

AEC-Q200 COMPLIANT (Pending)
*RoHS and



BOURNS®

Features

- Toroid core for high coupling and low radiation
- Complies with IEC 60950-1, IEC 62368-1 and IEC 60664-1
- Reinforced insulation for working voltage of 800 V
- Designed for isolation power supplies using TI SN6501 and SN6505B

- AEC-Q200 compliant
- RoHS compliant*

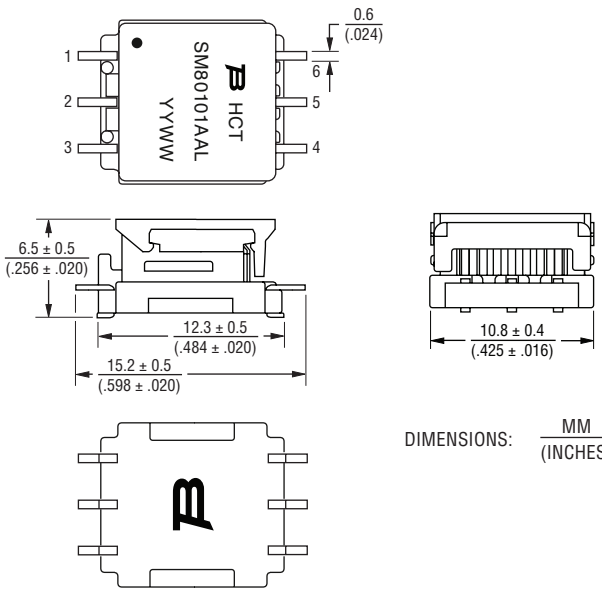
HCT Series - High Clearance and Creepage Distance Transformers

Electrical Specifications @ 25 °C

Bourns Part Number**	Primary Inductance @ 100 kHz	Leakage Inductance @ 100 kHz / 0.1 V (All Sec. Pins Shorted)	Turns Ratio P(1-3) : S(6-4)	Pri. (1-3) DCR (Ω) Max.	Sec. (6-4) DCR (Ω) Max.
	L 1-3 (μH) Min.	Lk 1-3 (μH) Max.			
HCTSM80101AAL	250	0.8	1 : 1	0.30	0.20
HCTSM80102AAL	250	0.6	1 : 2	0.30	0.35
HCTSM80201AAL	250	1.2	2 : 1	0.30	0.15
HCTSM80304BAL	300	0.6	3 : 4	0.30	0.30
HCTSM80305BAL	300	0.6	3 : 5	0.30	0.30
HCTSM80308BAL	300	0.7	3 : 8	0.50	0.85
HCTSM80403AAL	250	0.8	4 : 3	0.30	0.20
HCTSM80803AAL	250	1.8	8 : 3	0.30	0.15
HCTSM80809AAL	250	0.6	8 : 9	0.30	0.25
HCTSM80910BAL	300	0.9	9 : 10	0.30	0.25
HCTSM81017CAL	350	0.9	10 : 17	0.42	0.48

**Add E or E1 part number suffix - See How to Order.

Product Dimensions



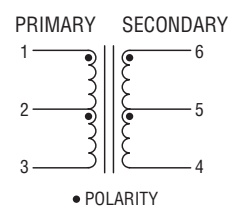
General Specifications

Primary (1-3) E*T Constant...11 V-μS min.
 Rated Current.....350 mA AC
 Hi-Pot: Primary/Secondary 4.2k VAC for 1 minute
 Operating Temperature-40 °C to +125 °C (Temperature rise included)
 Storage Temperature (Component)-40 °C to +125 °C
 Clearance/Creepage Distance of Primary to Secondary 8 mm min.
 Level of Insulation..... Reinforced for a working voltage of 800 Vac,
 Material Group 1, Pollution degree 2, Altitude 2000 m
 Moisture Sensitivity Level..... 1
 ESD Classification (HBM)..... N/A

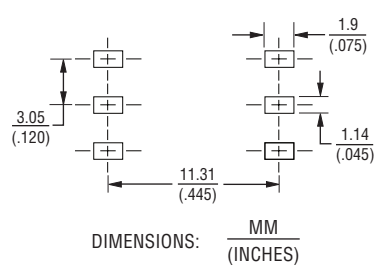
Materials

Core.....Ferrite
 Wire ... Enameled/triple-insulated copper
 Terminal FinishSn
 Packaging..... 500 pcs. per 13-inch reel

