

Bourns® Automotive Component Selection Guide

Short Form Brochure



BOURNS®

Introduction

Systems and electronics within automobiles have become increasingly more sophisticated with the introduction of new and improved features every year. Crucial to customer satisfaction is that each of these features must be reliably powered, protected and connected to its respective interface within the overall automotive system. Bourns has substantial automotive experience and supplies leading component solutions. The Bourns Automotive division has extensive experience designing, building and supplying high reliability AEC-Q200 compliant components. Bourns offers a wide variety of resistors and magnetics to condition and filter electronic circuits. To complement our conditioning products, we offer a portfolio of circuit protection products that have been designed specifically for automotive applications.

All Bourns® components that are approved for automotive applications are manufactured in facilities that are fully certified to TS 16949, and have been tested and qualified using the AEC-Q200 specification for passive components. Bourns also offers customers access to our application test lab.

Bourns has a long history of serving the automotive market with quality sensor products. The company's inductive and circuit protection components are available to meet the board level requirements of many automotive applications. With excellent customer service and the availability of field application engineers, Bourns works closely with automotive system designers in selecting the right components, providing layout support, and making modifications as necessary. Bourns performs surge tests and offers application and customer-specific testing. Leaving the details of circuit protection and conditioning technology to Bourns allows automotive designers to concentrate on their specific core application differentiation.



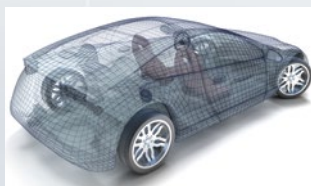
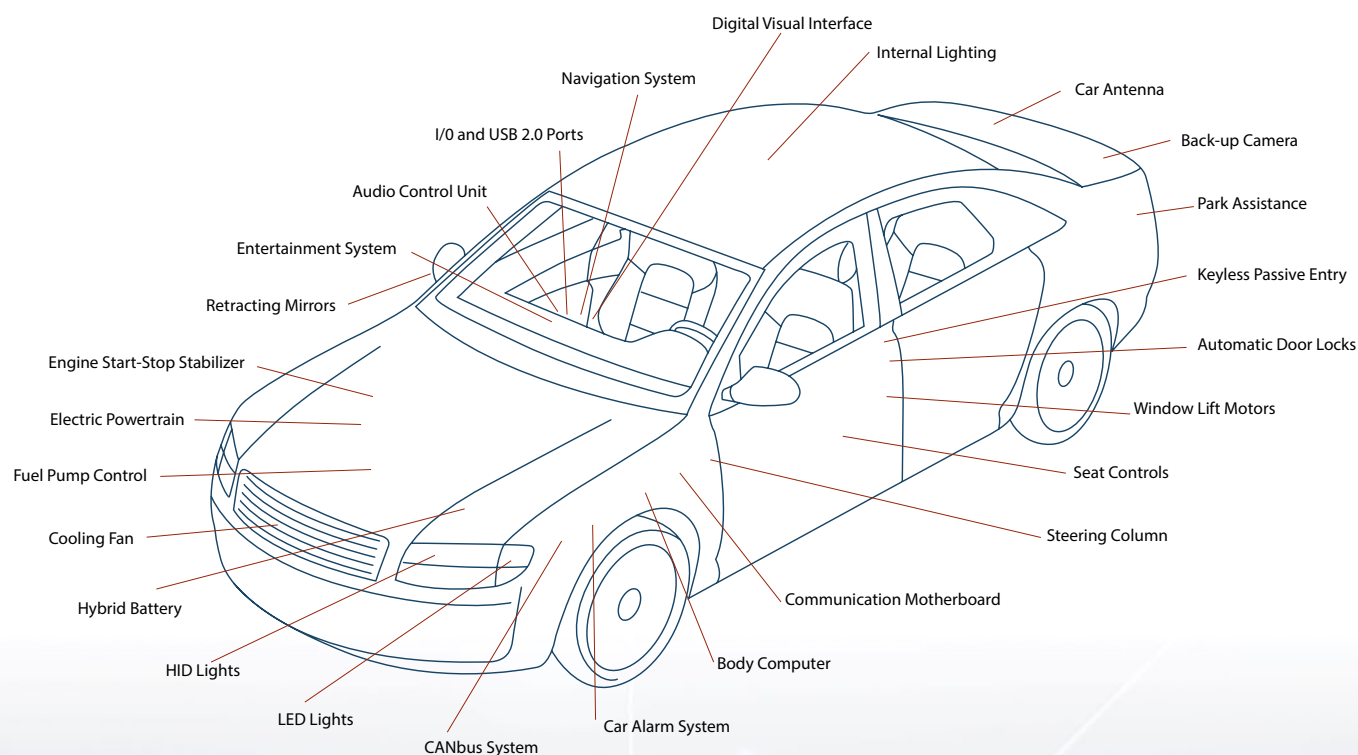
Power Inductors

