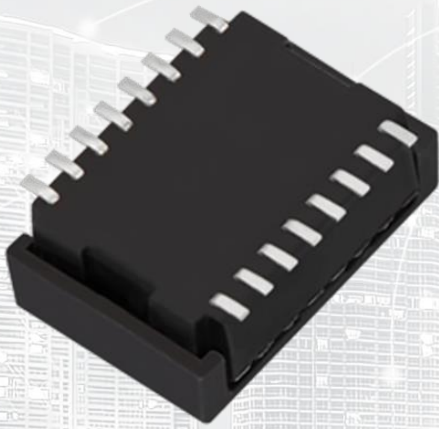




TAOGLAS®



Datasheet

BMS Transformer/CMC

Part No:
TMU16A02W

Description:

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

Features:

AEC-Q200
IATF 16949
Automotive grade
Dual 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 TMU16A02W is a BMS Transformer with Common Mode Choke of 16 pins and Dual channel for Operation voltage of 48VDC.

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	350uH Min. @100KHz/0.1V with 8mA DC Bias
Leakage Inductance	0.5uH Max. @100KHz/0.1V
Turns Ratio (±3%)	TX=1CT: 1CT RX=1CT: 1CT
LK	0.5uH Max @100KHz/0.2V
Cw/w	35PF Max @100KHz/0.2V
D.C.R:	1.2 ohm Max
Insertion Loss	1-100MHz: -1.0dB Max
Return Loss	-16dB Min @ 1-30MHz
	-16+20 log(f/30) dB Min @ 30-60MHz
	-10dB Min @ 60-80MHz
CMRR	1-100MHz: -30dB Min
Hi-Pot	1500Vrms

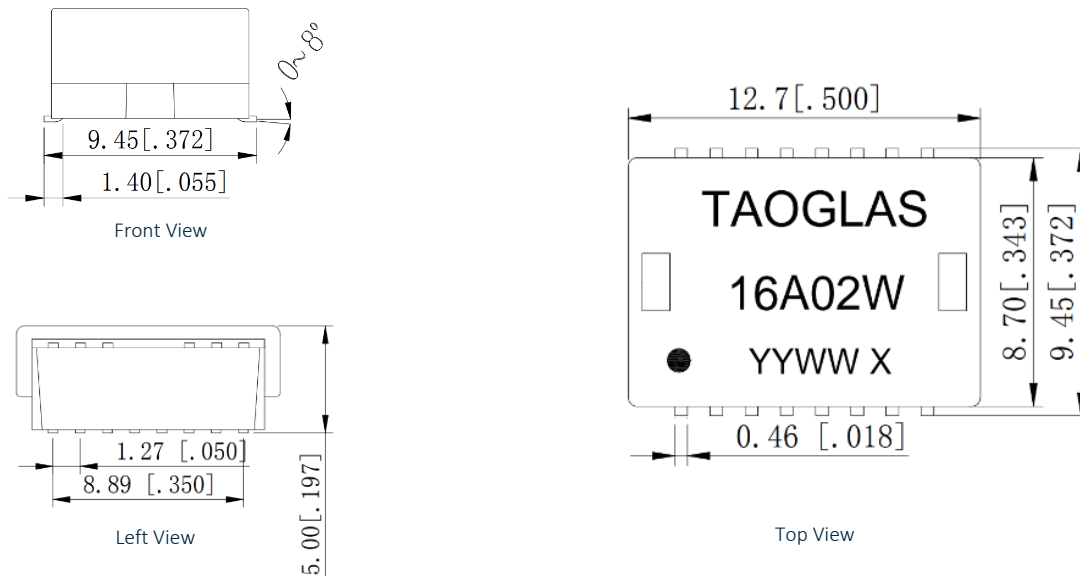
Environmental Specifications	
Operating Temperature	-40°C TO +85°C

Compliance	
UL recognized - FILE NO. E528697	
RoHS Compliant	

Storage requirements	
Humidity	MSL - 1
Storage Temperature	-40°C TO +125°C

3. Mechanical

3.1 Mechanical Drawings

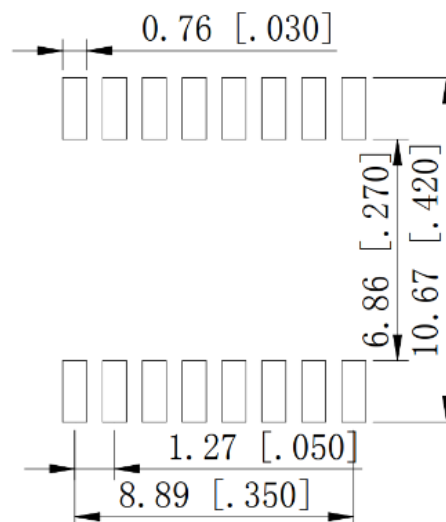


Mechanical Specifications

Length	12.70 mm
Width	9.45 mm
Height	5.00 mm
Mounting Style	Surface Mount (SMT)

