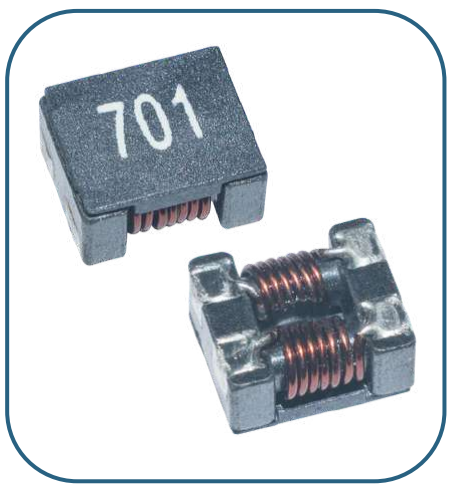
Superworld Electronics

# COMMON MODE CHOKE HIGH-DEMAND EMI SOLUTION

## LAUNCHES COMPACT, RELIABLE SOLUTION FOR NOISE CONTROL




# Introduction

***Superworld Electronics*** *is excited to unveil our high-demand Common Mode Choke—engineered for today's fast-paced, high-performance component.*

***Optimized for advanced automation systems***, *it delivers greater capacity, faster production, and a stronger competitive edge.*

*Currently manufactured in Taiwan, we're* ***expanding operations to Malaysia*** *to meet growing global demand across automotive, industrial, and consumer sectors.*

# Common Mode Choke

## W8AF Series

Commercial grade

# W8AF SERIES

## Description

- Designed for advanced noise suppression in electronic circuits.
- Engineered with precision for optimal EMI filtering performance.

## Form Factor

- **Dimensions: 4.80 mm (L) × 5.00 mm (W) × 2.50 mm (H)**
- Ideal for space-constrained PCB layouts.
- Recommended layout with optimized pin spacing for stable soldering.

## Electrical Performance

- **Impedance Range** : 250Ω (Typ) @ 100MHz
- **Rated Current** : Up to 5000 mA (MAX)
- **DCR** : (0.014Ω ~ 0.040Ω) ±40%
- **Insulation Resistance** : Minimum 10 MΩ
- **Rated Voltage** : 50

## Environmental Conditions

- **Temperature Range** : -40°C to +125°C
- **High Reliability** : 100% Lead-free, Halogen-free, RoHS, and REACH compliant.

## Applications

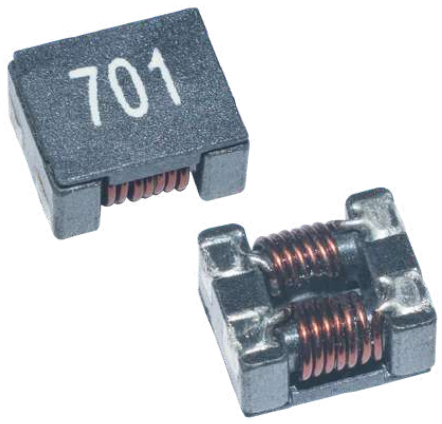
- Power supplies
- DC-DC converters
- Signal line filtering for high-speed data lines
- Noise suppression in consumer and industrial electronics

