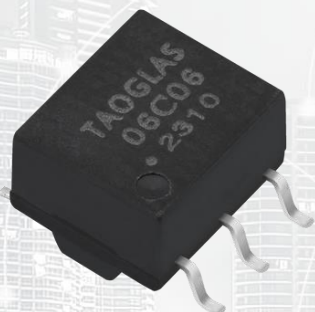




# TAOGLAS®



# Datasheet

## BMS Transformer/CMC

**Part No:**  
TMU06C06

### Description:

Transformer with Common Mode Choke for Battery Management System  
6 pin SMT

### Features:

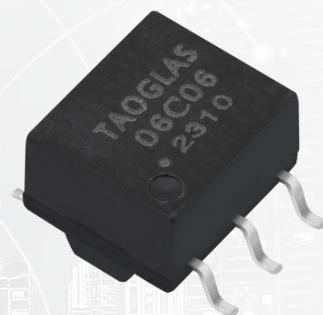
AEC-Q200  
IATF 196949  
Automotive grade  
Single channel

|    |                |   |
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# 1. Introduction



Featuring a compatible footprint with industry BMS transformers, and designed to work in demanding automotive environmental conditions, the Taoglas TMU06C06 is a BMS Transformer with Common Mode Choke of 6 pins and Single channel for Operation voltage of 1000VDC.

The Taoglas Magnetics Product Team have over fifteen years of experience in magnetics design and high-quality manufacturing. With ever expanding portfolio, we provide trusted products and services to our customers within a wide range of applications such as:

- Electric Vehicle
- Energy Storage Systems
- Data Center UPS
- Solar energy storage
- Renewable Energy

Taoglas offers a full line of BMS transformers, and common mode chokes for energy storage systems that require serial port safety isolation and EMI noise suppression. These transformers are designed for battery systems with large voltage differences that demand component-to-component isolation.

The Taoglas BMS Transformers portfolio is intended to perform in highly energy-efficiency modern vehicles such as EVs, HEVs, and PHEVs.

All Taoglas parts meet AEC-Q200 requirements for automotive applications. For more information on the range of products or for assistance with integration, contact your regional Taoglas customer support team.

## 2. Specifications

| Electrical Performance @25°C |  |
|------------------------------|--|
| OCL                          | 150μH ~ 450μH @100KHz/0.1V (-40°C to +125°C)   |
| Leakage Inductance           | 0.5μH Max. @100KHz/0.1V                        |
| Turns Ratio (±2%)            | 1:1  |
| D.C.R                        | 0.45 ohm Max. @Transformer side                |
|                              | 0.80 ohm Max. @CM choke side                   |
| Insertion Loss               | -0.25dB Max.@4MHz                              |
| Return Loss                  | -22dB Min @4MHz (Z out= 100Ω)                  |
| CMRR                         | -35dB Min @1-100MHz                            |
|                              | -28dB Min @100-200MHz                          |
| Hi-Pot                       | 4300VDC, 1mA, 60S                              |
| Design Construction          | Functional insulation; Working voltage 1000VDC |

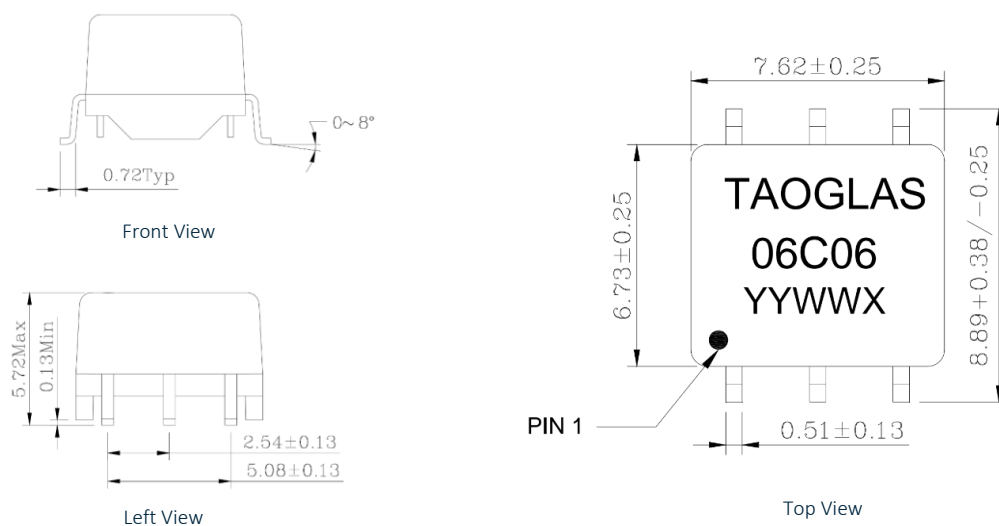
| Environmental Specifications |                 |
|------------------------------|-----------------|
| Operating Temperature        | -40°C TO +125°C |

| Compliance                       |  |
|----------------------------------|--|
| UL recognized - FILE NO. E528697 |  |
| RoHS Compliant                   |  |
| J-STD-020                        |  |

| Storage requirements |                 |
|----------------------|-----------------|
| Humidity             | MSL - 1         |
| Storage Temperature  | -50°C TO +125°C |

