

Reinforced Halogen Free ESS Transformer

UL approved design for residential and commercial Battery Storage Solutions



- ☉ Supports leading vendors silicon for battery (BMS) and energy storage solutions (ESS).
- ☉ UL Compliance to IEC/UL62368-1 for Reinforced
- ☉ Selection of Working and Breakdown Voltages
- ☉ Wide temperature performance from -40 to +125°C
- ☉ Automated Winding and Production Process for high reliability

Applications:

Energy Storage (ESS), marine or aviation transportation.

Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

| Part Number | Inductance (100kHz, 100mVrms) | Turns Ratio | Choke fitted | Isolation breakdown (Pri:Sec) | Working Voltage | Insulation Clearance (mm) | Insulation Creepage (mm) | Insulation Resistance (MegaOhms) |
|-------------|-------------------------------|-------------|--------------|-------------------------------|-----------------|---------------------------|--------------------------|----------------------------------|
| HXE2006HL | 150 uH min | 1.00 +/- 2% | YES | 4300Vrms / 60sec | 500VDC | >6.35mm | >6.35mm | 400 |
| HXE2007HL | 150 uH min | 1.00 +/- 2% | YES | 4300Vrms / 60sec | 800VDC | >6.35mm | >8.00mm | 400 |
| HXE2008HL | 150 uH min | 1.00 +/- 2% | YES | 4300Vrms / 60sec | 1000VDC | >6.35mm | >10.0mm | 400 |
| HXE2009HL | 150 uH min | 1.00 +/- 2% | YES | 4300Vrms / 60sec | 1500VDC | >6.35mm | >15.0mm | 400 |
| HXE2010HL | 150 uH min | 1.00 +/- 2% | YES | 5000Vrms / 60sec | 500VDC | >8.0mm | >8.0mm | 400 |
| HXE2011HL | 150 uH min | 1.00 +/- 2% | YES | 5000Vrms / 60sec | 800VDC | >8.0mm | >8.0mm | 400 |
| HXE2012HL | 150 uH min | 1.00 +/- 2% | YES | 5000Vrms / 60sec | 1000VDC | >8.0mm | >10.0mm | 400 |
| HXE2013HL | 150 uH min | 1.00 +/- 2% | YES | 5000Vrms / 60sec | 1500VDC | >8.0mm | >15.0mm | 400 |
| HXE2014HL | 150 uH min | 1.00 +/- 2% | YES | 6000Vrms / 60sec | 500VDC | >8.0mm | >8.0mm | 400 |
| HXE2015HL | 150 uH min | 1.00 +/- 2% | YES | 6000Vrms / 60sec | 800VDC | >8.0mm | >8.0mm | 400 |
| HXE2016HL | 150 uH min | 1.00 +/- 2% | YES | 6000Vrms / 60sec | 1000VDC | >8.0mm | >10.0mm | 400 |
| HXE2017HL | 150 uH min | 1.00 +/- 2% | YES | 6000Vrms / 60sec | 1500VDC | >8.0mm | >15.0mm | 400 |

Additional Electrical performance

Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

| Part Number | Leakage Inductance (Max) | Winding DCR (Ω) | | Insertion Loss | Return Loss Z out = 100 Ω | CMRR | |
|-------------|--------------------------|-----------------|-----------|--------------------|-------------------------------|-----------|-------------|
| | | PHY Side | Line Side | | | 1 - 10MHz | 10- 1000MHz |
| HM2113ZNL | 1.0 uH @ 100kHz | 0.80 max | 1.00 max | -0.50dB max @ 4MHz | -20 dB min @ 4MHz | -35dB | -20dB |

1. Storage Temperature: -50°C to +125°C
2. Compliance to J-STD:
 - A. J-STD-002: Solderability at 245°C Reflow Profile
 - B. J-STD-020: Moisture Sensitive Level 1
 - C. J-STD-075: R7, 245°C Maximum Through Reflow Solder
3. The NL suffix part comes in Tubes with 35pcs per tube. To order tape and reel packaging add a 'T' suffix to the part number (ie: HXE2006HL becomes HXE2006HLT). Quantity per reel is 350pcs/reel.

