33H CE50Z		

## LD6815 SERIES KEY FEATURES

- Output current: 150 mA
- ▶ High PSRR: 75 dB
- ▶ Low noise: 40 µV
- Low quiescent: supply 35 μA, standby 0.1 μA
- Input voltage range: 2.3 V 5.5 V
- Output voltage range: 1.2 V 3.6 V
- SOT753 package 2.9 x 1.5 x 1.0 mm
- LD6835 SERIES KEY FEATURES
- Output current: 300 mA
- High PSRR: 80 dB
- Low noise: 50 μV
- $\blacktriangleright\,$  Low quiescent: supply 35  $\mu A,$  standby 0.1  $\mu A$
- Input voltage range: 1.75 5.5 V
- Output voltage range: 1.2 3.6 V
- DFN1010C-4 package 1.0 x 1.0 x 0.55 mm
- LD6836 SERIES KEY FEATURES
- Output current: 300 mA
- Ultra-low dropout: 90 mV @ 300 mA
- Low noise: 30 μV
- Low quiescent: supply 70 μA, standby 0.1 μA
- Input voltage range: 2.3 V 5.5 V
- Output voltage range: 1.2 V 3.6 V
- SOT753 package 2.9 x 1.5 x 1.0 mm



LD68xx series in plastic packages (Extract of linecard)			Package Picture		SOT753		DFN1010C-4 (SOT1194) Diamond		
									Size (mm)
					2.7 X 1.0 X 1.0		1.0 x 1.0 x 0.00 mm		
			P <sub>tot</sub> (mW)		800		400		
			General Usage		PSRR @ 1kHz (dB)	V <sub>DROP</sub> @ I <sup>OUT</sup> typ	l <sub>out</sub> max (mA)	Output voltage	High ohmic output stage
			(mv)		(V)^				
			60	200	1.2	LD6806TD/12H	LD6806TD/12P	-	-
					1.3	LD6806TD/13H	LD6806TD/13P	-	-
					1.4	LD6806TD/14H	LD6806TD/14P	-	-
					1.6	LD6806TD/16H	LD6806TD/16P	-	-
					1.8	LD6806TD/18H	LD6806TD/18P	-	-
					2	LD6806TD/20H	LD6806TD/20P		-
					21	LD6806TD/21H	LD6806TD/21P		-
					2.1	LD6806TD/22H	LD6806TD/22P		
					2.2		LD6804TD/22P		
					2.3			-	-
					2.5	LD68061D/25H	LD66061D/25P	-	-
e L					2.7	LD68061D/2/H	LD68061D/27P	-	-
ciel <b>a</b>					2.8	LD6806TD/28H	LD6806TD/28P	-	-
fe effi					2.9	LD6806TD/29H	LD6806TD/29P	-	-
e 2 géner					3	LD6806TD/30H	LD6806TD/30P	-	-
tag	0.0	55			3.3	LD6806TD/33H	LD6806TD/33P	-	-
vol e <b>rop</b>	2.3				3.6	LD6806TD/36H	LD6806TD/36P	-	-
ed ar					1.2	LD6836TD/12H	LD6836TD/12P	-	-
in dri	5.5				1.3	LD6836TD/13H	LD6836TD/13P	-	-
Ultra					1.4	LD6836TD/14H	LD6836TD/14P	-	-
					1.6	LD6836TD/16H	LD6836TD/16P		_
					1.8	LD6836TD/18H	LD6836TD/18P		
					2	LD6836TD/20H	LD6836TD/20P		
					21		LD6836TD/21P		
					2.1		LD00301D/211		-
			90	300	2.2	LD66361D/22H	LD00301D/22F	-	-
					2.3	LD00301D/23H	LD68361D/23P	-	-
					2.5	-	LD68361D/25P	-	-
					2./	LD68361D/2/H	LD68361D/2/P	-	-
					2.8	LD68361D/28H	LD68361D/28P	-	-
					2.9	LD6836TD/29H	LD6836TD/29P	-	-
					3	LD6836TD/30H	LD6836TD/30P	-	-
					3.3	LD6836TD/33H	LD6836TD/33P	-	-
					3.6	LD6836TD/36H	LD6836TD/36P	-	-
					1.2	LD6815TD/12H	LD6815TD/12P	LD6805K/12H	LD6805K/12P
PSRR)	1.75 5.5	75	250	150	1.3	-	-	LD6805K/13H	LD6805K/13P
					1.4	-	-	LD6805K/14H	LD6805K/14P
- -					1.5	LD6815TD/15H	LD6815TD/15P	LD6805K/15H	LD6805K/15P
ti.					1.6	-	-	LD6805K/16H	LD6805K/16P
ules ules					1.8	LD6815TD/18H	LD6815TD/18P	LD6805K/18H	LD6805K/18P
<b>ple Rej</b> odules · modu					1.85	-	_	LD6805K/185H	_
					2	-	_	LD6805K/20H	LD6805K/20P
ver ver					21	LD6815TD/21H	LD6815TD/21P	LD6805K/21H	LD6805K/21P
dri dri					2.2	-	2000.010/211	LD6805K/22H	LD6805K/22P
upp lay					2.2	-	-		
Very high Power Sup ♦ Optimized for RF su ♦ Optimized for displa					2.3				
					2.5	LD68151D/25H	LD68151D/25P	LD6805K/25H	LD6805K/25P
					2.8	LD68151D/28H	LD68151D/28P	LD6805K/28H	LD6805K/28P
					2.9	LD6815TD/29H	LD6815TD/29P	LD6805K/29H	LD6805K/29P
					3	LD6815TD/30H	LD6815TD/30P	LD6805K/30H	LD6805K/30P
					3.1	-	-	LD6805K/31H	LD6805K/31P
					3.3	LD6815TD/33H	LD6815TD/33P	LD6805K/33H	LD6805K/33P
					3.6	LD6815TD/36H	LD6815TD/36P	LD6805K/36H	LD6805K/36P

\* Further output voltages available on request. LD6835TD series under development



For more information and datasheets please visit: http://www.nxp.com/campaigns/standard-linear

## www.nxp.com

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