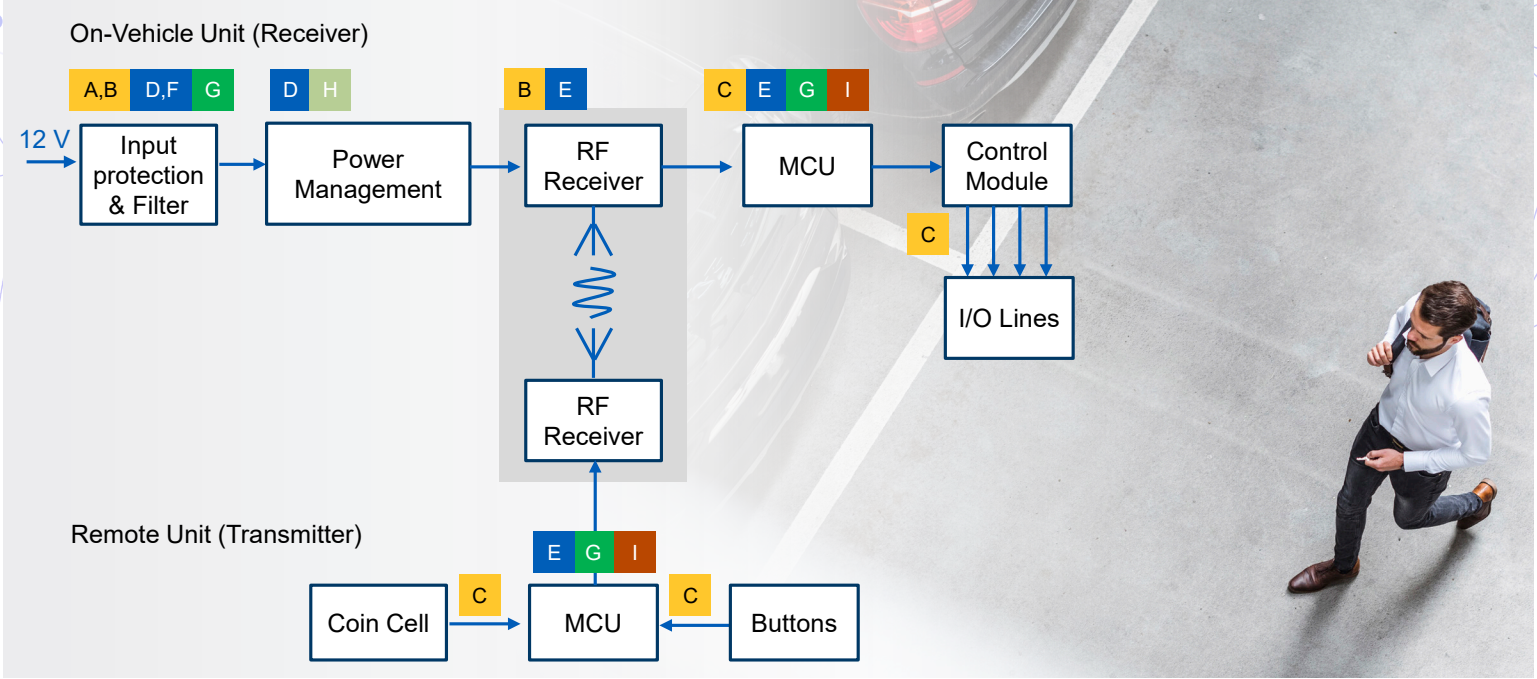


Remote keyless entry system

It's a convenient and secure technology that allows drivers to lock, unlock, and control various functions of their vehicles without using a traditional key. Within these systems, electronic components support functions such as noise filtering, voltage regulation, and EMI suppression to help ensure the reliable operation in the demanding automotive environment.

How electronic components used here?



	Product	Families	Function
Circuit Protection	A SMD fuse	0603FA	OC protection
	B Multilayer varistor ESD protection, High power TVS diode, Polymer ESD suppressor	AMLV, SM8T, 0402ESDA-AEC1	OV protection
	C Multilayer varistor ESD protection, Polymer ESD suppressor	AMLV, 0402ESDA-AEC1	OV protection
Magnetics	D Molded power inductor, Semi-shielded inductor, Shielded inductor	HCM1A, MPIA, EXLA, SDCxA, DRA	DC-DC
	E Ferrite chip bead, Multilayer chip inductor	MFBA, MCLA	Signal line noise reduction
Capacitors	F Automotive common mode choke	CMLA	Common mode filter, power line
Sensors	G Hybrid polymer capacitor	EHBSA	Input / output capacitor
	H Current sense resistor	CHSA	Current sensing
Timing Devices	I MHz quartz crystal resonator	E3XA / E9XA	Clock reference

