

ECN/PCN No.: M1354

| For Manufacturer | | | |
|--|---|--|---|
| Product Description: 10/100/1000 Base-T Single Port, Traditional SMD LAN Transformer | Abracon Part Number / Part Series: ALANS10001 | <input type="checkbox"/> Documentation only <input checked="" type="checkbox"/> ECN <input type="checkbox"/> EOL | <input checked="" type="checkbox"/> Series <input type="checkbox"/> Part Number(s) |
| Affected Revision: Initial | New Revision: A | Application: | <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety |

Prior to Change:

Mechanical Outline:

18.4 x 12.4 x 6.45 mm

13.9 x 15.5 x 5.7 mm

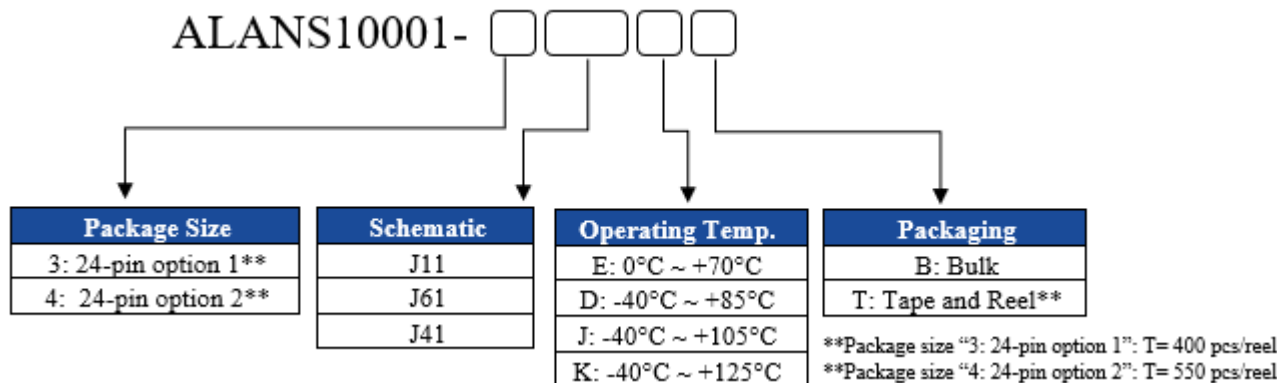
Key Electrical Specification

| Part Number | Insertion Loss (dB Max) | Return Loss (dB Min) | | | | | Crosstalk (dB Min) | | | CMRR (dB Min) | | | DCMR (dB Min) | | |
|-----------------|-------------------------|----------------------|--------|--------|---------|--------|--------------------|---------|--------|---------------|---------|--------|---------------|---------|--|
| | 0.1-100 MHz | 1-40 MHz | 60 MHz | 80 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz | |
| ALANS10001-3J11 | 0.8 | 18 | 15 | 12 | 10 | 42 | 38 | 34 | 40 | 36 | 32 | 46 | 38 | 31 | |
| ALANS10001-3J61 | 0.8 | 18 | 15 | 12 | 10 | 42 | 38 | 34 | 40 | 36 | 32 | 46 | 38 | 31 | |
| ALANS10001-3J41 | 0.8 | 18 | 15 | 12 | 10 | 42 | 38 | 34 | 40 | 36 | 32 | 46 | 38 | 31 | |
| ALANS10001-4J11 | 0.8 | 18 | 15 | 12 | 10 | 42 | 38 | 34 | 40 | 36 | 32 | 46 | 38 | 31 | |
| ALANS10001-4J61 | 0.8 | 18 | 15 | 12 | 10 | 42 | 38 | 34 | 40 | 36 | 32 | 46 | 38 | 31 | |
| ALANS10001-4J41 | 0.8 | 18 | 15 | 12 | 10 | 42 | 38 | 34 | 40 | 36 | 32 | 46 | 38 | 31 | |