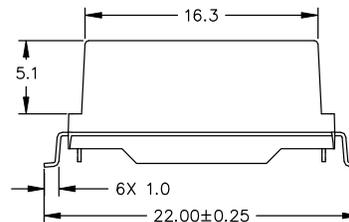
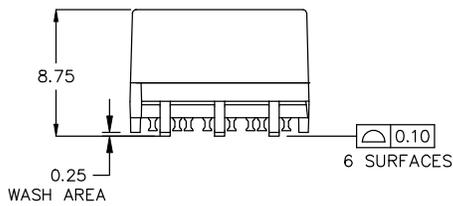
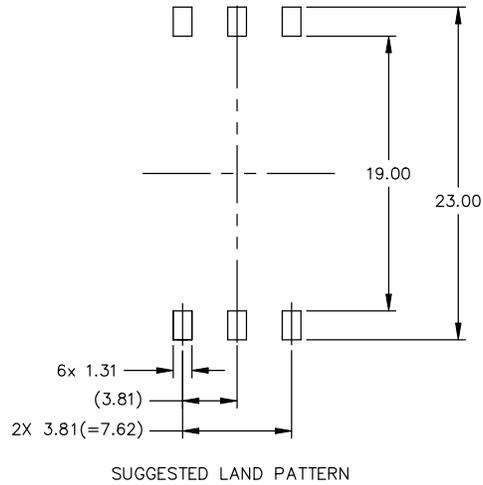
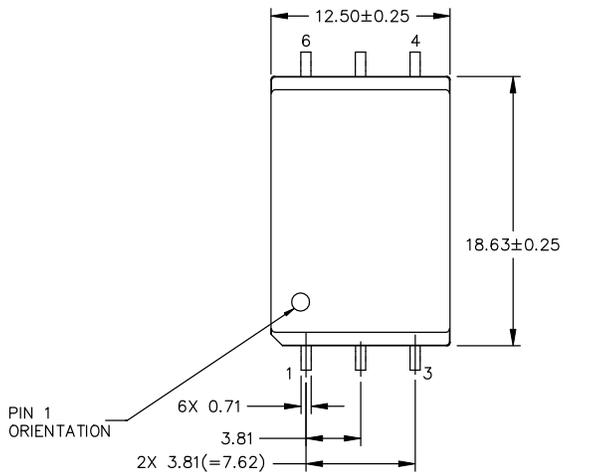
4. Header: DAP (Diallyl Phthalate) with flammability Rating UL 94V-0 or better
5. Lead Frame: Cooper Alloy
Under plated: Half Hard Ductile Nickel 50-100" (1.3-2.5um)
Over plated : 100% Tin electro-deposited per ASTM B545 300 - 50u"(8-13um)
Finish : Matte finish 100% Tin solder
6. AEC-Q200 Qualified, PPAP on request