Electrical Schematic



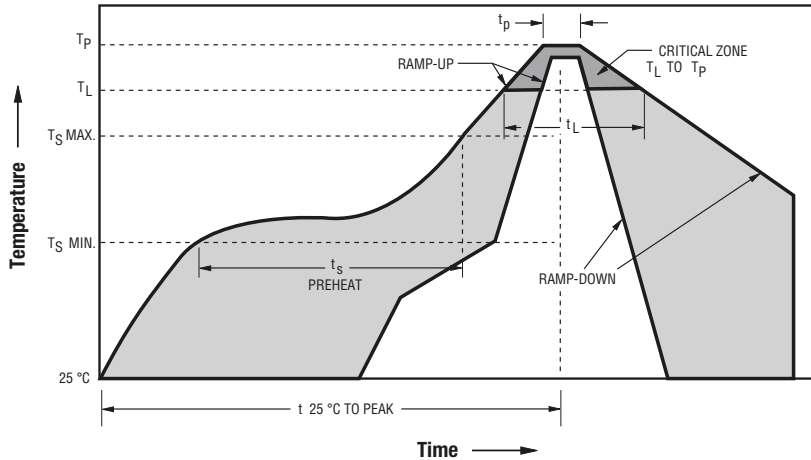
Recommended Layout



WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

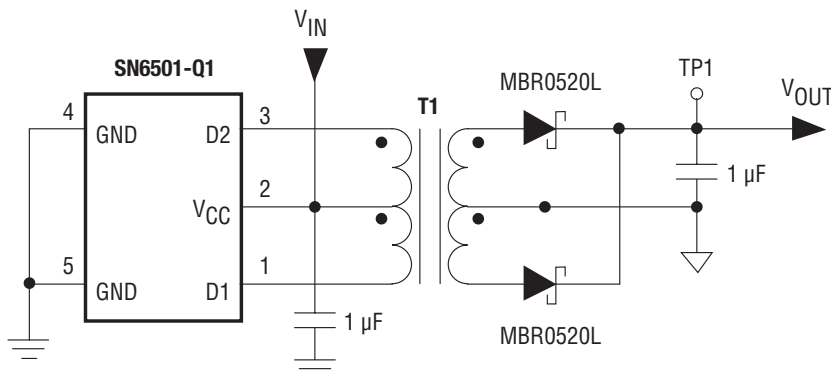
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
 Specifications are subject to change without notice.
 Users should verify actual device performance in their specific applications.
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Reflow Solder Profile



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate ($T_{S_{max}}$ to T_p)	3 °C / second max.
PREHEAT: Temperature Min. ($T_{S_{min}}$) Temperature Max. ($T_{S_{max}}$) Time ($T_{S_{min}}$ to $T_{S_{max}}$) (t_s)	150 °C 200 °C 60~180 seconds
TIME MAINTAINED ABOVE: Temperature (T_L) Time (t_L)	217 °C 60~150 seconds
Peak Temperature (T_p)	245-250 °C
Time within 5 °C of Actual Peak Temperature (t_p)	20~40 seconds
Ramp-Down Rate	6 °C / second max.
Time 25 °C to Peak Temperature	8 minutes max.