| Part Number | Inductance (μH Min) | Leakage Inductance (μH) | Interwinding Capacitance (pF Max) | DC Resistance (Ω Max) | | Hi Pot (VDC) |
|-----------------|----------------------------|-------------------------|-----------------------------------|-----------------------|-----------|--------------|
| | @100kHz, 0.1V, 8mA DC Bias | @100kHz, 0.1V, Td to Mx | @100kHz, 0.1V, Td to Mx | Primary | Secondary | 0.5mA/6 sec. |
| ALANS10001-3J11 | 350 | 0.35 | 35 | 0.9 | 1.2 | 2500 |
| ALANS10001-3J61 | 350 | 0.35 | 35 | 1.2 | 0.9 | 2500 |
| ALANS10001-3J41 | 350 | 0.35 | 35 | 0.9 | 1.2 | 2500 |
| ALANS10001-4J11 | 350 | 0.35 | 35 | 0.9 | 1.2 | 2500 |
| ALANS10001-4J61 | 350 | 0.35 | 35 | 1.2 | 0.9 | 2500 |
| ALANS10001-4J41 | 350 | 0.35 | 35 | 1.2 | 0.9 | 2500 |

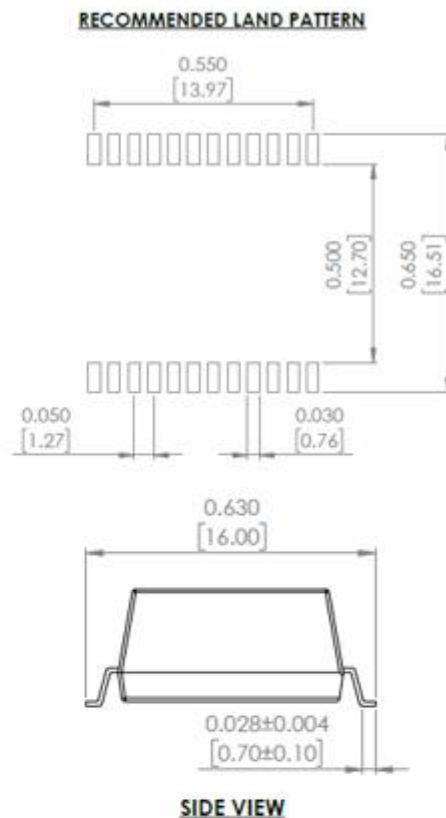
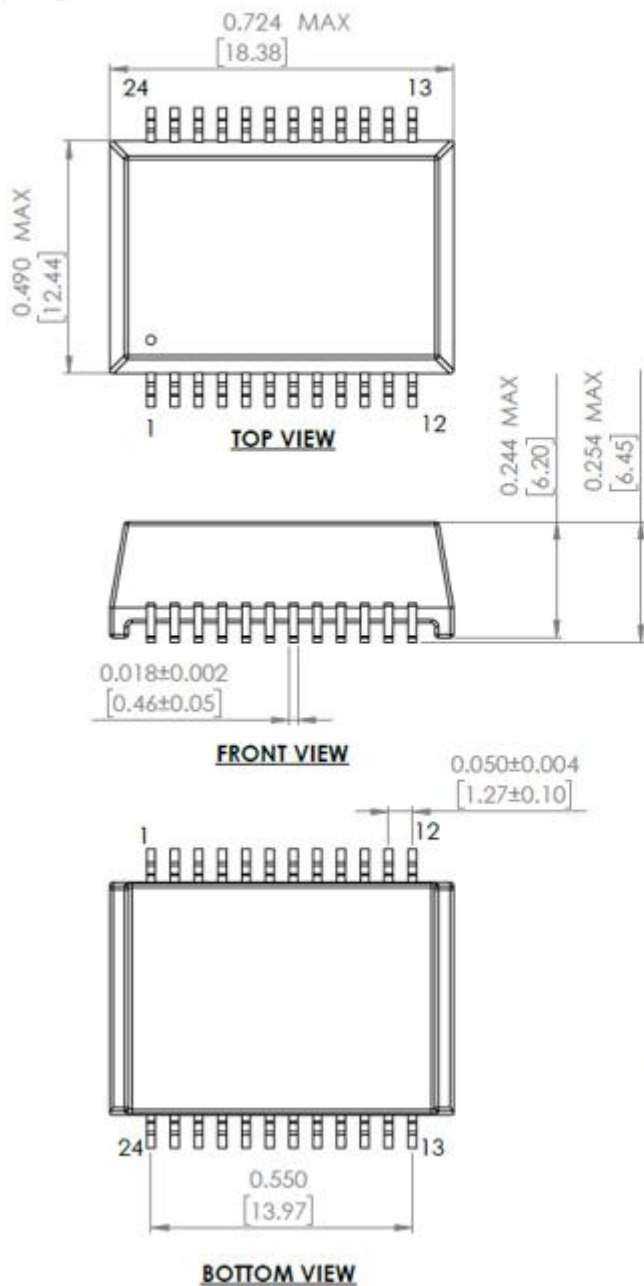
Options and Part Identification