Recommended products



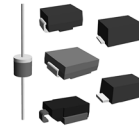
0603FA Fast-acting SMD fuse

- 1.6 mm x 0.8 mm surface mount
- Up to 50 Vdc voltage
- Interrupting rating: 35 A / 50 A
- Current range: 0.25 A - 5 A
- AEC-Q200 qualified



AMLV Multilayer varistor ESD protection

- Up to 1200 A peak current
- Up to 56 V working voltage
- AEC-Q200 qualified



SM8T High power TVS diode automotive rated

- 8000 W peak pulse capability
- Uni and Bi-polar
- Low profile DO-218AB package
- AEC-Q101 qualified



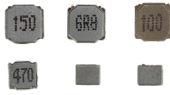
0402ESDA-AEC1 Polymer ESD suppressor

- 0402 (1005 metric) package
- Ultra-low capacitance (0.05 pF)
- Single-line, bi-directional device
- Very fast response time
- AEC-Q200 qualified



HCM1A High current molded inductor

- Popular SMT sizes: 5 mm, 7 mm, 10 mm, 13 mm, 17 mm
- Inductance range: 0.10 μ H to 100 μ H, rated up to 100 A, low DCR
- AEC-Q200, -55 $^{\circ}$ C to +155 $^{\circ}$ C



SDCx A Semi-shielded inductor

- 4 mm, 5 mm, 6 mm, 8 mm SMT sizes
- Inductance range: 1.0 μ H to 100 μ H, current range up to 13.5 A, low DCR
- AEC-Q200, -55 $^{\circ}$ C to +125 $^{\circ}$ C



DRA Shielded inductor

- 12.5 mm (4.5, 6, and 8 mm height) mm and 7.6 mm (3.55 and 4.35 mm height) SMT packaging
- Inductance range: 0.28 μ H to 1000 μ H, rated up to 56 A
- AEC-Q200, +165 $^{\circ}$ C maximum operating temperature



MPIA Low profile molded inductor

- EIA / Metric sizes: (0806/2016), (1008/2520), and 4² mm
- Inductance range: 0.10 μ H to 22 μ H, rated up to 22 A, low DCR
- AEC-Q200, -55 $^{\circ}$ C to +125 $^{\circ}$ C



MFBA Ferrite chip bead

- EIA / Metric sizes: (0402/1005), (0603/1608), (0805/2012), (1206/3126)
- High impedance up to 2000 Ω , high current up to 6 A
- AEC-Q200, -55 $^{\circ}$ C to +150 $^{\circ}$ C (High temperature rating)



MCLA Multilayer chip inductor

- Standard EIA 0402 to 3216 size
- High Q, higher current ratings
- Inductance range: 1.0 nH to 12 μ H
- AECQ Grade 3 qualified



CMLA Automotive common mode choke

- Three most popular SMT sizes: 7 mm, 9 mm, 12 mm
- 700 Ω impedance, rated up to 8 A
- AEC-Q200, -40 $^{\circ}$ C to +125 $^{\circ}$ C



EXLA High current molded inductor

- SMT sizes: 4 mm, 5 mm, 6 mm, 7 mm, 8 mm, 10 mm
- Inductance range: 0.185 μ H - 22 μ H, rated up to 58 A, low DCR
- AEC-Q200, -55 $^{\circ}$ C to +155 $^{\circ}$ C



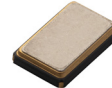
Conductive polymer hybrid aluminum electrolytic capacitor

- Capacitance range: 10 μ F - 820 μ F
- Voltage range: 16 Vdc - 80 Vdc
- High reliability, high endurance, high ripple current, low ESR and long life
- Temperature range: -55 $^{\circ}$ C to +125 $^{\circ}$ C
- AEC-Q200 option available



CHSA Current sense resistor

- 2512 (6432 metric) to 5930 (15076 metric) package
- High power ratings, up to 15 W
- AEC-Q200 qualified



E3XA 3225 Quartz crystal resonator

- 1210 (3225 metric) package
- Frequency range 12 MHz to 48 MHz
- Operating temperature: -40 $^{\circ}$ C to +125 $^{\circ}$ C
- AEC-Q200 qualified

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