

NEW PRODUCT BRIEF



Bourns® Model HCT8xxxEAL High Clearance/Creepage Transformer

INTRODUCTION

The Model HCT8xxxxEAL is Bourns' second-generation AEC-Q200 compliant, automotive grade, high clearance and creepage transformer series. Offering reinforced insulation in a small footprint package for high voltage designs, the Model HCT8xxxxEAL Series is IEC 62368-1 and IEC 61558-1 compliant.

MARKET SEGMENT OVERVIEW

Bourns® Model HCT8xxxxEAL Generation II Transformer is designed as an EV/ESS isolation/ industrial interface component solution for batteries used in smart grid and non-critical medical equipment*.

Providing high isolation, compact size and different turns ratios with the capability to support working voltages of 800 V or higher, the Model HCT8xxxxEAL Series provides a cost-effective and high reliability solution.

APPLICATIONS

- Automotive BMS/ESS
- RS-485
- CAN Interface
- Digital Input Module
- RS-323 Isolation

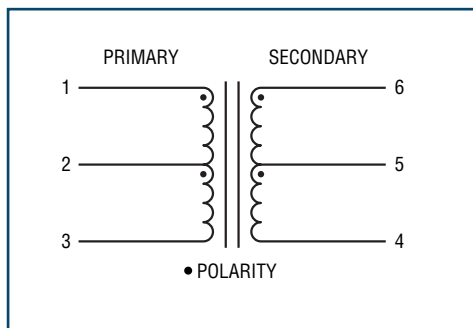
FEATURES

- L (100 kHz/1 V): (-40 °C to +125 °C), 160 µH
- Volt Second on Half Primaries: (1 - 2 or 2 - 3), 14 Vµs min.
- Rated current: 350 mA
- HI-POT (1 mA, 60 S): 5000 VDC
- Reinforced Insulation for Working Voltage: 800 V
- Basic Insulation for Working Voltage: 1000 V
- Operating Temperature Including Temperature Rise: -40 °C to +125 °C
- Storage Temperature: (Component) -40 °C to +125 °C
- Moisture Sensitivity Level: 1

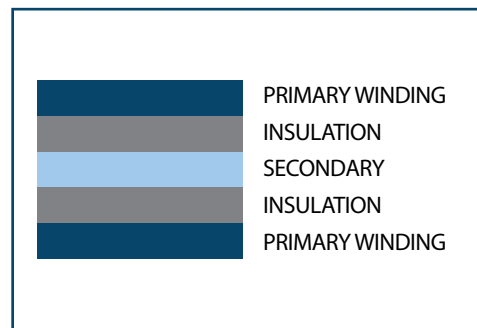
BENEFITS

- Fully automated construction for superior quality
- Coil overmolding structure
- Reinforced insulation for working voltage of 800 V_{rms} and basic insulation for 1000 V_{rms}
- Complies with IEC 62368-1 and IEC 61558-1
- Designed for isolation power supplies using Texas Instruments model SN6501 and SN6505
- Small package size and high creepage/clearance design
- Low leakage inductance with a sandwich coil-construction design

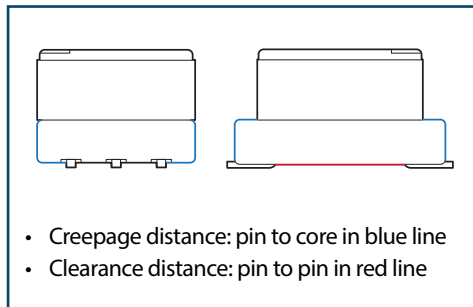
CIRCUIT DIAGRAM



SANDWICH CONSTRUCTION



CREEPAGE/CLEARANCE PATH



* Bourns® products have not been designed for and are not intended for use in "lifesaving," "life-critical" or "life-sustaining" applications nor any other applications where failure or malfunction of the Bourns® product may result in personal injury or death. See Legal Disclaimer Notice <http://www.bourns.com/docs/legal/disclaimer.pdf>.