Typical Application



How to Order

HCTSM80101A A L - *

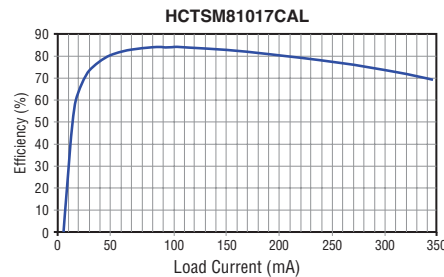
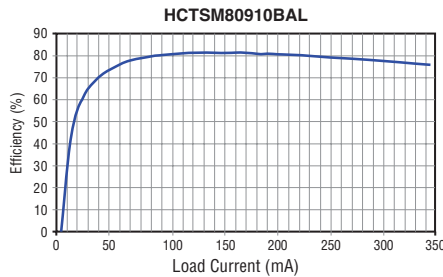
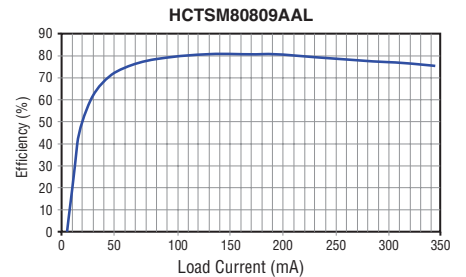
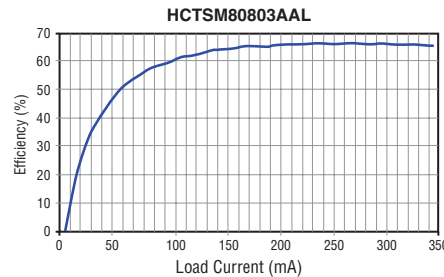
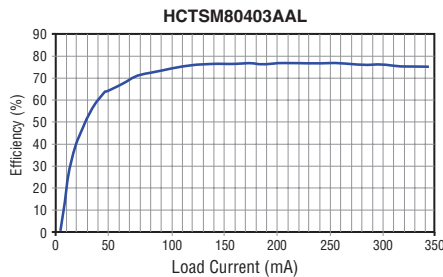
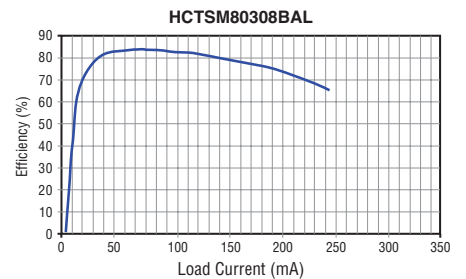
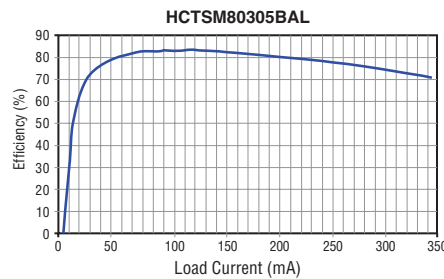
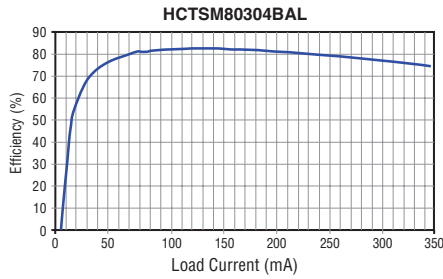
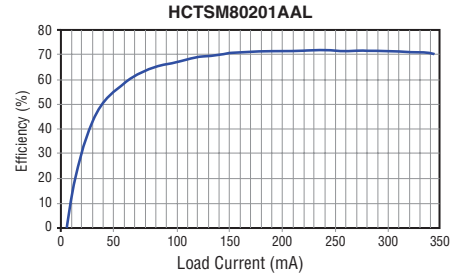
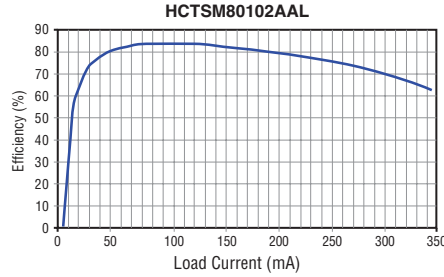
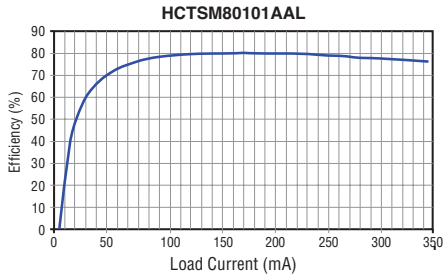
Model _____
 AEC-Q200 Compliancy Designator _____
 RoHS Compliancy Designator _____
 Tape & Reel Packaging
 E = 500 pcs. per 13-inch Reel,
 5 Reels per Box,
 MOQ/Mult: 2500 pcs./2500 pcs.
 E1 = 500 pcs. per 13-inch Reel,
 1 Reel per Box,
 MOQ/Mult: 500 pcs./500 pcs.

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Users should verify actual device performance in their specific applications.