# Common Mode Choke

## WCQFAS, WQFFAS, WQJFAS Series

Automotive grade

# AUTOMOTIVE APPLICATION




## WCQFAS SERIES

**Infotainment systems**

**Powertrain modules**

**Engine control units (ECUs)**


## WQFFAS SERIES

**Transmission control modules**

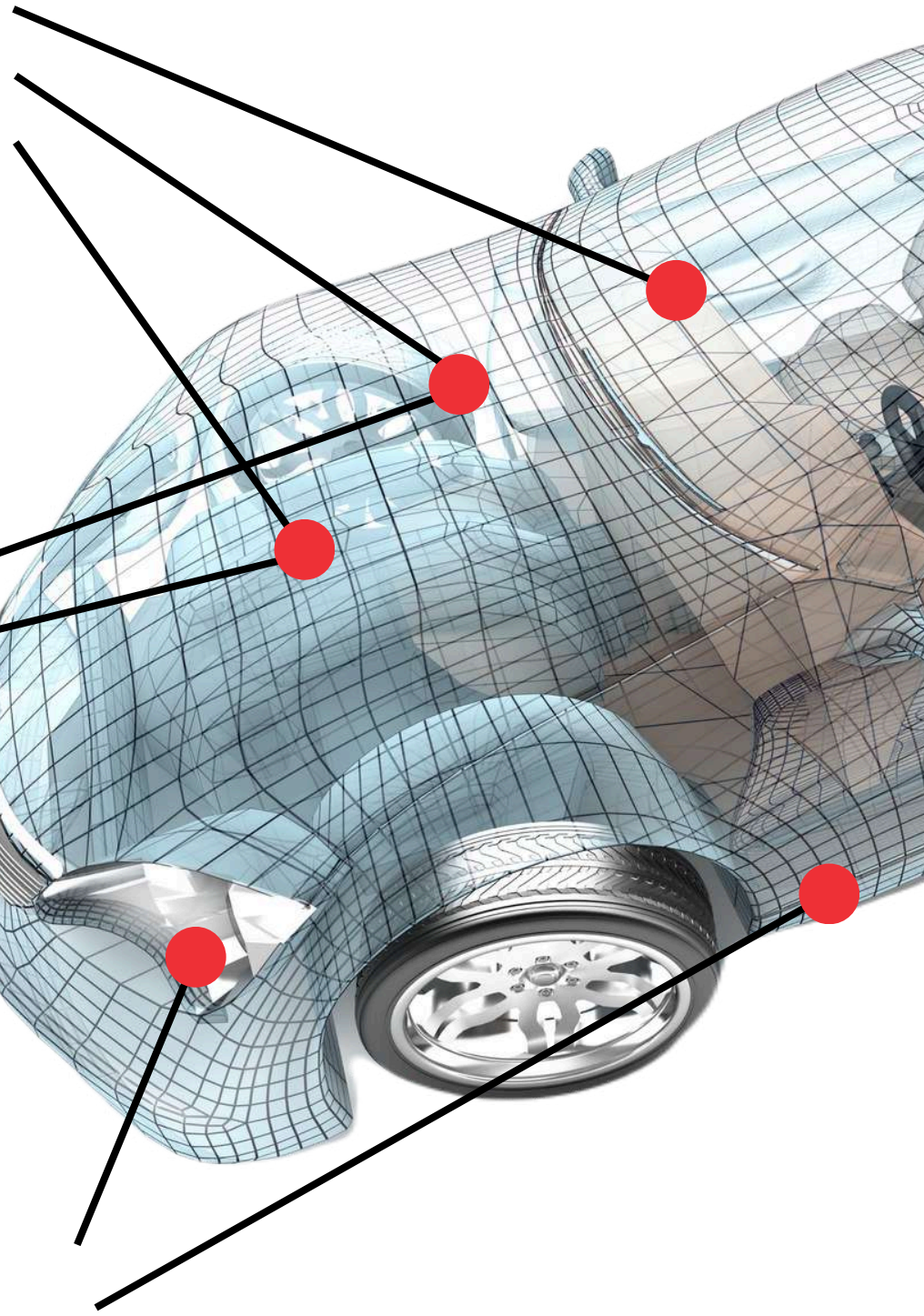
**Motor control units (MCUs)**




## WQJFAS SERIES

**Lighting control modules**

**Battery management systems (BMS),**



# WCQFAS SERIES


## Description

- Delivers high-efficiency EMI suppression with automotive-grade reliability.
- Optimized for performance in demanding electrical environments.

## Form Factor

- **Dimensions: 7.0 mm (L) × 6.0 mm (W) × 3.8 mm (H)**
- Designed for efficient PCB space usage with laser-marked inductance code.

