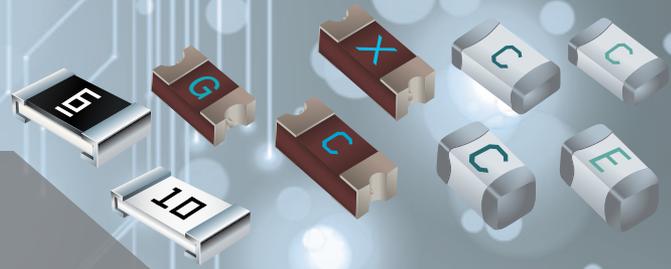


NEW PRODUCT BRIEF



Bourns® SinglFuse™ Automotive Grade SMD Fuses

INTRODUCTION

Bourns is pleased to introduce ten families of AEC-Q200 compliant*, automotive-grade SMD fuses to complement its already successful line of SinglFuse™ SMD Fuse products.

The Model [SF-0603HIA-M](#), [SF-0603SA-M](#), [SF-0603SPA-R](#), [SF-1206HHA-R](#), [SF-1206HIA-M](#), [SF-1206SA-M](#), [SF-1206SA-R](#), [SF-1206SA-W](#), [SF-2410FPA-W](#), and [SF-2410FA-W](#) families are UL 248-14 listed, RoHS compliant** and halogen free***. All ten families meet Bourns' internal AEC-Q200 equivalent test plan which includes more severe test conditions and larger sample sizes to ensure the products can handle typical harsh environments. These model families are intended for use in a variety of industrial, medical****, and telecom applications.

PRODUCT FIT

With these automotive grade fuses, Bourns continues to broaden its portfolio of SinglFuse™ SMD Fuses to address the growing need for effective circuit protection in a variety of battery system applications including main control power input, slave control monitor lines and cell balance lines within the battery management system (BMS), and the battery module and BMS connection board within the interconnection board module.

These automotive grade fuses can be applied in a variety of applications including telecom and networking equipment, PCs and monitors, server farms, portable memory, portable electronics, gaming systems, robotics, smart appliances, battery chargers, and industrial controllers, to name just a few.

FEATURES

- EIA 0603, 1206 and 2410 footprints
- AEC-Q200 compliant*
- UL 248-14 listed
- RoHS compliant**
- Halogen free***