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Efficiency vs. Load Curves*



*Measured with circuit in Typical Application, 5 VDC input, 0-350 mA DC load, $T_a = 20\text{ }^\circ\text{C}$

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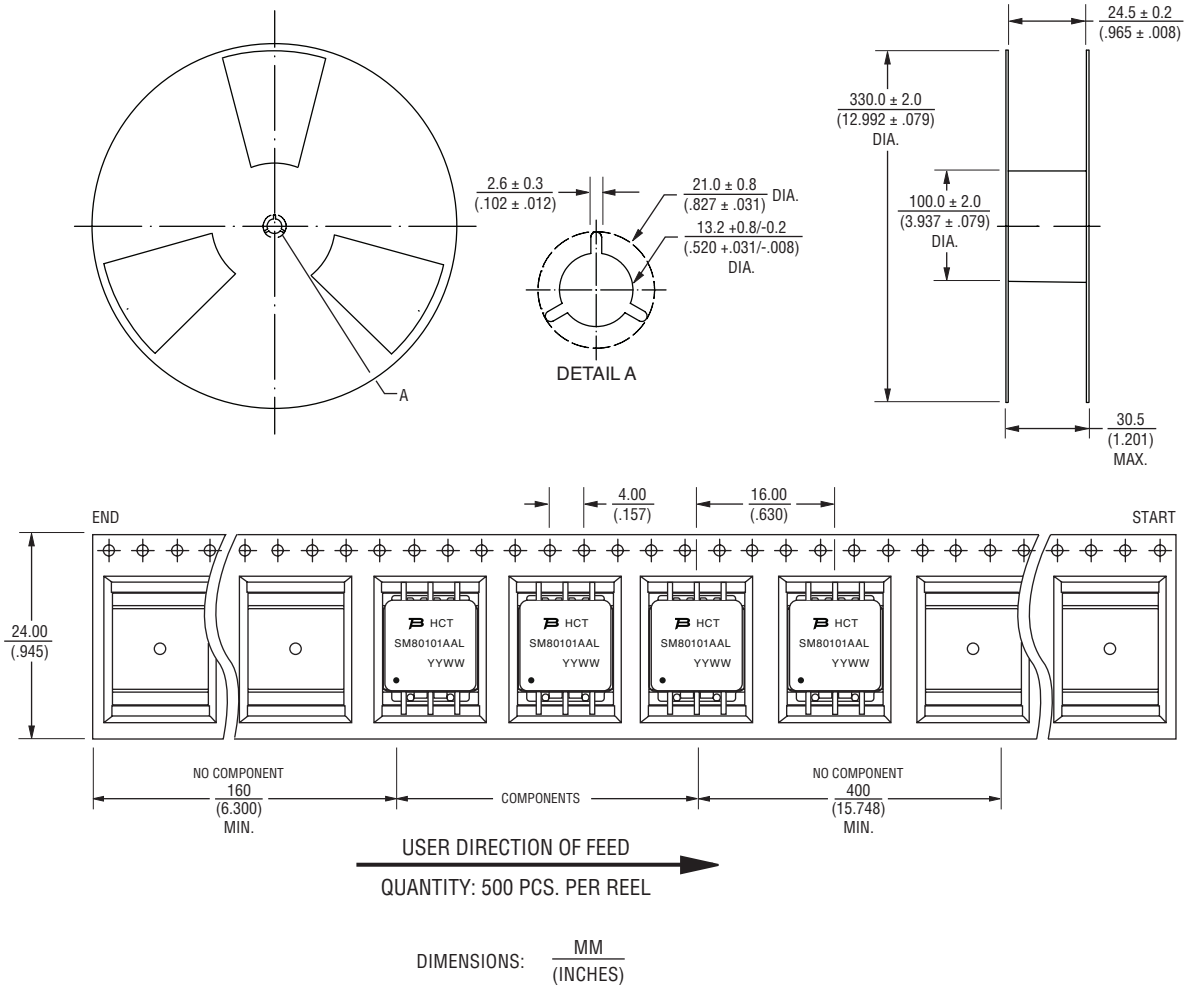
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HCT Series - High Clearance and Creepage Distance Transformers

BOURNS®

Packaging Specifications



REV. 01/20

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