

## New cost effective 150mA and 300mA single channel low dropout linear regulators

The AP731x is a 150mA and the AP733x is a 300mA CMOS LDO.

They offer:

- Wide input range: 2V to 6V
- Wide adjustable output range: 0.8V to 5V
- Fixed output options: 1.0V, 1.2V, 1.5V, 1.8V, 2.0V, 2.5V, 2.8V, 3.0V, 3.3V
- 2% output tolerance over -40°C to 85°C
- Fast transient response

They are well suited for a wide range of applications requiring good regulation from 5V and below rails. These include:

These include:

- Consumer
- Computer
- Data communications
- Industrial

The AP73x3 is available in industry standard SOT23 pin-outs.

The AP73x1 offers all the performance benefits of the AP73x3 plus an enable pin and is available in industry standard SOT25 pin-outs. The AP7331 is also available in the space and height saving DFN2020-6 package.

All packages are green.



### Diodes Advantage

The AP731x and AP733x, with multiple fixed output voltage options, provide versatile LDO solutions

- Drives low ESR, 1 $\mu$ F ceramic capacitor  
Improved stability and reduces cost
- 2% tolerance over temperature, line and load variations  
Maintains accuracy across all conditions
- 55 $\mu$ A low quiescent current  
Provides power saving in portable and low power applications
- Built-in over-current, over-temperature and short-circuit protection  
Improves robustness of LDO
- -40 to 85° temperature range  
Operates over whole industrial temperature range

### Applications

Consumer and portable applications:

- XDSL routers
- Wireless LAN Cards
- Desktop and notebook PCs
- Mouse and keyboards
- Battery powered equipment



# New Product Announcement

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### Diodes CMOS low dropout linear regulators

Device	Output Current	Dropout Voltage Max	Quiescent Current typ	PSRR typ	Operating Input Voltage	Output Voltage	Operating Ambient Temperature Range	Package
	A	V	μA	dB	V	V	°C	
AP7115	0.15	0.3	50	70 at 1kHz	2.5 to 5.5	1.0V/ 1.2V/ 1.5V/ 1.8V/ 2.5V/ 2.8V/ 2.85/ 3.0V/ 3.3V/ 3.5V	-40 to 85	SOT25, SOT353
AP7311	0.15	0.3	65	65 at 100Hz	2.0 to 6.0	1.0V/ 1.2V/ 1.5V/ 1.8V/ 2.0V/ 2.5V/ 2.8/ 3.0V/ 3.3V/ ADJ	-40 to 85	SOT25
AP7313	0.15	0.3	65	65 at 100Hz	2.0 to 6.0	1.0V/ 1.2V/ 1.5V/ 1.8V/ 2.0V/ 2.5V/ 2.8V/ 3.0V/ 3.3V	-40 to 85	SOT23, SOT23R
AP130	0.3	0.5	50	58 at 100Hz	2.7 to 5.5	1.5V/ 1.8V/ 2.0V/ 2.5V/ 2.8V/ 3.0V/ 3.3V/ 3.5V	-40 to 85	SOT23, SC59/R, SOT89/R
AP131	0.3	0.5	50	60 at 100Hz	2.7 to 5.5	1.5V/ 1.8V/ 2.0V/ 2.5V/ 2.8V/ 3.0V/ 3.3V/ 3.5V	-40 to 85	SOT25
AP139	0.3	0.45	45	75 at 1kHz	2.7 to 5.5	1.5V/ 1.8V/ 2.0V/ 2.5V/ 2.8V/ 3.0V/ 3.3V/ 3.5V	-40 to 85	SOT25
AP133	0.3	0.45	40	65 at 1kHz	2.0 to 6.0	ADJ 1V to 5V	-40 to 85	SOT25, DFN2020-6
AP7331	0.3	0.55	65	65 at 100Hz	2.0 to 6.0	1.0V/ 1.2V/ 1.5V/ 1.8V/ 2.0V/ 2.5V/ 2.8V/ 3.0V/ 3.3V/ ADJ	-40 to 85	SOT25, DFN2020-6
AP7333	0.3	0.55	65	65 at 100Hz	2.0 to 6.0	1.0V/ 1.2V/ 1.5V/ 1.8V/ 2.0V/ 2.5V/ 2.8V/ 3.0V/ 3.3V	-40 to 85	SOT23, SOT23R
AP7165	0.6	0.4	125	60 at 1kHz	2.2 to 5.5	ADJ 0.8 to 5V	-40 to 85	SO-8, DFN3030-10
AP7167	1.2	0.8	125	60 at 1kHz	2.2 to 5.5	ADJ 0.8V to 5V	-40 to 85	SO-8, DFN3030-10
AP7173	1.5	0.27	1000	60 at 1kHz	1.0 to 5.5	ADJ 0.8V to 3.3V	-40 to 85	SO-8EP, DFN3030-10

