

Use case

Eaton Bussmann® high current SMT fuses



Eaton provides fast-acting protection in high-current applications



With the sustained rise in the use of consumer electronics, IoT-enabled machines, AI, and cloud computing, enormous amounts of data are being generated, processed, and stored daily. The internet allows individuals and organizations to access, store, and modify vast amounts of data in real-time, improving the quality of human lives and making business processes more efficient. Data centers dedicated to housing the ever-growing computing infrastructure enable the storage, processing, and dissemination of data around the globe.

As internet connectivity is now woven into every aspect of modern life, data center

utilization is expanding rapidly to meet growing information needs. Design engineers, data center operators, and facility managers face several technical challenges while designing, building, and operating these data hubs. A key consideration is future-proofing electrical distribution systems to meet current and emerging power needs while ensuring maximum uptime. Power outages due to high fault currents and short circuits may damage sensitive electronics and cause costly downtime that must be avoided at all costs.

Fuses are well-known overcurrent protection devices used in a host of computing applications. Fast-acting

overcurrent fuses are required in server chassis, backplane boards, and line cards, and more to safeguard sensitive electronics from damaging currents due to short circuits or overloading. Since today's designers are implementing high power density on each rack, these fuses must have higher interrupting ratings. Moreover, as circuits become more component-dense, the right fuse selection must come in smaller footprints. Surface-mount (SMD) fast-acting brick fuses provide greater space savings and reduce design complexity compared to through hole or large cartridge fuse designs. A single-fuse solution with sufficient higher current rating can avoid the need for fuse

paralleling to provide adequate overcurrent protection.

Eaton Bussmann® series 1025HC and 1245HC SMD fuses provide high interrupting ratings in traditional SMD fuse sizes. Eaton's 1025HC fuses are offered in current ratings from 20 A up to 50 A while the 1245HC fuses are rated up to 100 A. 1025HC and 1245HC fuses have I²t characteristics that help allow for inrush currents that result in fewer nuisance openings. They also feature an ultra-low direct current resistance (DCR) that ensures the highest efficiency with lower heat rise. Each product is RoHS compliant and UL recognized for reliability and safety.

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