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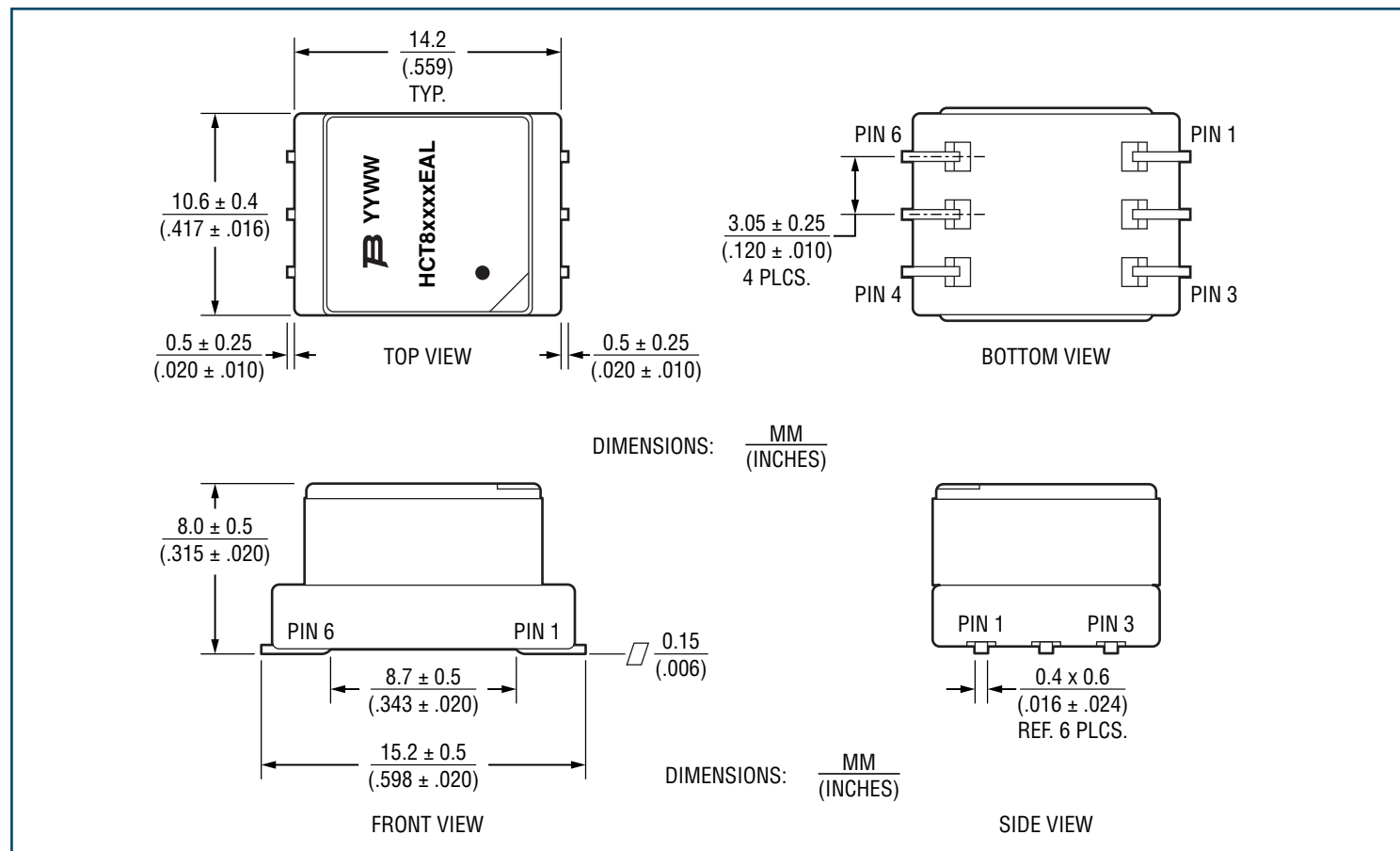


ELECTRICAL CHARACTERISTICS

Series	Photo	Operating Temperature	Working Voltage	Rated Current	Hi-Pot (1 mA, 60 s)	L (100 kHz / 1 V)	Clearance distance & Creepage distance
HCT8xxxxEAL		-40 °C to +125 °C	Reinforced Insulation: 800 V _{rms} Basic Insulation: 1000 V _{rms}	350 mA	5000 VDC	160 µH Min.	>8.0 mm.

For full characteristics, see data sheet

PRODUCT DIMENSIONS



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