

# Exposed Universal AC Power Port

## IEC 61000-4-5 Level 4 Solution

Bourns® PortNote® solutions provide protection recommendations for typical port threats.

### Solution Products



PTVS1-380C-TH



GDT25-60-S1-RP

### Objective

The 5G wireless infrastructure and EV charging stations are powered by universal AC and require robust surge protection. This solution offers a low clamping voltage (520 V @ 1 kA, 8/20 μs) and assists compliance with the IEC 61000-4-5 Level 4 requirement.

### Solution

- 1 Power TVS Diode:  
PTVS1-380C-TH
- 1 Next-Generation Fast Acting  
Gas Discharge Tube (GDT):  
GDT25-60-S1-RP

### Benefit

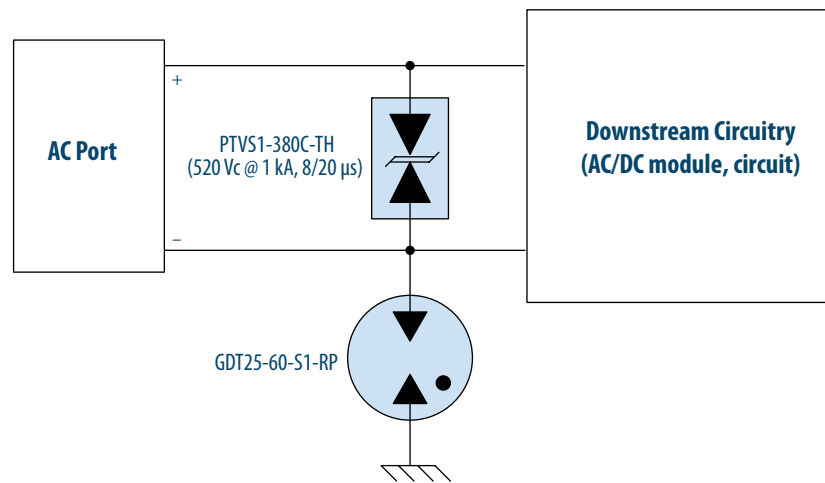
Combines the Power TVS Diode's superior clamping voltage and the GDT's space-saving feature to minimize stress in the downstream AC/DC circuit.

### Compliance\*

IEC 61000-4-5 Level 4

### Alternate Recommendations

- PTVS3-xxxC-TH for enhanced 3 kA protection (520 V @ 3 kA, 8/20 μs)
- PTVS6-xxxC-TH for enhanced 6 kA protection (520 V @ 6 kA, 8/20 μs)
- PTVS10-xxxC-TH for superior 10 kA protection (520 V @ 10 kA, 8/20 μs)



### Request Sample



To order samples, click on the "Request Sample" button online.

The schematic above illustrates the application protection and does not constitute the complete circuit design. The Bourns® Model PTVS1-380C-TH and GDT25-60-S1-RP have been tested to a 1 kA surge current of a wave shape 8/20 μs which is compliant with IEC 61000-4-5 Level 4 specifications. However, different loads at downstream circuitry may affect the rise time and breakover voltage of PTVS1 and GDT25 devices. Customers should verify actual device performance in their specific applications.

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**BOURNS**<sup>®</sup>

Americas: Tel +1-951 781-5500  
Email [americus@bourns.com](mailto:americus@bourns.com)

EMEA: Tel +36 88 885 877  
Email [eurocus@bourns.com](mailto:eurocus@bourns.com)

Asia-Pacific: Tel +886-2 256 241 17  
Email [asiacus@bourns.com](mailto:asiacus@bourns.com)