Dimensions are in millimeters with the following tolerances: X.XX = ± 0.25

3.2 Pad Layout

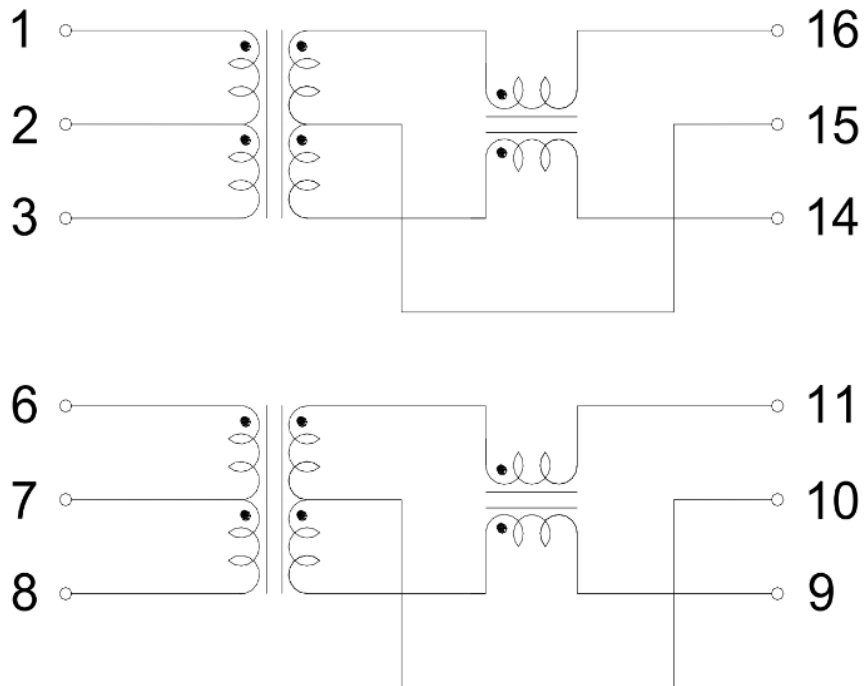


Suggested pad layout

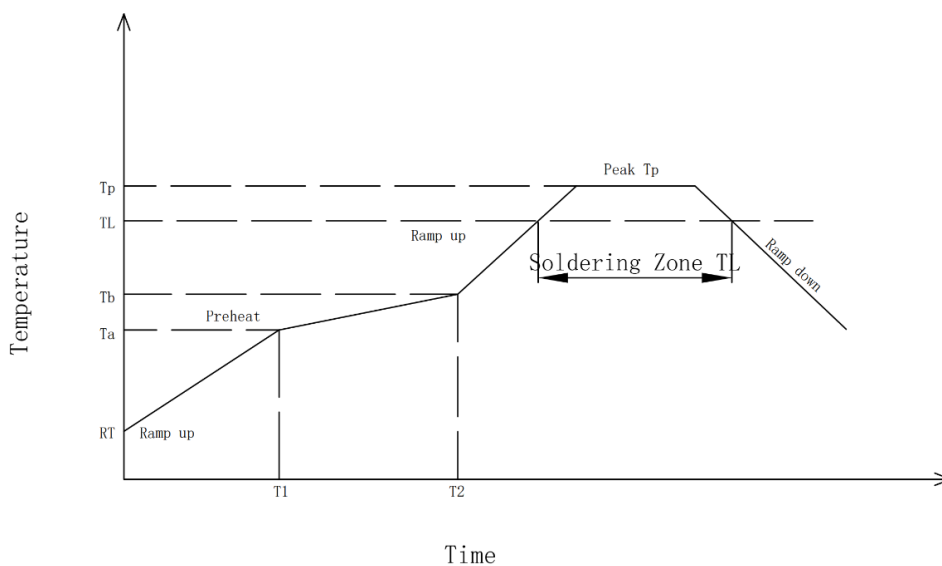
Dimensions are in millimeters with the following tolerances: X.XX = ± 0.10

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. Packaging

5.1 SPQ

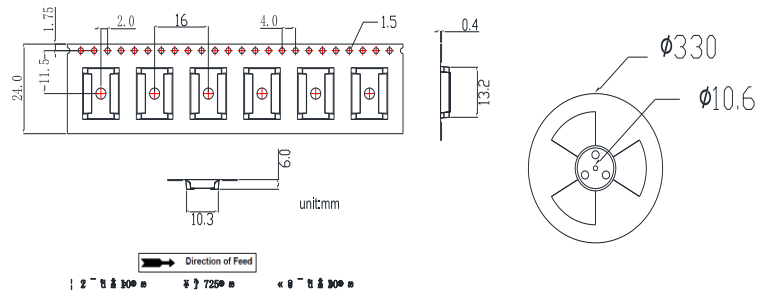
1 reel = 725 pcs

A (Carrier Tape Width): 24 ± 0.3 mm

B (Sprocket hole to Cavity center): 11.5 ± 0.2 mm

C (Cavity width): 10.3 ± 0.2 mm

Weight: 900gr



1 Carton = 9 reels = 6525 pcs

Carton dimensions: 373*365*284 mm

Carton Weight: 9.4 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-23-8-033 – TMU16A02W

Revision: B

Date:	2023-03-30
Notes:	Update in PN for Q1 2023 availability.
Author:	Javier Vasena

Previous Revisions

Revision: A (Original First Release)

Date:	2023-02-21
Notes:	
Author:	Javier Vasena



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