ALANS10001- [] [] [] []

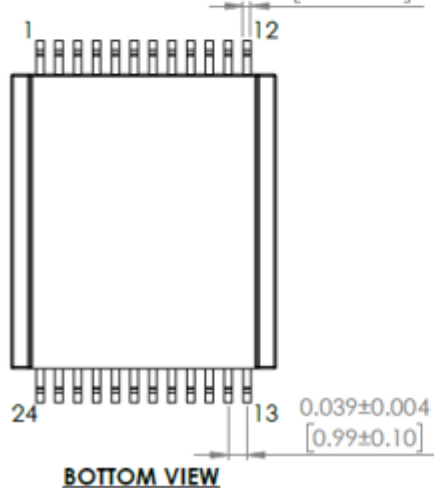
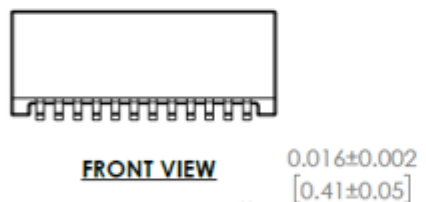
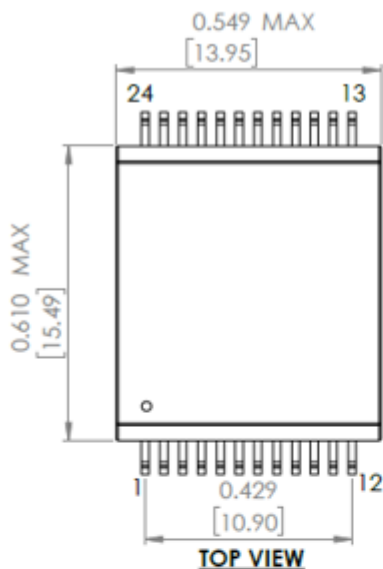


Mechanical Dimensions

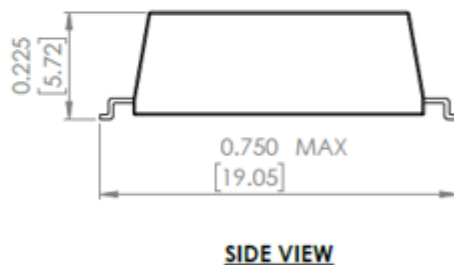
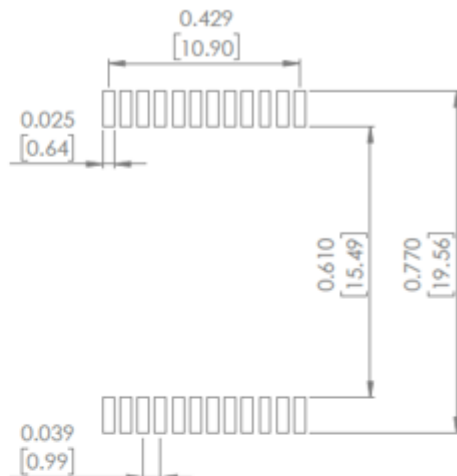
3: 24-pin option 1



