

ADVANCED CIRCUIT PROTECTION FOR ADVANCED APPLICATIONS – ADOPTED



Eaton Electronics, an industry leader and legacy circuit protection manufacturer, offers a broad portfolio of high quality overcurrent and overvoltage products with competitive lead times. The Eaton circuit protection portfolio is constantly growing in order to meet the customer needs and offers products ideal for both industrial and automotive battery management applications.

1. Eaton's resettable fuse expansion for IoT & Automotive

Eaton a leader in circuit protection technology added additional PPTC based overcurrent protection to respond to the increasing market demand of IoT and automotive.

The new PTSLR series represents 4x lower losses than traditional resettable fuses and 10x lower than one-time-fuses helping to achieve longer lifetime for batteries powering IoT sensors and actuators mainly. Also any POL power circuits up to 8V benefits from lower heat loss in SMT package sizes 0603 up to 1812 with current ratings from 0.5A-5A.

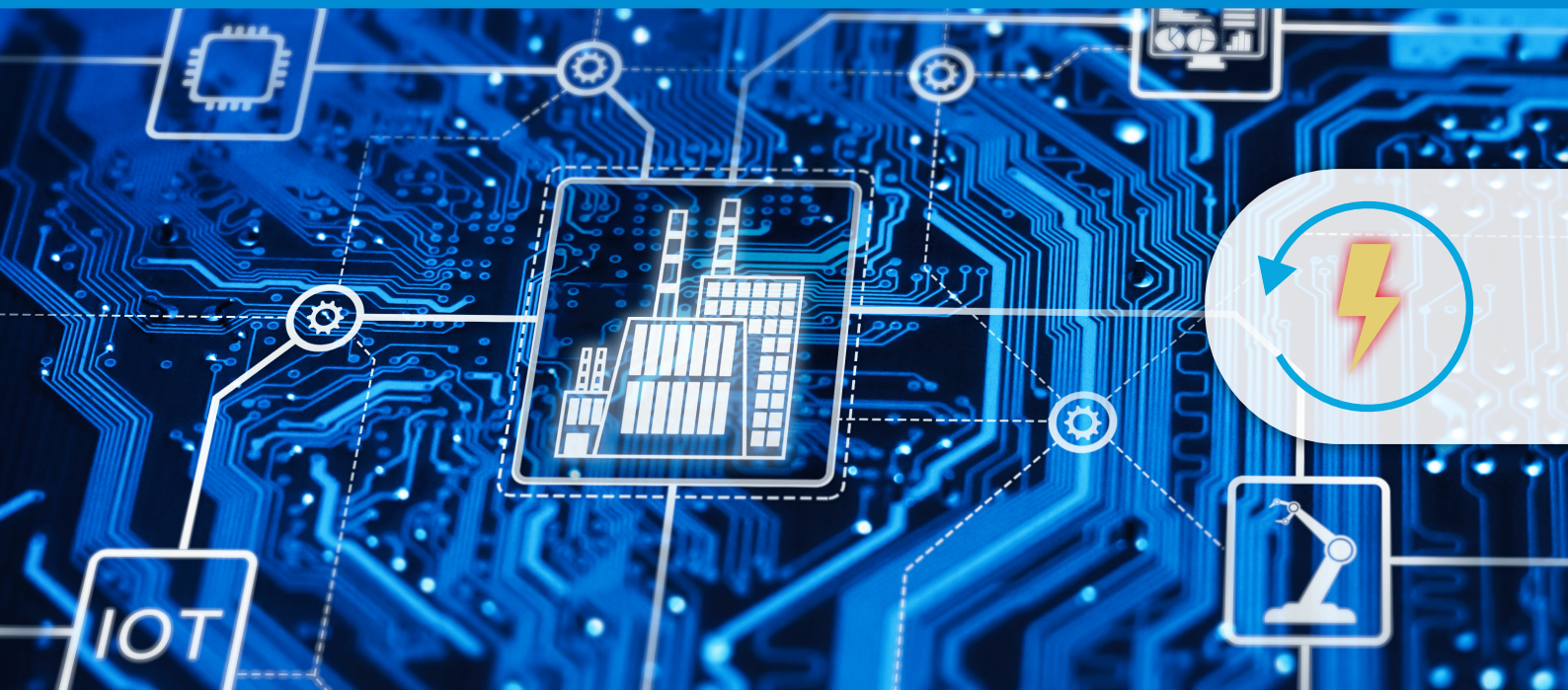
The new AEC-Q200 qualified PTSA series SMT parts are ideally suited for infotainment, ADAS, dashboard controls & LED lights. PTSA0805 to 1812 sizes are ready to serve in max +85C environments up to 2.6A hold currents while the PTSAHT0805 to 1206 series' can handle +125C environment up to 0.5A hold current.

2. Eaton's new fuses for Li-Ion BMS

Leader in circuit protection, Eaton added new SMT fuses to serve in different positions in Li-Ion battery packs protection. CC06F miniature 0603 size fuse series is ideally tuned for sense lines short circuit protection up to 63VDC rating that makes it the smallest sense line fuse for 48V battery packs available on the market.

1245HC fuses protects battery pack power lines up to 72V and 100A in a 12x4.5mm SMT package. This exceptional current rating along with 1000A breaking capacity allows larger battery pack operated devices to serve like electric chainsaws, power vacuums and devices normally up to 3kW power.

1145HV & 1350HV fuses provide protection for HV Li-Ion BMS boards up to 600VDC. The 5A max current is sufficient for even the most powerful balancer circuits as well and may be used for HV power distribution units (PDU) as well in vehicles (1145HVA – automotive grade).



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3. Eaton's new AHC HV fuse series with exceptional breaking capacity

Eaton's high voltage AHC & AHCA (automotive) ¼ " fuses feature a state of the art arch suppressing material allowing an exceptional voltage rating to achieve in the smallest format in the industry. The new arc quenching filler allows breaking capacities up to 20kA which opens the door for this fuse to act in the electrical industries mainly as a primary protection for EV chargers (residential wall charger units) up to 450VAC/32A and Onboard Chargers (OCB) up to 500VDC/30A. There are several different terminal options available which helps even to fit the 6x32mm AHCA products in the typical 10x38mm fuse footprints. AHC parts are offered with a wide range from 200mA up to 40A targeting 3phase industrial applications protection as well up to 600VAC.

4. Eaton's expansion on SMT packaged overvoltage protection

Leader in circuit protection, Eaton recently focuses to add new products serving for as overvoltage protection. The portfolio is continuously growing by products based on semiconductors (TVS diodes) as well as metal-oxide compositions. Ten new sizes of SMT multilayer varistors (MLV series) has been recently added to the portfolio to expand from 0201 to 4032 sizes. Two new sizes (2828 & 4032) of metal oxide varistors (MOVS series) have been added to respond to the most popular mains line overvoltage protection up to 670V and 1200A. In addition for automotive a new auto grade multilayer varistor family is added (AMLV series) in 7 different footprints from 0402 up to 2220 for both load dumps & CAN/LIN bus protection in focus.

Further news is that Eaton's unique PolySurg™ 0402ESDA-AEC1 product has been qualified for Open Alliance defined 100/1000Base-T1 for automotive Ethernet lines protection.