## Electrical Performance

- **Impedance Range** : 40Ω (Min) / 1300Ω (Typ) @ 100MHz
- **Rated Current** : Up to 15 A (per line) (MAX)
- **DCR** : 20 mΩ max
- **Insulation Resistance** : Minimum 10 MΩ
- **Rated Voltage** : 80 (MAX)

## Environmental Conditions

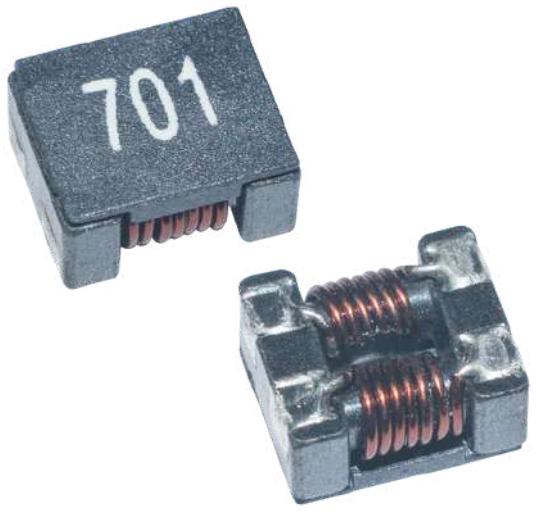
- **Temperature Range :** -40°C to +125°C
- **High Reliability** : Conforms to AEC-Q200 automotive standard
  : Built for stable operation in wide thermal and humidity ranges

## Applications

- Automotive electronics
- (e.g., engine control units (ECUs), infotainment systems, and powertrain modules)

- Harsh environment electronic assemblies
- EMI suppression for signal and power lines

# WQFFAS SERIES




## Description

- Ideal for suppressing EMI in demanding environments.
- Automotive-grade part compliant with AEC-Q200 reliability standards.

## Form Factor

- **Dimensions: 9.0 mm (L) × 7.0 mm (W) × 4.5 mm (H)**
- Optimized PCB footprint for secure and efficient assembly

## Electrical Performance

- **Impedance Range** **:** 300Ω (Min) / 2700Ω (Typ) @ 100MHz
- **Rated Current** **:** Up to 8.0 A (MAX)
- **DCR** **:** 32 mΩ max
- **Insulation Resistance** **:** Minimum 10 MΩ
- **Rated Voltage** : 80 (MAX)