Model	Photo	Size (mm)	Shielded	Inductance Range (μ H)	Current Range (A)	AEC-Q200 Qualification Reports on three representative P/Ns	PPAP Documentation Reports on three representative P/Ns	TS 16949 Factory
SRP4012TA		4.45 x 4 x 1	Yes	0.1 - 10	1.3 - 11.5	-1R0M, -4R7M, -100M	Level 3	Yes
SRP1238A		13.5 x 12.5 x 3.3	Yes	0.1 - 10	7 - 43	-1R0Y, -100M, -101M	Level 3	Yes
SRP4020TA		4.45 x 4 x 1.8	Yes	0.1 - 22	1.2 - 12	-R47M, -2R2M, -100M	Level 3	Yes
SRP5015TA		5.7 x 5.2 x 1.3	Yes	0.15 - 22	1.2 - 16	-R47M, -3R3M, -100M	Level 3	Yes
SRP7028A		7.3 x 6.6 x 2.8	Yes	0.15 - 33	2 - 27	-R33M, -2R2M, -100M	Level 3	Yes
SRP1265A		13.5 x 12.5 x 6.2	Yes	0.15 - 68	6.5 - 55	-R33M, -1R5M, -680M	Level 3	Yes
SRP1038A		11 x 10 x 3.8	Yes	0.22 - 47	3 - 35	-2R2Y, -150Y, -101Y	Level 3	Yes
SRP5030TA		5.7 x 5.2 x 2.8	Yes	0.33 - 10	2.75 - 14	-R47M, -2R2M, -100M	Level 3	Yes
SRP7050TA		7.3 x 6.6 x 4.8	Yes	0.33 - 68	1.2 - 25	-R33M, -1R5M, -680M	Level 3	Yes
SRP1245A		13.5 x 12.5 x 4.8	Yes	0.33 - 18	7.5 - 42	-R33M, -2R2M, -100M	Level 3	Yes
SRP1770TA		17.3 x 16.9 x 6.7	Yes	1 - 100	5.3 - 52	-330M, -331M, -681M	Level 3	Yes
SRR6040A		6.7 x 6.7 x 4	Yes	1 - 100	0.65 - 5	-1R0Y, -100M, -101M	Level 3	Yes
SRU1028A		10 x 10 x 2.8	Yes	1 - 150	0.6 - 7	-100Y, -220Y, -330Y	Level 3	Yes
SRR1210A		12 x 12 x 10	Yes	1 - 1000	0.75 - 11	-R47M, -3R3M, -100M	Level 3	Yes
SRR1260A		12.5 x 12.5 x 6	Yes	1 - 1000	0.68 - 9.4	-R47M, -2R2M, -100M	Level 3	Yes
SRU5028A		5.2 x 5.2 x 2.8	Yes	1.2 - 100	0.47 - 3.5	-2R2Y, -150Y, -101Y	Level 3	Yes
SRU6025A		6.2 x 6.5 x 2.5	Yes	1.2 - 220	0.42 - 4	-2R2Y, -220Y, -221Y	Level 3	Yes
SRU1038A		10 x 10 x 3.8	Yes	1.5 - 330	0.55 - 7.2	-1R0M, -4R7M, -100M	Level 3	Yes
SRU1048A		10 x 10 x 4.8	Yes	1.5 - 330	0.65 - 7	-R47M, -2R2M, -100M	Level 3	Yes
SRU8028A		8 x 8 x 2.8	Yes	2.5 - 100	0.75 - 4.5	-6R8Y, -220Y, -101Y	Level 3	Yes
SRR1280A		12.5 x 12.5 x 7.5	No	4.7 - 1000	0.68 - 8.2	-3R3M, -330M, -101K	Level 3	Yes
SRU3028A		3.5 x 3.3 x 2.8	Yes	10 - 33	0.47 - 0.72	-100Y, -220Y, -330Y	Level 3	Yes
SRR0735A		7.3 x 7.3 x 3.5	Yes	10 - 680	0.21 - 2.1	-330M, -331M, -681M	Level 3	Yes
SRR0745A		7.3 x 7.3 x 4.5	Yes	10 - 1000	0.2 - 2.1	-220M, -101M, -221M	Level 3	Yes
SDE0403A		4.5 x 4 x 3.2	No	1 - 68	0.4 - 2.7	-2R2M, -150M, -680K	Level 3	Yes
SDE0604A		5.8 x 5.2 x 4.5	No	1.2 - 150	0.52 - 5.3	-3R3M, -330M, -101K	Level 3	Yes
SDE0805A		7.8 x 7 x 5	No	1.5 - 470	0.55 - 5.8	-100M, -101K, -471K	Level 3	Yes
SDE1006A		10 x 9 x 5.4	No	1.5 - 820	0.45 - 7.2	-2R2M, -150M, -680K	Level 3	Yes
SDR1307A		13 x 13 x 7	No	1.5 - 1000	0.65 - 9.5	-2R2Y, -220Y, -221Y	Level 3	Yes

