



New Product Announcement

AP2145/2155

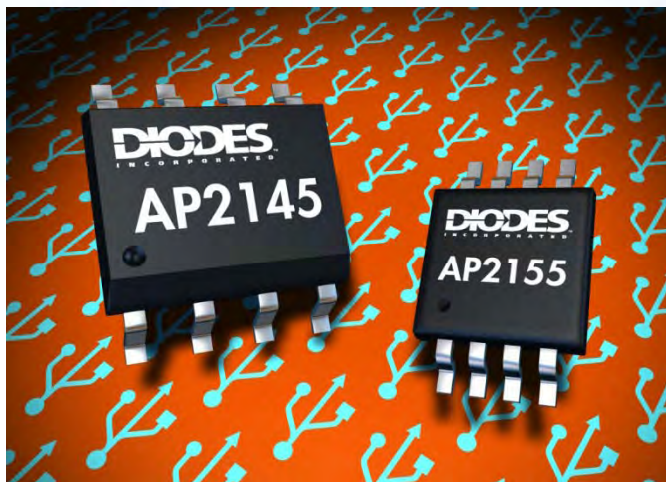
Single Channel Current-Limiting Power Switch with Reverse Current Blocking

Description

The AP2145 and AP2155 are 0.5A single channel cost effective form-fit-function integrated high-side power switches, optimized for Universal Serial Bus (USB) ports protection and other 3V-5V hot-swap applications. The family of devices complies with USB standards, and available with both polarities of Enable input.

They offer reverse current blocking and over-current, over-temperature and short circuit protection, as well as controlled rise time and under-voltage lockout. A 7ms deglitch capability on the open-drain Flag output prevents false over-current reporting and does not require any external components.

They are available in industry standard in SO-8 and MSOP-8L-EP green packages.



The Diodes advantage

The AP2145/AP2155 provide the simplest cost effective solution for USB ports protection

- **Form-fit-function industry standard in SO-8 and MSOP-8L-EP**
Lower cost single channel complementing existing dual channel AP21x6 series (0.5A/1A/1.5A)
- **10µs fast transient response time**
Prevent unnecessary system shutdown or restart and improve system robustness
- **Tight current limiting tolerance**
Reduce power requirements on system rail and reduce cost
- **Reverse current blocking, over-current, short-circuit and over-temperature protection**
Improve robustness of USB port
- **UL Recognized (pending) and IEC 60950-1 CB Scheme Certified**
Ensure public safety and improve product quality

Circuit functions

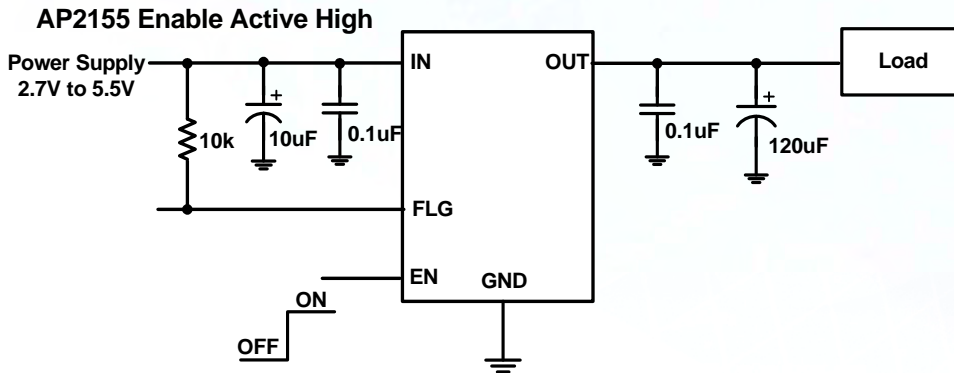
- USB ports protection
- Short-circuit protection
- Heavy capacitive loads protection



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Product portfolio

| Diodes P/N | Channel | Enable Polarity | V _{in} | Max Output Current (A) | Typ Current Limit (A) | Reverse Current Blocking | UL and Nemko IEC 60950-1 Certified | Package |
|------------|---------|-----------------|-----------------|------------------------|-----------------------|--------------------------|------------------------------------|--------------------|
| AP2145 | 1 | Active low | 2.7-5.5V | 0.5 | 0.8 | Yes | Yes | SO-8 MSOP-8L-EP |
| AP2155 | | Active high | | | | Yes | Yes | |
| AP2146 | 2 | Active low | 2.7-5.5V | 0.5 | 0.8 | Yes | Yes | |
| AP2156 | | Active high | | | | Yes | Yes | |
| AP2166 | | Active low | 2.7-5.5V | 1.0 | 1.5 | Yes | Yes | |
| AP2176 | | Active high | | | | Yes | Yes | |
| AP2186 | | Active low | 2.7-5.5V | 1.5 | 2.1 | Yes | Yes | |
| AP2196 | | Active high | | | | Yes | Yes | |

Product page <http://www.diodes.com/products/catalog/list.php?parent-id=71>

Datasheet http://www.diodes.com/datasheets/AP2145_2155.pdf

Ordering information

| Device | Packaging | Package marking info | Reel size | Tape width | Quantity |
|--------------|------------|----------------------|-----------|------------|----------|
| AP2145SG-13 | SO-8 | AP2145 YYWWXX | 13" | 12mm | 2500 |
| AP2155SG-13 | SO-8 | AP2155 YYWWXX | 13" | 12mm | 2500 |
| AP2145MPG-13 | MSOP-8L-EP | YWXE AP2145 | 13" | 12mm | 2500 |
| AP2155MPG-13 | MSOP-8L-EP | YWXE AP2155 | 13" | 12mm | 2500 |

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. Codes for date coding on part marks

Y Year 0-9 YY Year 08, 09 etc W A-Z week 1-26 a-z week 27-53 WW Week 01-52 X A-Z: Green