

Meeting the New FCC “B” Surge Requirements with the CYG20xx / CYG2911 Series DAA Modules

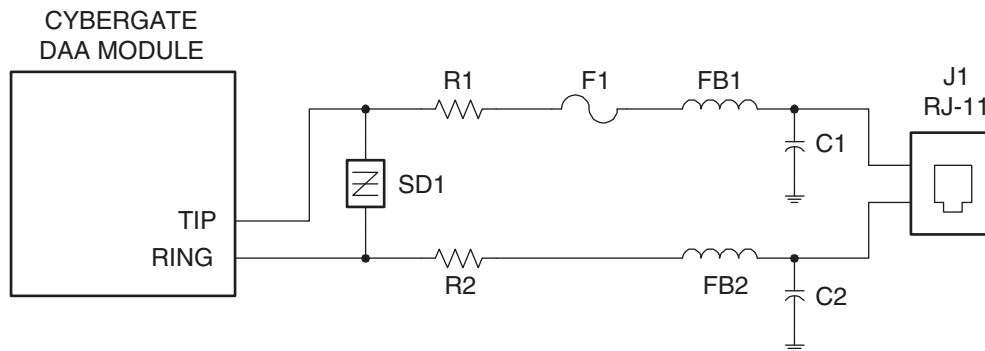
1 Introduction

Starting in June, 1998, the FCC, under the Code of Federal Regulations (CFR 47 part 68), had adopted a requirement that equipment connected to the telephone line be fully functional after multiple surges of a particular waveform called the 'B' surge.

Products designed and certified prior to this date are not required to meet or be tested to the 'B' surge.

While the CYG20xx and CYG2911 DAA modules contain MOV surge protection, it is recommended for new designs using these modules, that an additional solid state surge protection device be added to the Tip and Ring terminals to ensure compliance to multiple applications of the 'B' surge (see schematic below). A device such as the Littelfuse P3100SBL SIDACtor device will react faster than the MOV, and provide a crowbar action that will ensure survivability to multiple 'B' surge events. This note does not apply to the CYG2217 or CYG21xx series as they contain a similar device to the P3100SBL.

Since the Cybergate series of DAA modules are FCC compliant, it is the responsibility of the end user to submit the end product incorporating the Cybergate to an accredited FCC lab for compliance testing and certification.



2 Circuit Details

- SD1 is a Littelfuse P3100SBL SIDACtor device rated for 100A with a breakover voltage of $275V_{rms}$. Contact Littelfuse, Inc. at www.Littelfuse.com for explicit details on the SIDACtor products.
- R1 and R2 are 15Ω , 1 Watt resistors. These resistors are only recommended, and they should be through-hole devices.
- For power cross (UL 1459) either a Raychem TR-600-150 resettable polyfuse or a 1.25A, 250VAC slow-blow fuse is recommended for F1.
- Depending on the design FB1, FB2, C1, and C2 may be required for EMI suppression under FCC Part 15. The values of these devices depend on the frequency of the emissions generated by system clocks, etc. Contact Fair Rite at www.fair-rite.com for information on ferrite beads and other EMI suppression devices.
- J1 is an RF-11 jack and must be supplied by an FCC-approved vendor. Circuit board traces should be spaced 0.100" (2.54mm) between Tip, Ring, and Ground.

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