4: 24-pin option 2

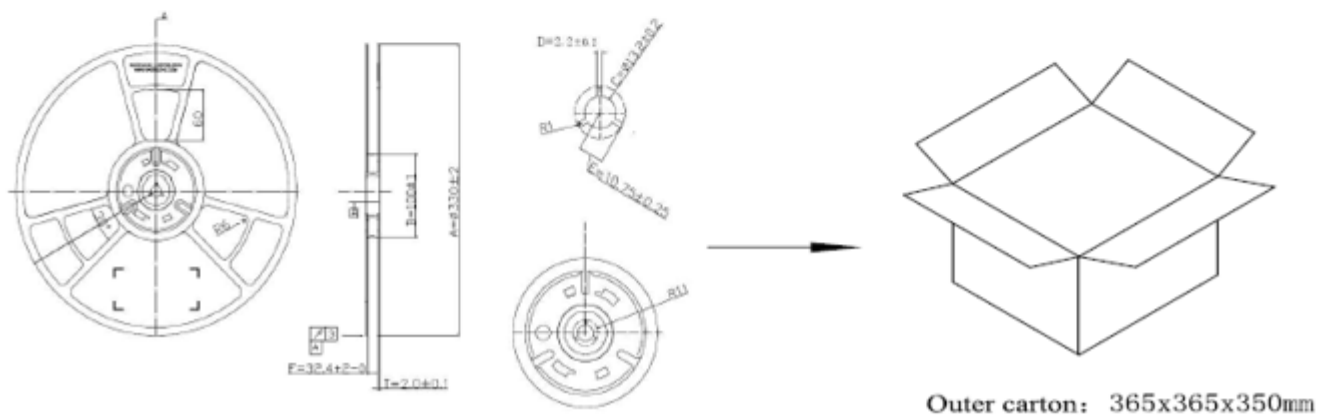
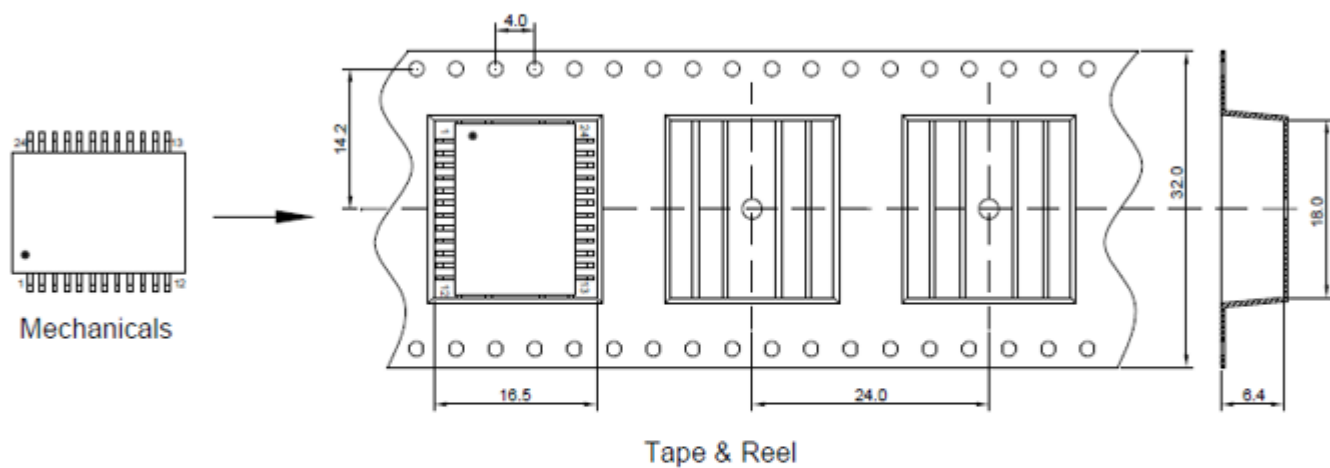