### To find out more information:

LDO overview webpage  
 Datasheet  
 Datasheet  
 Datasheet  
 Datasheet

<http://www.diodes.com/products/catalog/list.php?parent-id=66>  
<http://www.diodes.com/datasheets/AP7311.PDF>  
<http://www.diodes.com/datasheets/AP7313.PDF>  
<http://www.diodes.com/datasheets/AP7331.PDF>  
<http://www.diodes.com/datasheets/AP7333.PDF>



# New cost effective 150mA and 300mA single channel low dropout linear regulators

## AP731x 150mA LDO Ordering information

Package	Output voltage	Package	7" Reel Quantity
AP7311-WG-7	Adjustable	SOT25	3000
AP7311-10WG-7	1.0V	SOT25	3000
AP7313-10SAG-7		SOT23	3000
AP7313-10SRG-7		SOT23R	3000
AP7311-12WG-7		1.2V	SOT25
AP7313-12SAG-7	SOT23		3000
AP7313-12SRG-7	SOT23R		3000
AP7311-15WG-7	1.5V	SOT25	3000
AP7313-15SAG-7		SOT23	3000
AP7313-15SRG-7		SOT23R	3000
AP7311-18WG-7	1.8V	SOT25	3000
AP7313-18SAG-7		SOT23	3000
AP7313-18SRG-7		SOT23R	3000
AP7311-20WG-7	2.0V	SOT25	3000
AP7313-20SAG-7		SOT23	3000
AP7313-20SRG-7		SOT23R	3000
AP7311-25WG-7	2.5V	SOT25	3000
AP7313-25SAG-7		SOT23	3000
AP7313-25SRG-7		SOT23R	3000
AP7311-28WG-7	2.8V	SOT25	3000
AP7313-28SAG-7		SOT23	3000
AP7313-28SRG-7		SOT23R	3000
AP7311-30WG-7	3.0V	SOT25	3000
AP7313-30SAG-7		SOT23	3000
AP7313-30SRG-7		SOT23R	3000
AP7311-33WG-7	3.3V	SOT25	3000
AP7313-33SAG-7		SOT23	3000
AP7313-33SRG-7		SOT23R	3000



## New cost effective 150mA and 300mA single channel low dropout linear regulators

### AP733x 300mA LDO Ordering information

Package	Output voltage	Package	7" Reel Quantity
AP7331-WG-7	Adjustable	SOT25	3000
AP7331-SNG-7		DFN2020-6	3000
AP7331-10WG-7	1.0V	SOT25	3000
AP7331-10SNG-7		DFN2020-6	3000
AP7333-10SAG-7		SOT23	3000
AP7333-10SRG-7		SOT23R	3000
AP7331-12WG-7	1.2V	SOT25	3000
AP7331-12SNG-7		DFN2020-6	3000
AP7333-12SAG-7		SOT23	3000
AP7333-12SRG-7		SOT23R	3000
AP7331-15WG-7	1.5V	SOT25	3000
AP7331-15SNG-7		DFN2020-6	3000
AP7333-15SAG-7		SOT23	3000
AP7333-15SRG-7		SOT23R	3000
AP7331-18WG-7	1.8V	SOT25	3000
AP7331-18SNG-7		DFN2020-6	3000
AP7333-18SAG-7		SOT23	3000
AP7333-18SRG-7		SOT23R	3000
AP7331-20WG-7	2.0V	SOT25	3000
AP7331-20SNG-7		DFN2020-6	3000
AP7333-20SAG-7		SOT23	3000
AP7333-20SRG-7		SOT23R	3000
AP7331-25WG-7	2.5V	SOT25	3000
AP7331-25SNG-7		DFN2020-6	3000
AP7333-25SAG-7		SOT23	3000
AP7333-25SRG-7		SOT23R	3000
AP7331-28WG-7	2.8V	SOT25	3000
AP7331-28SNG-7		DFN2020-6	3000
AP7333-28SAG-7		SOT23	3000
AP7333-28SRG-7		SOT23R	3000
AP7331-30WG-7	3.0V	SOT25	3000
AP7331-30SNG-7		DFN2020-6	3000
AP7333-30SAG-7		SOT23	3000
AP7333-30SRG-7		SOT23R	3000
AP7331-33WG-7	3.3V	SOT25	3000
AP7331-33SNG-7		DFN2020-6	3000
AP7333-33SAG-7		SOT23	3000
AP7333-33SRG-7		SOT23R	3000

All variants are in packages that are "Green" Molding Compound (No Br, Sb) with Lead Free Finish/RoHS Compliant (Note 1)

Notes: 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.