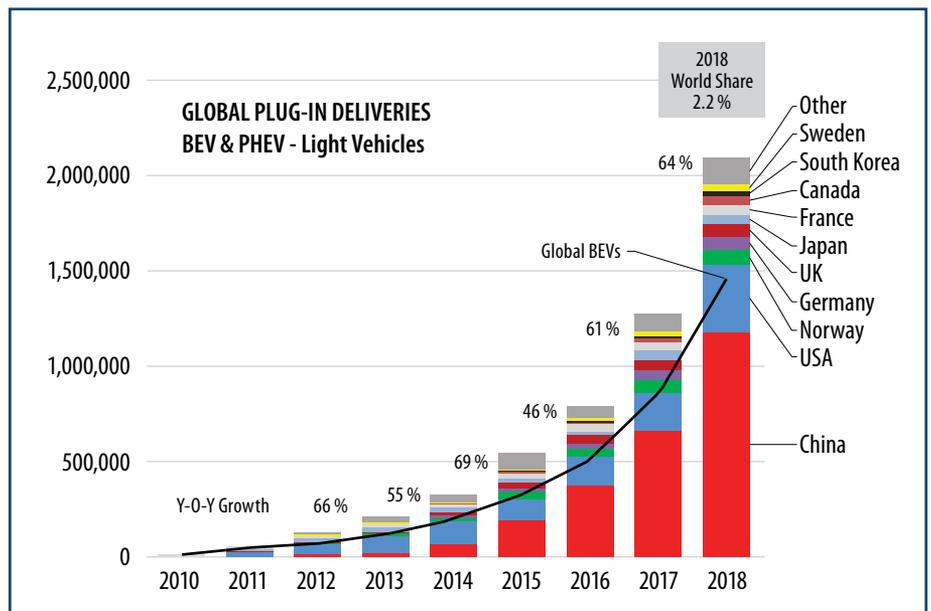
COMMON APPLICATIONS

- Industrial
- Medical****
- Telecom
- Battery Management Systems

MARKET SEGMENT OVERVIEW

Global demand for electric vehicles has increased sharply over the last several years. 2018 saw a 64 % increase in global plug-in vehicle deliveries compared to 2017, with 1.2 million deliveries in China alone.

According to some industry analysts, the global hybrid and electric vehicle fuse market will grow at a CAGR of over 23 % from 2018-2022. One major factor driving the market's growth is the increasing electronic content in hybrid and electric vehicles.



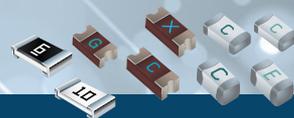
Data source: EVvolumes.com

* Meets Bourns internal AEC-Q200 equivalent test plan.

** RoHS3 Directive 2015/863 Amendments of Annex II on March 31, 2015.

*** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less

**** Bourns® products have not been designed for and are not intended for use in "lifesaving," "life-critical" or "life-sustaining" applications nor any other applications where failure or malfunction of the Bourns® product may result in personal injury or death. See Legal Disclaimer Notice: <http://www.bourns.com/docs/legal/disclaimer.pdf>.



Bourns® SinglFuse™ Automotive Grade SMD Fuses

PRODUCT CHARACTERISTICS

Series	Photo	Size (EIA)	Rated Current	Rated Voltage	UL Listed	AEC-Q200 Compliant*	RoHS Compliant**	Halogen Free***
SF-0603HIA-M		0603	1 A – 5 A	32 Vdc	Yes	Yes	Yes	Yes
SF-0603SA-M		0603	0.5 A – 8 A	24 - 65 Vdc	Yes	Yes	Yes	Yes
SF-0603SPA-R		0603	1 A – 8 A	50/63 Vdc	Yes	Yes	Yes	Yes
SF-1206HHA-R		1206	8 A – 30 A	50 Vdc	Yes	Yes	Yes	Yes
SF-1206HIA-M		1206	0.5 A – 6 A	24 – 65 Vdc	Yes	Yes	Yes	Yes
SF-1206SA-M		1206	0.5 A – 5 A	65 Vdc	Yes	Yes	Yes	Yes
SF-1206SA-R		1206	10 A – 20 A	32 Vdc	Yes	Yes	Yes	Yes
SF-1206SA-W		1206	1.5 A – 15 A	32 – 110 Vdc	Yes	Yes	Yes	Yes
SF-2410FPA-W		2410	1 A – 10 A	125 – 250 Vdc	Yes	Yes	Yes	Yes
SF-2410FA-W		2410	12 A – 20 A	65 Vdc	Yes	Yes	Yes	Yes

SINGLIFUSE™ SMD FUSE PRODUCT LINE CHART

Technology	Series	General Purpose						Automotive Grade		
		0402	0603	1206	2410	3812	2923	0603	1206	2410
Thin Film (PCB)	SF-xxxx-F	0.15 A – 5 A								
Thin Film (Ceramic)	SF-xxxx	0.315 A	7 A							
Metal Foil	SF-xxxx-R SF-xxxx-A-R			8-30 A				1 A – 30 A		
Multilayer (Ceramic)	SF-xxxx-M SF-xxxx-A-M	0.5 A	40 A					0.5 A – 8 A		
Wire Core (PCB)	SF-xxxx-W SF-xxxx-A-W			0.5 A – 20 A						1 A – 20 A
Wire Core (Ceramic)	SF-xxxx-T				0.62 A – 60 A					
Ceramic Tube	SF-xxxx-C					20 A – 50 A				

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