RECOMMENDED LAND PATTERN



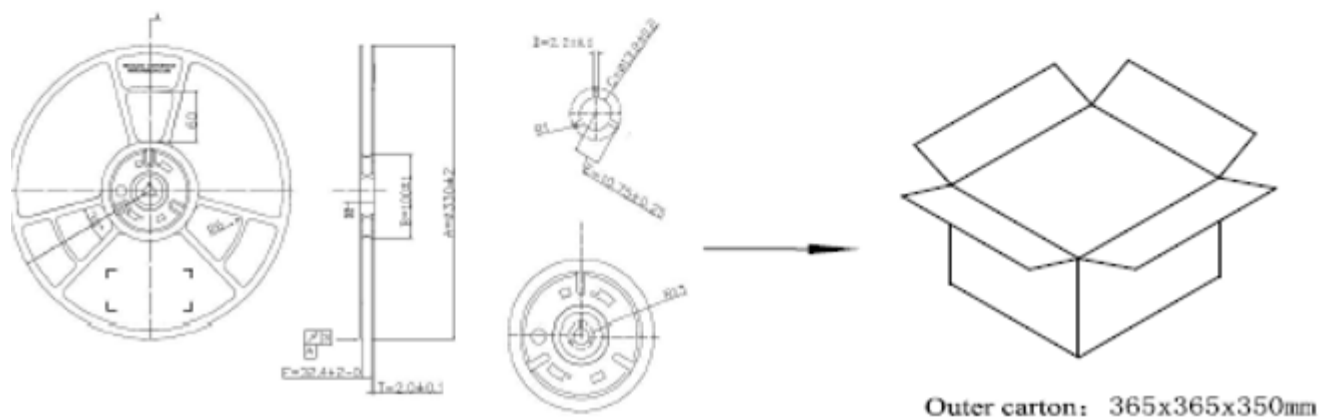
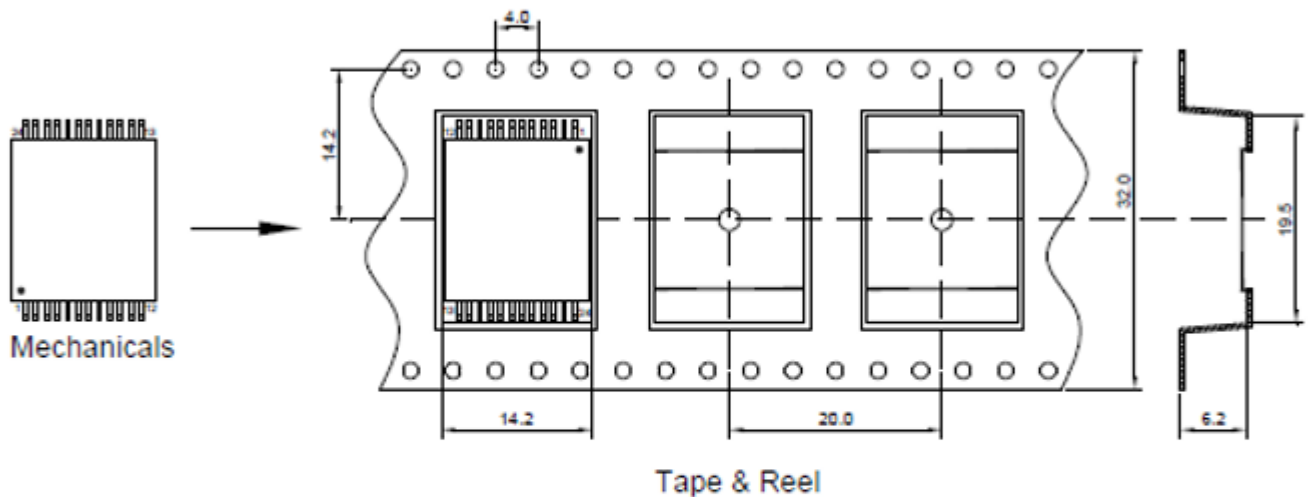
Packaging
Package size option 3:

