

NU5721 High-Voltage High-Current Bidirectional Power Switch

1 Feature

- Wide Power Supply Voltage Range: 2.8V to 23V
- Integrated TVS: > 120V for IEC61000-4-5
- Super-fast OVLO Response Time: typical 40ns
- Internal Over-Voltage Protection Thresholds:
 - 6.8V
- Wide Adjustable OVLO Threshold Range: 4V to 24V
- Integrated Switch On-Resistance:
 - 20mΩ (TYP)
- Robust ESD Performance
 - ±2KV Human Body Model (HBM)
 - ±1KV Charged Device Model (CDM)
 - ±200V Machine Model (MM)
- System Level ESD (IEC61000-4-2)
 - ±8 kV Contact Discharge
 - ±15 kV Air Gap Discharge
- Soft-Start Function
- Enable Function: Low Active
- Power switch stat indicator: \overline{ACOK}
- Optional external OVLO configuration
- Thermal Shutdown Protection
- -40°C to +85°C Operating Temperature Range
- Available in Green FCQFN-1.30×1.80-12B

2 Applications

- Smart Phone
- Tablet PC

3 Descriptions

The NU5721 is an over-voltage protection device designed to protect low voltage systems from damage caused by voltage surges. The NU5721 can withstand surges up to +/-120V without damage. The integrated 20mΩ (TYP) R_{ON} FET allows it to pass through 6A continuous current. The FET is turned off when the input voltage exceeds the over-voltage threshold which can be adjusted from 4V to 20V with optional external resistors. If the OVLO input is set below the external OVLO select threshold, the NU5721 automatically choose the internal trip threshold which is preset to 6.8V typically. The open drain \overline{ACOK} output indicates a stable power supply voltage which is within V_{UVLO} and V_{OVLO} . The NU5721 also has enable/disable control function to reduce power consumption. The NU5721 are available in FCQFN-1.30×1.80-12B packages, and operate over an ambient temperature range of -40°C to +85°C.

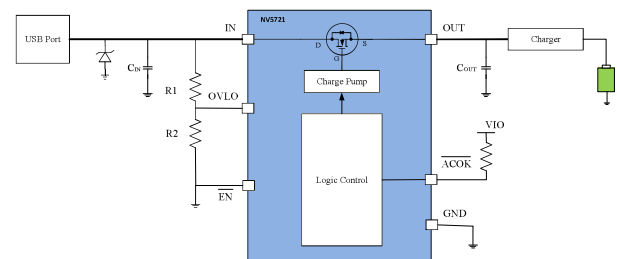


Figure 1-1. Simplified Application Diagram

This document contains confidential and proprietary information of NuVolta. Any information in this document is prohibited from being used, reproduced or disseminated to any third party in any form and/or through any means without the prior written consent of NuVolta. **ALL RIGHTS RESERVED.**