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MECHANICAL

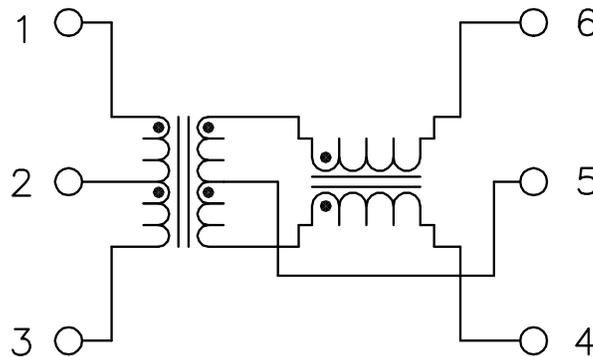
HXE20xxHL



Dimensions in mm
Unless otherwise specified,
all tolerances are $\pm 0,25$

SCHEMATIC

HXE20xxHL

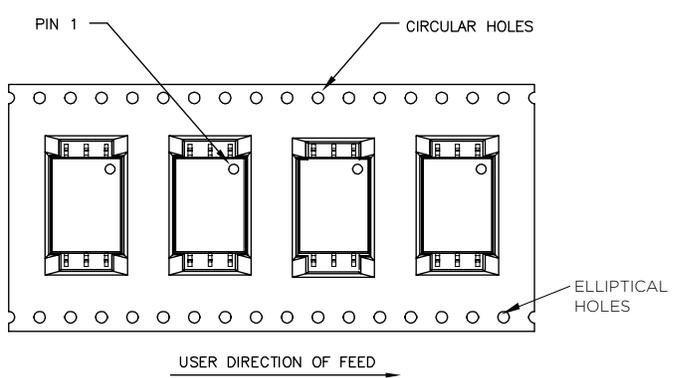
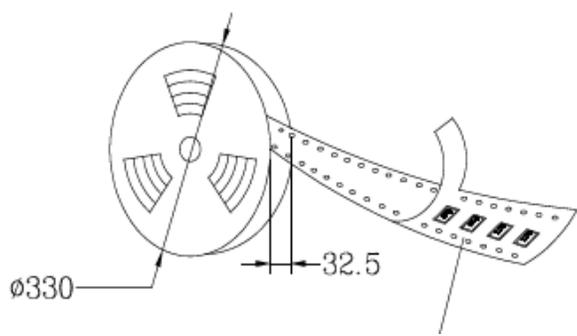
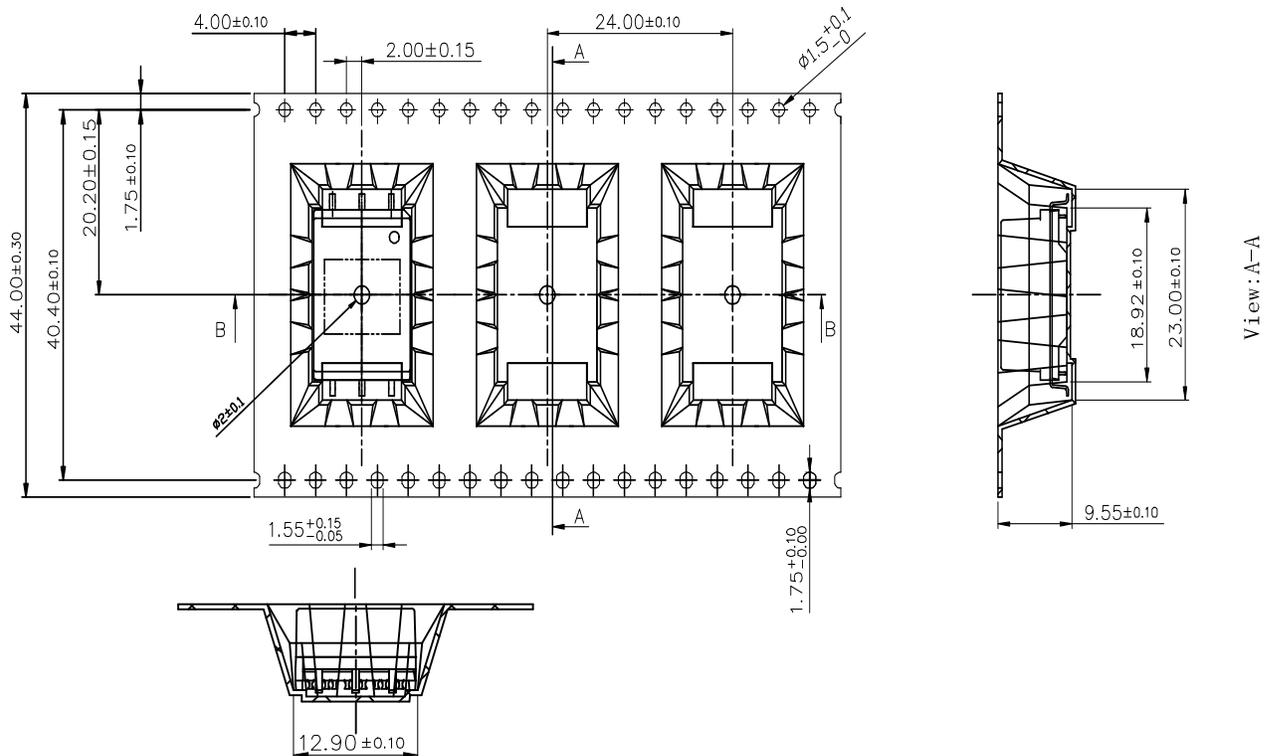


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TAPE & REEL

HM20xxHL



All Dimensions meet EIA-481-D requirements.

Component

1. **Material:** Black Conductive Polystyrene
2. **Components per Reel:** 250 pieces
3. **Quantity per carton:** 4x full reels = 2000 pieces

For More Information:

Americas - prod_info_network_americas@yageo.com | Europe - prod_info_network_emea@yageo.com | Asia - prod_info_network_apac@yageo.com

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