Tape and Reel: 400 pcs/reel
 Pieces per Carton: 3200
 T&R per Carton: 8
 Weight per Carton: 13.6kg
 Weight per Piece: 2.65g



Package size option 4:

Tape and Reel: 550 pcs/reel
 Pieces per Carton: 4400pcs
 T&R per Carton: 8
 Weight per Carton: 12.7kg
 Weight per Piece: 1.75g


Materials

Conformal coating for exposed toroids
 KE-4971 Silicone RTV

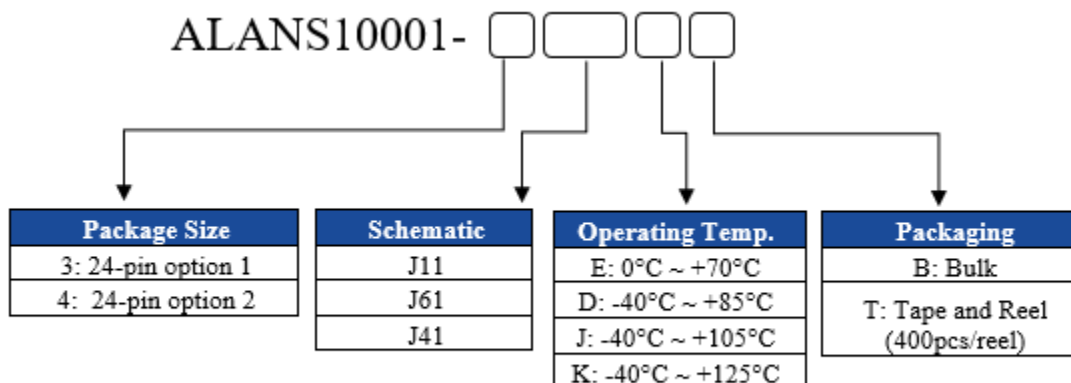
Product Marking

All product uses RTV silicone as conformal coating over the toroids. The product date code is represented as YYWW, where YY is the year and WW is the work week when the product was manufactured.

After Change:
Mechanical Outline:
18.1 x 12.2 x 6.8 mm
13.7 x 15.3 x 6.7 mm
Key Electrical Specification

| Part Number | Insertion Loss (dB Max) | Return Loss (dB Min) | | | | | Crosstalk (dB Min) | | | CMRR (dB Min) | | | DCMR (dB Min) | | |
|-----------------|-------------------------|----------------------|--------|--------|---------|--------|--------------------|---------|--------|---------------|---------|--------|---------------|---------|--|
| | 0.1-100 MHz | 1-40 MHz | 60 MHz | 80 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz | |
| ALANS10001-3J11 | 1.0 | 18 | 15 | 12 | 10 | 42 | 38 | 34 | 40 | 36 | 32 | 46 | 38 | 31 | |
| ALANS10001-3J61 | 1.0 | 18 | 15 | 12 | 10 | 42 | 38 | 34 | 40 | 36 | 32 | 46 | 38 | 31 | |
| ALANS10001-3J41 | 1.0 | 18 | 15 | 12 | 10 | 42 | 38 | 34 | 40 | 36 | 32 | 46 | 38 | 31 | |
| ALANS10001-4J11 | 1.0 | 18 | 15 | 12 | 10 | 42 | 38 | 34 | 40 | 36 | 32 | 46 | 38 | 31 | |
| ALANS10001-4J61 | 1.0 | 18 | 15 | 12 | 10 | 42 | 38 | 34 | 40 | 36 | 32 | 46 | 38 | 31 | |
| ALANS10001-4J41 | 1.0 | 18 | 15 | 12 | 10 | 42 | 38 | 34 | 40 | 36 | 32 | 46 | 38 | 31 | |

