



New Product Announcement

AP2303

1.75A DDR-2/3/3L/4 Termination Regulator

The AP2303 is a low dropout linear regulator that generates the termination voltage of DDR-2/3/3L/4 SDRAM.

The regulator can source or sink up to 1.75A continuously. The output voltage is regulated to track tightly with the reference voltage ($1/2V_{DDQ}$) within $\pm 10\text{mV}$.

The AP2303 supports soft-start when turned-on by V_{CNTL} or V_{REFEN} . The AP2303 integrates a shutdown circuit that is triggered once the voltage of V_{IN} , V_{CNTL} or V_{REFEN} falls below a certain value.

AP2303 features over-temperature protection and over-current protection for both source and sink.

AP2303 is available in SO8 and SO8EP packages.



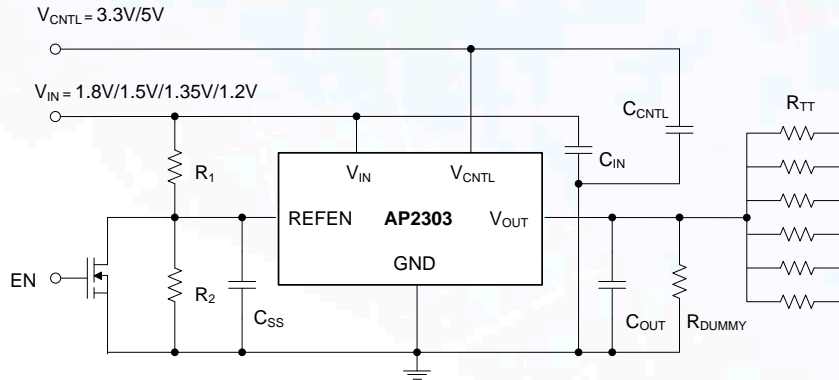
The Diodes Advantage

- **Supports DDR-2/3/3L/4 Memory Bus termination (V_{DDQ})**
Output voltage is $1/2 V_{DDQ}$, to cover DDR-2(0.9V), DDR-3(0.75V), DDR-3L(0.675V), DDR-4(0.6V) with source/sink current up to 1.75A.
- **Soft Start-up**
Minimizes in-rush current drawn from input during power-on, especially in large capacitor loading applications.
- **Shutdown**
Shutdown by any of V_{IN} , V_{CNTL} or V_{REFEN} saves power consumption.
- **Sink and Source Over-Current and Over-Temperature Protection**
Improves reliability and robustness

Target Markets

- PC motherboard
- Set-Top Box
- Graphic card
- Smart-TV

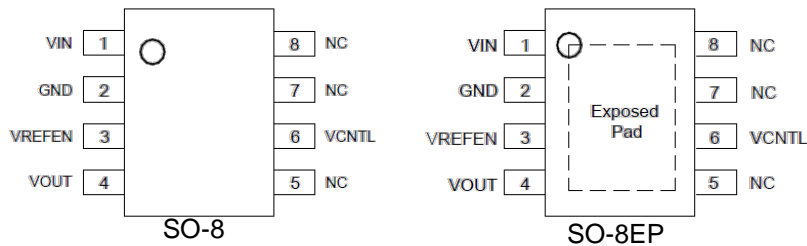
Typical Application Schematic



Diodes DDR Termination LDOs

Part number	V_{CNTRL}	V_{IN}	I_{OUT}	V_{OS}	V_{DO}	Temp range °C	Protection			Enable	Soft-start	Package
	V	V	A	V	V		OTP	OC	SC			
AP2303	3.0 ~ 5.5	1.2 ~ 5.5	~0.75	5	0.4	-40~85	-	Y	Y	Y	Y	SO8, SO8EP

Package and Pin-Out



Ordering Information

Device	Packaging	Part mark (Note 2)	Reel size	Tape width	Quantity
AP2303MTR-G1	SO8	2303M -G1 YWWAXX	13"	12mm	4000
AP2303MPTR-G1	SO8EP	2303MP -G1 YWWAXX	13"	12mm	4000

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
2. Y: Year, WW: Work Week of Molding, A: Assembly House Code, XX: 7th and 8th Digits of Batch No.