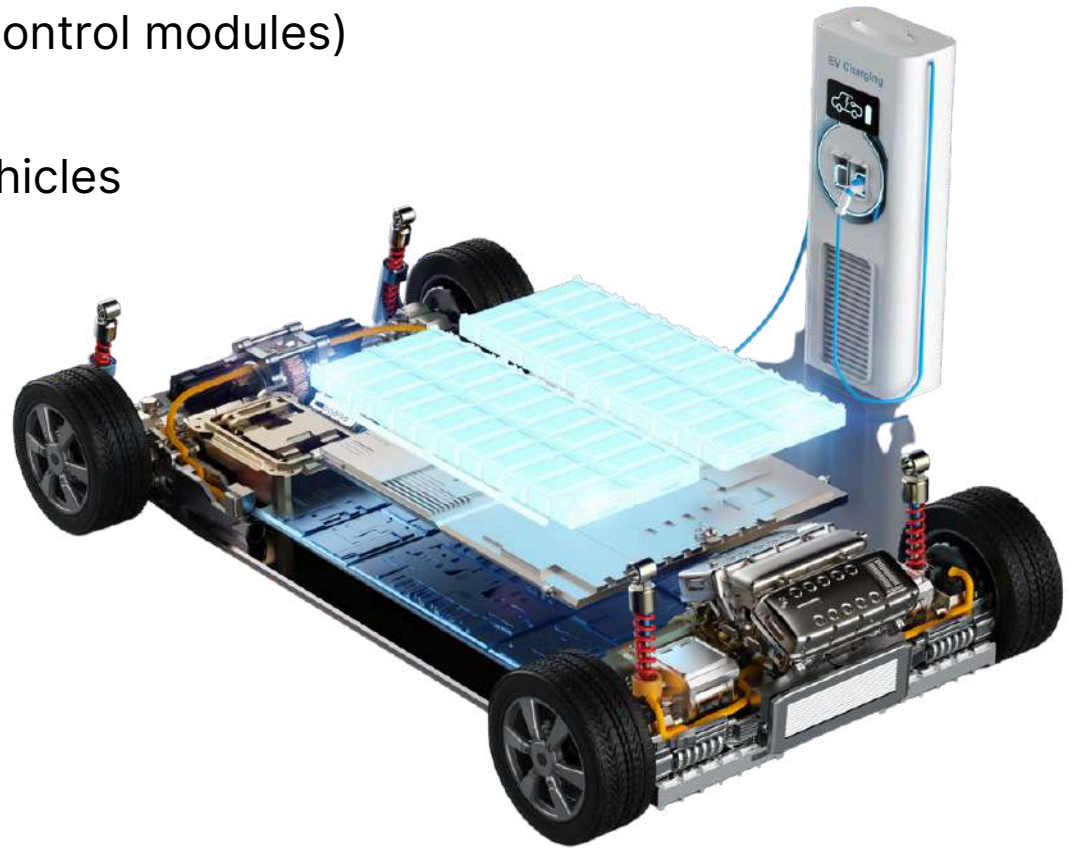
## Environmental Conditions

- **Temperature Range :** -40°C to +125°C
- **High Reliability** **:** AEC-Q200 qualified for automotive use
  : Suitable for prolonged operation in harsh climates

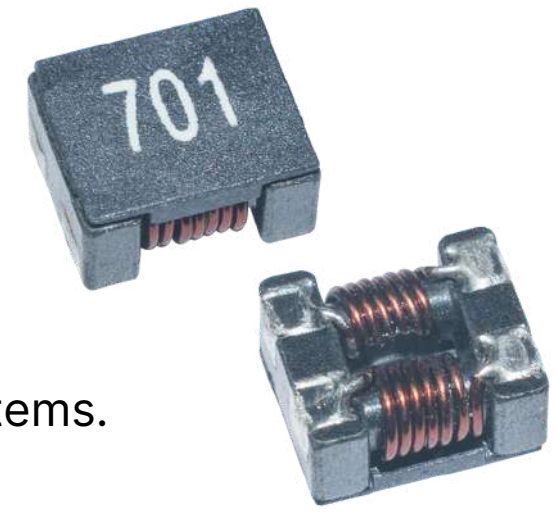
## Applications

- Automotive electronics and powertrains
- (e.g.,Motor control units (MCUs), transmission control modules)

- Power filtering modules in electric and hybrid vehicles
- EMI suppression in high-current designs,
- Such as automotive charging systems



# WQJFAS SERIES




## Description

- Designed for compact integration into noise-sensitive electronic systems.
- Compliant with automotive-grade reliability standards (AEC-Q200).

## Form Factor

- **Dimensions: 5.5 mm (L) × 5.5 mm (W) × 3.5 mm (H)**
- Space-saving design ideal for tight PCB layouts.

## Electrical Performance

- **Impedance Range** **:** 100Ω (Min) / 1400Ω (Typ) @ 100MHz
- **Rated Current** **:** Up to 8.5 A (MAX)
- **DCR** **:** 38 mΩ (MAX)
- **Insulation Resistance** **:** Minimum 10 MΩ
- **Rated Voltage** : 80 (MAX)

## Environmental Conditions

- **Temperature Range :** -40°C to +125°C
- **High Reliability** **:** Automotive durability and temperature cycling requirements

## Applications

- Power filtering in automotive and industrial electronics
- (e.g., Battery management systems (BMS), lighting control modules)

- Noise suppression in compact DC circuits within vehicles
- EMI reduction in high-density PCB environments,
- Such as automotive sensor circuits

# Key Capabilities and Use Case Coverage

### Noise Filtering Excellence:

- Filters common mode noise and EMI for cleaner signals in high-speed circuits.

### High Capacity Performance

- Handles high current and voltage for demanding applications like power supplies and automotive systems.