## 3. Mechanical

### 3.1 Mechanical Drawings

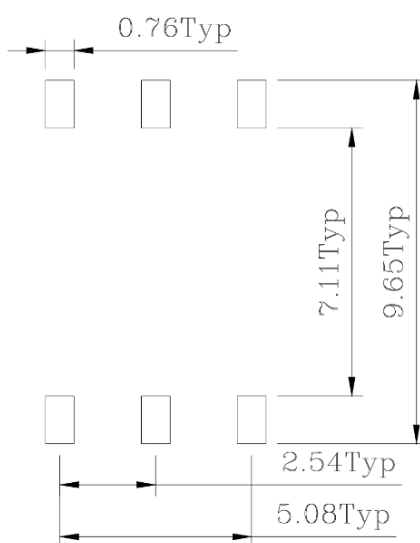


#### Mechanical Specifications

|                |                     |
|----------------|---------------------|
| Length         | 7.62 mm             |
| Width          | 8.89 mm             |
| Height         | 5.72 mm             |
| Mounting Style | Surface Mount (SMT) |

Dimensions are in millimeters with the following tolerances: X.XX =  $\pm 0.25$

### 3.2 Pad Layout

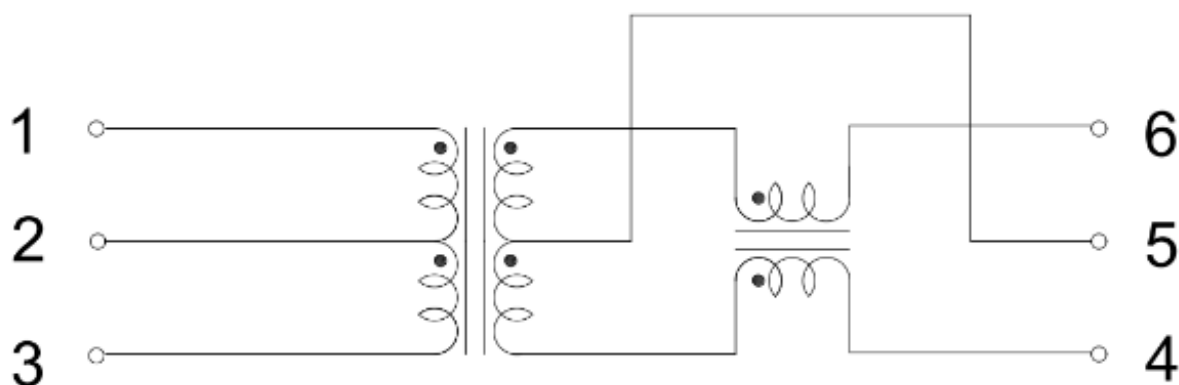


Suggested pad layout

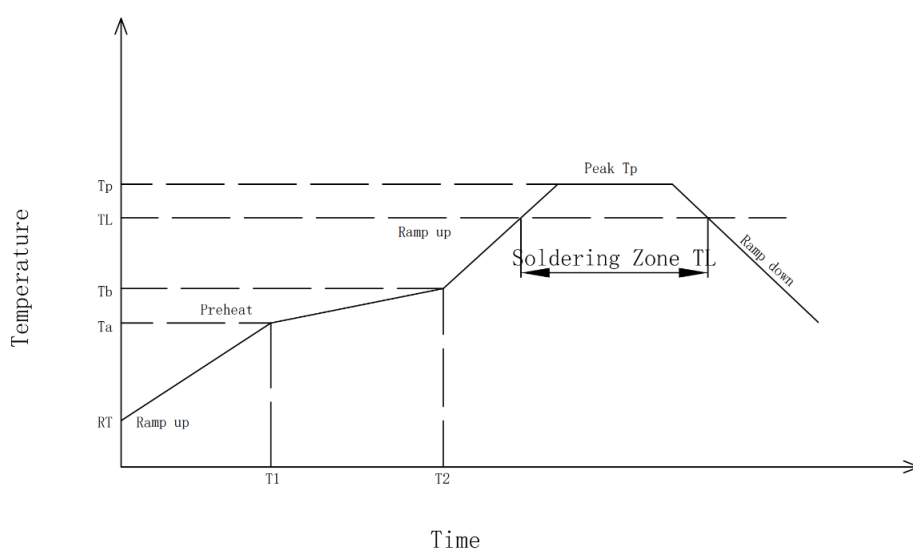
Dimensions are in millimeters with the following tolerances: X.XX =  $\pm 0.10$

## 4. Electrical

### 4.1 Electrical Drawings



### 4.2 Profile of Reflow Solder



Preheat :  
Temperature (Ta-Tb):150-200°C  
Time(T1-T2):60-180s

Holding Temperature:217°C  
Time (TL):60-150s

Max Temperature (Tp):250(+0/-5°C)  
Max Time (Tp):30Sec±10Sec

The average speed:3°C/S Max  
The average cooling speed:6°C/S Max

From 25°C to Products out of the  
furnace:6 minutes Max

## 5.1 SPQ

Weight (gr): 550



Carton Weight: 6.3 kg



## 5.2 Label

Taoglas Limited

P/N NO: XXXXXXXX

QYT: XXX PCS DC: XXXX

DATE: XXXX-XX-XX

**SPQ Label (8x5cm)**

|                  |               |
|------------------|---------------|
| Taoglas Limited  |               |
| P/N NO: XXXXXXXX |               |
| PO: XXXXXXXX     | B/N: XXXXXXXX |
| QYT: XXX PCS     | DC: XXXX      |
| DATE: XXXX-XX-XX |               |

**Carton Label (8x5cm)**

# Changelog

Changelog for the datasheet

**SPE-23-8-062 – TMU06C06**

## Revision: B

|         |  |
|---------|--|
| Date:   | 2024-07-22                                   |
| Notes:  | Electrical Specification, turns ratio format |
| Author: | Javier Vasena                                |

## Previous Revisions

### Revision: A (Original First Release)

|         |               |
|---------|---------------|
| Date:   | 2023-03-30    |
| Notes:  |               |
| Author: | Javier Vasena |





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