



### **BMS Transformer/CMC**

Part No: TMU16A21

**Description:** 

Transformer with Common Mode Choke for Battery Management System 16 pin SMT

#### Features:

AEC-Q200 IATF 16949 Automotive grade Dual channel

Datasheet

www.taoglas.com



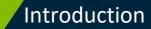
1.	Introduction	3
2.	Specifications	4
3.	Mechanical	5
4.	Electrical	6
5.	Packaging	7
	Changelog	8

Taoglas makes no warranties based on the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Taoglas reserves all rights to this document and the information contained herein. Reproduction, use or disclosure to third parties without express permission is strictly prohibited.





### 1.





Featuring a compatible footprint with industry BMS Transformers, and designed to work in demanding automotive environmental conditions, the Taoglas TMU16A21 is a BMS Transformer with Common Mode Choke of 16 pins and Dual channel for Operation voltage of 1000VDC.

The Taoglas Magnetics Product Team have over fifteen years of experience in magnetics design and highquality 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 $^\circ\!\mathrm{C}$ to +125 $^\circ\!\mathrm{C}$ )
Leakage Inductance	0.5µH Max @100KHz/0.1V
Turns Ratio (±2%)	1:1
D.C.R:	0.45 ohm Max @Transformer side
	0.85 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

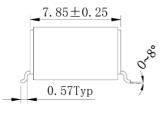


### Mechanical

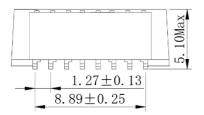


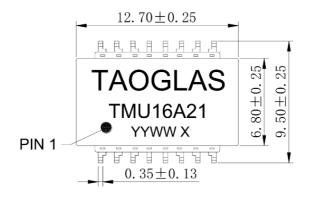
3.

#### **Mechanical Drawings**



Front View





Top View

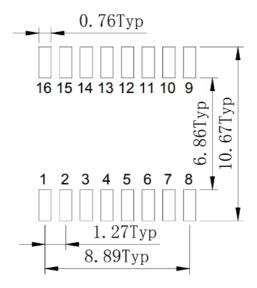
Left View

nical Specifications	
12.70 mm	
9.50 mm	
5.10 mm	
Surface Mount (SMT)	
	12.70 mm 9.50 mm 5.10 mm

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

3.2

### Pad Layout

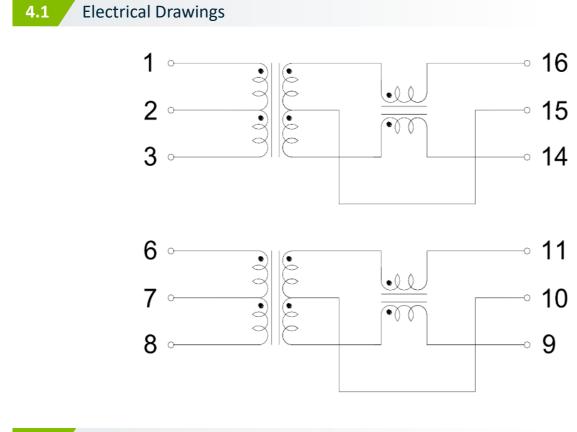


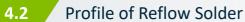
Suggested pad layout Dimensions are in millimeters with the following tolerances: X.XX =  $\pm 0.10$ 

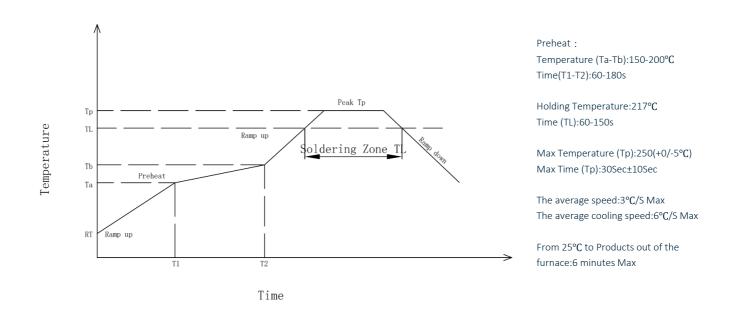


### Electrical

4.

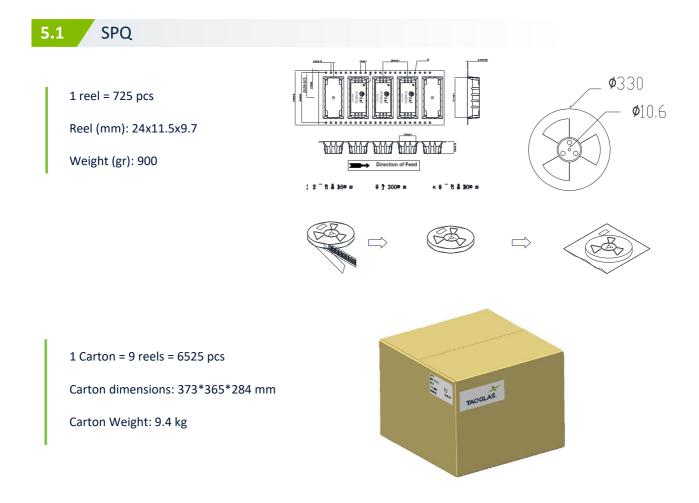






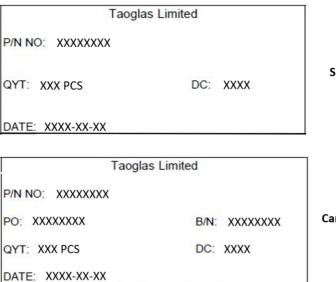


### 5. Packaging



#### 5.2

#### Label



SPQ Label (8x5cm)

Carton Label (8x5cm)



# Changelog

Changelog for the datasheet

SPE-23-8-034 – TMI	J16A21
Revision: C	
Date:	2024-07-24
Notes:	Updated spec
Author:	Javier Vasena

#### **Previous Revisions**

Revision: A (Original First Release)		
Date:	2023-02-21	
Notes:		
Author:	Javier Vasena	
Revision: B		
Date:	2023-03-30	
Notes:	Update in PN for Q1 2023 availability.	
Author:	Javier Vasena	





# www.taoglas.com

### **Mouser Electronics**

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Taoglas:

TMU16A21