Chipguard® ESD Suppressors

Model	Photo	Size (mm, mils)	Technology	Working Voltage (V_{DC})	AEC-Q200 Qualification	PPAP Documentation	TS 16949 Factory
CGA0402MLC		0402 mm	Thin Film Polymer	5, 12, 24	Yes	Level 3	Yes
CGA0603MLC		0603 mm		5, 12, 24	Yes	Level 3	Yes
CGA0603MLA		0603 mm	Multi-Layered Varistor	16 - 32	Yes	Level 3	Yes
CGA0805MLA		0805 mm		16 - 38	Yes	Level 3	Yes
CGA1206MLA		1206 mm		16 - 56	Yes	Level 3	Yes

Bourns® Automotive Components



Comfort & Positioning

- Window Lift Motor
- Seat Position Motor
- Seat Heater
- Park Assistance
- Back-up Camera
- Keyless Passive Entry
- Automatic Door Lock
- Body Computer
- Steering Column
- Retracting External Mirror
- Rear View Interior Mirror

Electrification

- Fuel Pump
- Start-Stop Module
- Battery Charger
- Cooling Fan
- Body Control
- Parking Assist
- Start-Stop Engine Control

Infotainment

- Instrument Cluster
- Stereo (Audio) Control
- In-Car Camera
- In-Car Television
- Ethernet Hub/Switch
- USB Charging Port
- Antenna
- Communications ECU
- GPS & Navigation Control