### Wide Temperature Resilience

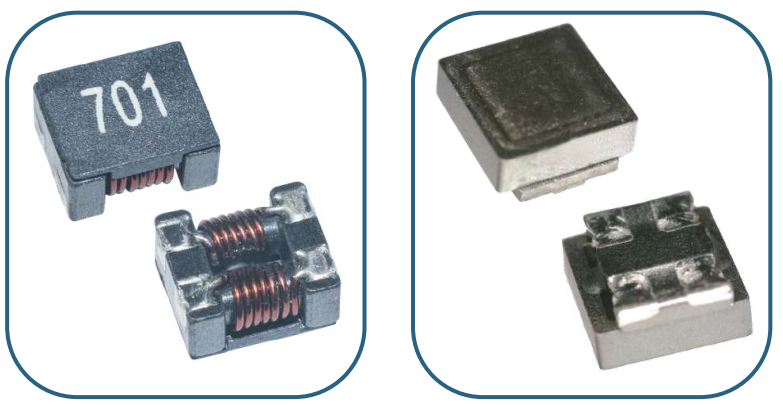
- Operates reliably from -40°C to +125°C in harsh environments.

### Space-Saving Design

- Compact design saves PCB space without losing efficiency.

### Automotive Durability

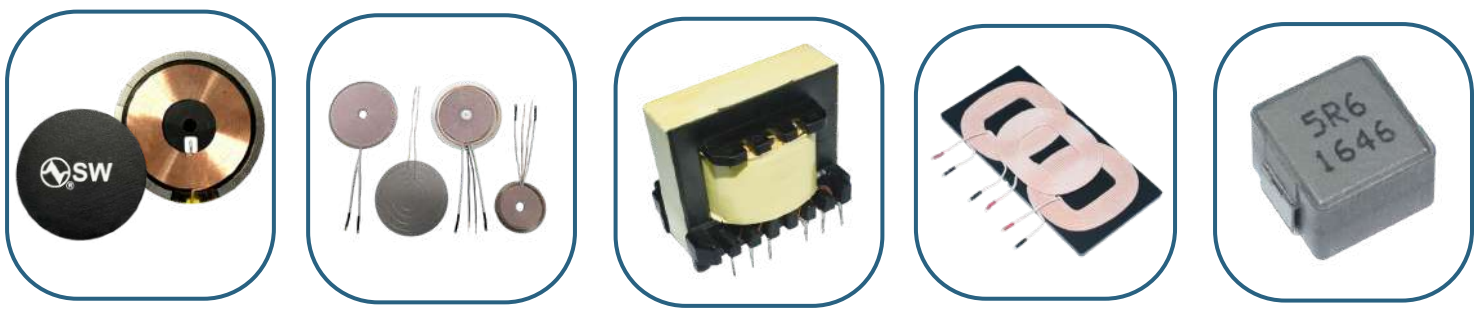
- Meets AEC-Q200 for automotive reliability and performance.




# Conclusion

The new Common Mode Choke from **Superworld Electronics** represents a significant leap forward in noise suppression technology.

By addressing key challenges such as **EMI, thermal performance, and space efficiency**, this product empowers engineers and manufacturers to build more reliable, high-performance electronic systems.



Superworld Electronics

## ABOUT US

### HEADQUARTERS

- Singapore

### SALES & ENGINEERING SUPPORT

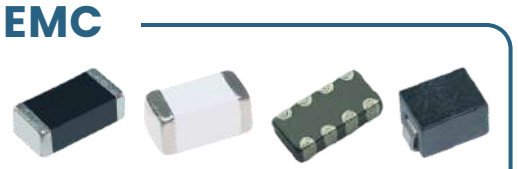
- Asia
- Europe
- North America

### DESIGN & MANUFACTURING

- Singapore
- Malaysia
- China
- Taiwan
- Thailand

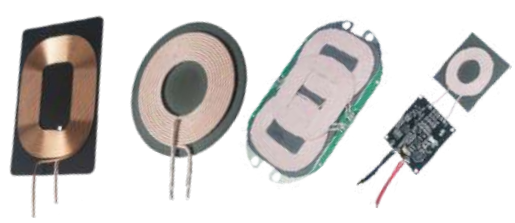
## PRODUCT

### EMC



### MAGNETIC


### WIRELESS POWER TRANSFER



### TRANSFORMERS

## CONTACT US

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