Automotive Grade Products

Key Attributes*

- Compliance with certain automotive industry quality standards and best practice guidelines (IATF16949, VDA, AEC, AIAG, ZVEI, etc.)
- Risk mitigation through process flow enhancements to meet rigorous automotive quality requirements
- Enhanced quality management, product and process development, documentation services and after-sales support
- Extended product life cycle support, minimizing end of life impact and customer requalification efforts

Skyworks Automotive Grade versus commercial grades comparison†

Topic	Automotive Grade	Commercial/Industrial
Development processes	Automotive development process, including AIAG APQP, Lessons Learned, Phase Reviews, Design Methodologies (DFMEA, DFM, DFR), Risk Assessment, Safe Launch	Standard development and release processes
Reliability qualification	AEC-Q100 (IC)/101 (Discrete)/104 (MCM)/200 (Passive)	JESD47, MIL-STD, etc
Product safety (if specified in datasheet)	Product safety incorporated into processes, certified PSCR on staff	Broad market requirements
PPAP	Available on request. Based on AIAG, level 3 as default, including material systems listings	Not supported
Manufacturing sites QMS	IATF16949:2016	ISO9001:2015
Production lines	Automotive trained operators and preferred tools and equipment	No special requirements
Manufacturing and test	Advanced quality controls, inspections, screenings, outlier detection, error-proofing and anomaly detection	Standard controls
Quality commitment	Zero defect strategy for 0 DPPM target	Standard targets
VDA6.3 audits	Processes are auditable with target results of >90% A	Not supported
Change control and management	Strict BOM control with PCN process based on J-STD-046 and ZVEI	Standard BOM control, change management based on J-STD-046
Product life cycle	Extended longevity, timely PTN announcements and suitable Last Time Buy offer	Standard life cycle and end of life policies
Customer returns	Automotive 8D, turn-around-time prioritization, and extended failure analysis	Standard RMA process

* Please note that specifications and certifications for Skyworks automotive grade parts may vary and are subject to change. Please consult your Skyworks sales representatives about automotive part offerings. Customers are responsible for ensuring the suitability of parts for their intended application.
† This table serves to illustrate specifications and certifications typically associated with automotive grade parts. However, it is not comprehensive and is subject to change. Please consult your Skyworks sales representatives about automotive part offerings. Customers are responsible for ensuring the suitability of parts for their intended application.

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Advanced Digital, Analog, and Mixed-Signal Solutions For Next-Generation Vehicle Innovation

Power (orange)
RF (teal)
Timing (dark red)
Radio (green)

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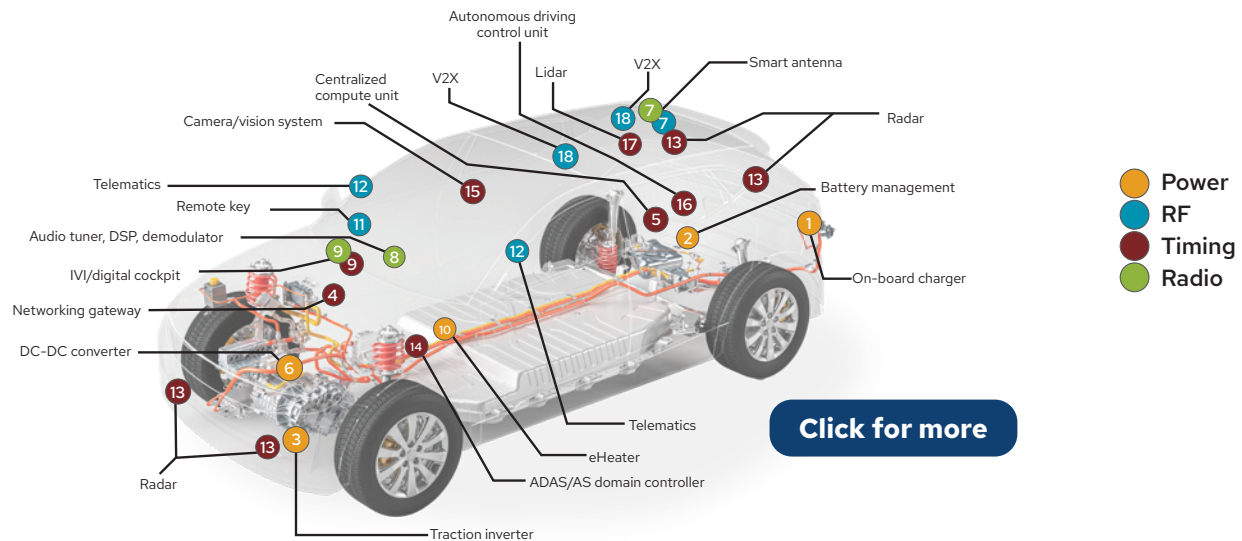
#	Function	Product Type	Part Numbers	Solution
Powertrain				
1	On-board charger	Isolated gate drivers, digital isolators, isolated amplifiers	Si86Sx, Si82Ax-Fx, Si892x/3x/4x	Power
2	Battery management	Digital isolators, isolated amplifiers	Si86Sx, Si88xx, Si892x/3x/4x	Power
3	Traction inverter	Isolated gate drivers, digital isolators, isolated amplifiers	Si828x, Si88xx, Si893x	Power
Vehicle Management				
4	Networking gateway	Clock generators, clock buffers, PCIe clocks/buffers, automotive tuners	Si52254A-01AM, Si5332A-AM1, Si53352A-01AM	Timing
5	Centralized compute unit	Automotive PCI Express (PCIe) clock buffers, clock generators, automotive tuners	Si52254A-01AM, Si5332A-AM1, Si53352A-01AM	Timing
6	DC-DC converter	Digital isolators, isolated amplifiers	Si82Ax-Fx, Si88xx, Si892x/3x/4x	Power
Infotainment				
7	Smart antenna	Automotive tuners, RF front-end modules, low noise amplifiers, GPS/GNSS	SKY5A2110, SKY5A2112 (coming soon), SKY5A2120 (coming soon)	Radio RF
8	Audio tuner, DSP, demodulator	USB drivers, automotive tuners	Si469xx, Si4790x/42/5x/6x, Si4791x/2x/7x/8x	Radio
9	In-vehicle infotainment/digital cockpit	Clock generators, clock buffers, PCIe clocks/buffers, USB drivers, automotive tuners, and RF switches	SKY5A1006 (coming soon), SKY5A1008 (coming soon), SKY5A2117 (coming soon)	Radio Timing
Driver Convenience				
10	eHeater	Isolated gate drivers, digital isolators, isolated amplifiers	Si82Ax-Fx, Si88xx, Si892x/3x/4x	Power
11	Remote key	Switches	SKY5A2108, SKYA21003, SKY5A5109	RF
12	Telematics	Front-end modules including power amplifiers, integrated filters, and LNAs	SKY5A3058 (coming soon), SKY5A3200 (coming soon), SKY5A3300 (coming soon), SKY5A5011/2 (coming soon), SKY5A2206, SKY5A2204/5, SKY5A2203	RF
Autonomous Driving				
13	Radar	Clock generators, clock buffers, PCIe clocks/buffers	Si52254A-01AM, Si5332A-AM1, Si53352A-01AM	Timing
14	ADAS/AV ECU			Timing
15	Camera/vision system			Timing
16	Autonomous driving/ High-performance compute			Timing
17	Lidar			Timing
18	V2X	RF front-end modules	SKY5A2105, SKYA21043, SKY5A1005 (coming soon)	RF