Lighting

- HID Headlight
- LED Headlight
- Internal LED Light

Networks

- CAN
- FlexRay
- LIN
- Ethernet



Fixed Resistors

Model	Photo	Tolerances	Temperature Coefficient, (ppm/°C)	Power (W)	Resistance Range (Ω)	AEC-Q200 Qualification	PPAP Documentation	TS 16949 Factory
CST0612		1 %	±100, ±200	1	0.5 - 2.0	Yes	Level 3	Yes
CRF0805		1 %, 5 %	±100	0.5	5 - 20	Yes	Level 3	Yes
CRF1206		1 %	±75, ±100	1	1 - 30	Yes	Level 3	Yes
CRA2512		1 %, 5 %	±75	3	10 - 100	Yes	Level 3	Yes
CRE2512		1 %	±75	2/3	1 - 9	Yes	Level 3	Yes
CRF2512		1 %, 5 %	±75, ±100, ±275	2/1	1 - 50	Yes	Level 3	Yes
4800P		0.5 %, 1 %, 2 %	±100, ±250	1.12 - 1.6 (package power rating)	10 - 2.2 M	Yes	Level 3	Yes
PWR163		1 %, 5 %	±100	25	0.02 - 130 K	Yes	Level 3	Yes
PWR220T-20		1 %, 5 %	±100	20	0.02 - 130 K	Yes	Level 3	Yes
PWR220T-35		1 %, 5 %	±100	35	0.02 - 130 K	Yes	Level 3	Yes
PWR221T-30		1 %, 5 %	±100	30	0.02 - 130 K	Yes	Level 3	Yes
PWR263S-20		1 %, 5 %	±100	20	0.02 - 130 K	Yes	Level 3	Yes
PWR263S-35		1 %, 5 %	±100	35	0.02 - 130 K	Yes	Level 3	Yes

Multifuse® PPTC Resettable Fuses

Model	Photo	Size (mm, mils)	Holding Current Range (A)	Max. Operating Voltage Range (V)	Max. Operating Current Range (A)	AEC-Q200 Qualification	PPAP Documentation	TS 16949 Factory
MF-PSHT		2012, 0805	0.10	16	40	Yes	Level 3	Yes
MF-NSMF		3216, 1206	0.12 - 2.00	6.0 - 30	10 - 100	Yes	Level 3	Yes
MF-USMF		3225, 1210	0.12 - 2.00	6.0 - 30	10 - 100	Yes	Level 3	Yes
MF-MSMF		4532, 1812	0.10 - 2.60	6.0 - 60.0	10 - 100	Yes	Level 3	Yes
MF-LSMF		7555, 2920	1.85 - 3.00	6 - 33	20, 40	Yes	Level 3	Yes
MF-RHT		Various	0.70 - 13.0	16	40, 100	Yes	Level 3	Yes
MF-SM		7555, 2920 & 8763, 3425	0.3 - 3.0	6.0 - 60	10 - 100	Yes	Level 3	Yes
MF-SMHT		7555, 2920 & 8763, 3425	1.36, 1.60	6.0 - 35	100	Yes	Level 3	Yes
MF-RG		Various	3.00 - 5.00	16	100	Yes	Level 3	Yes

Common Mode Inductors

Model	Photo	Size (mm)	Shielded	Inductance Range (μH)	Current Range (mA)	AEC-Q200 Qualification Reports on three representative P/Ns	PPAP Documentation Reports on three representative P/Ns	TS 16949 Factory
SRF0703A		7.6 x 7.6 x 3.4	Yes	8.2 - 1335	0.211 - 2.19	-8R2M, -220M, -151M	Level 3	Yes
SRF0905A		9.2 x 6 x 5	Yes	10 - 6500	0.3 - 1.6	-250Y, -251Y, -102Y	Level 3	Yes
SRF1260A		12.5 x 12.5 x 6	Yes	0.47 - 4000	0.283 - 8.8	-6R8Y, -100M, -471M	Level 3	Yes
SRF1280A		12.5 x 12.5 x 8	Yes	0.47 - 4000	0.307 - 17.9	-1R0Y, -470M, -102M	Level 3	Yes

Common Mode Chip Inductors

Model	Photo	Size (mm)	Impedance Range (Ω) @ 10 MHz	Inductance Range (μH)	Current Range (mA)	AEC-Q200 Qualification Reports on three representative P/Ns	PPAP Documentation Reports on three representative P/Ns	TS 16949 Factory
SRF2012AA		2 x 1.2 x 1.2	67 - 360	300 - 400	0.25 - 0.5	-670Y, -161Y, -361Y	Level 3	Yes
SRF3216A		3.2 x 1.6 x 2	90 - 2200	200 - 400	0.3 - 1.2	-900Y, -261Y, -222Y	Level 3	Yes

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Our Engineering and Production Centers

Engineering Centers



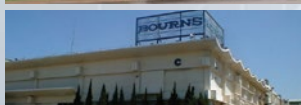
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