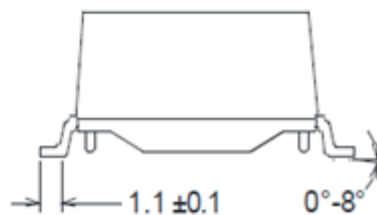
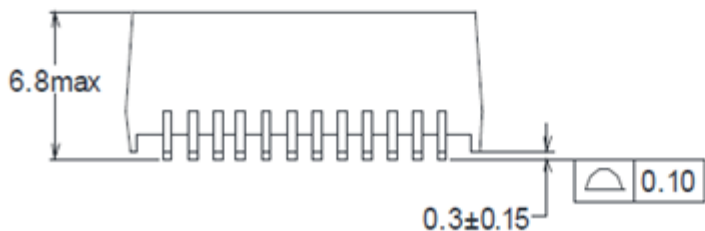
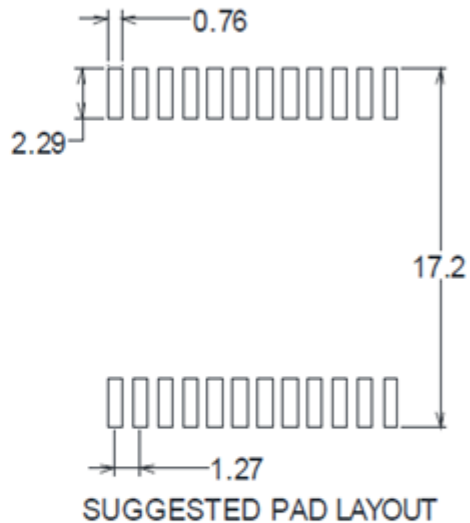
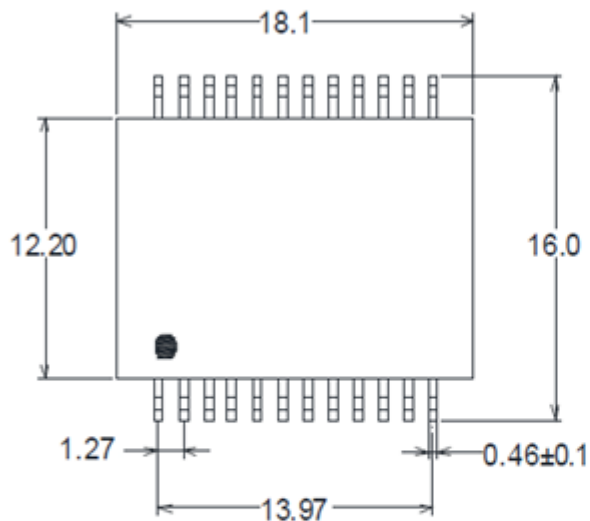
| Part Number | Inductance (μH Min) | Leakage Inductance (μH) | Interwinding Capacitance (pF Max) | DC Resistance (Ω Max) | | Hi Pot (VDC) |
|-----------------|----------------------------|-------------------------|-----------------------------------|-----------------------|-----------|--------------|
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| ALANS10001-3J41 | 350 | 0.35 | 35 | 0.9 | 0.9 | 2500 |
| ALANS10001-4J11 | 350 | 0.35 | 35 | 0.9 | 1.2 | 2500 |
| ALANS10001-4J61 | 350 | 0.35 | 35 | 1.2 | 0.9 | 2500 |
| ALANS10001-4J41 | 350 | 0.35 | 35 | 0.9 | 0.9 | 2500 |

Options and Part Identification


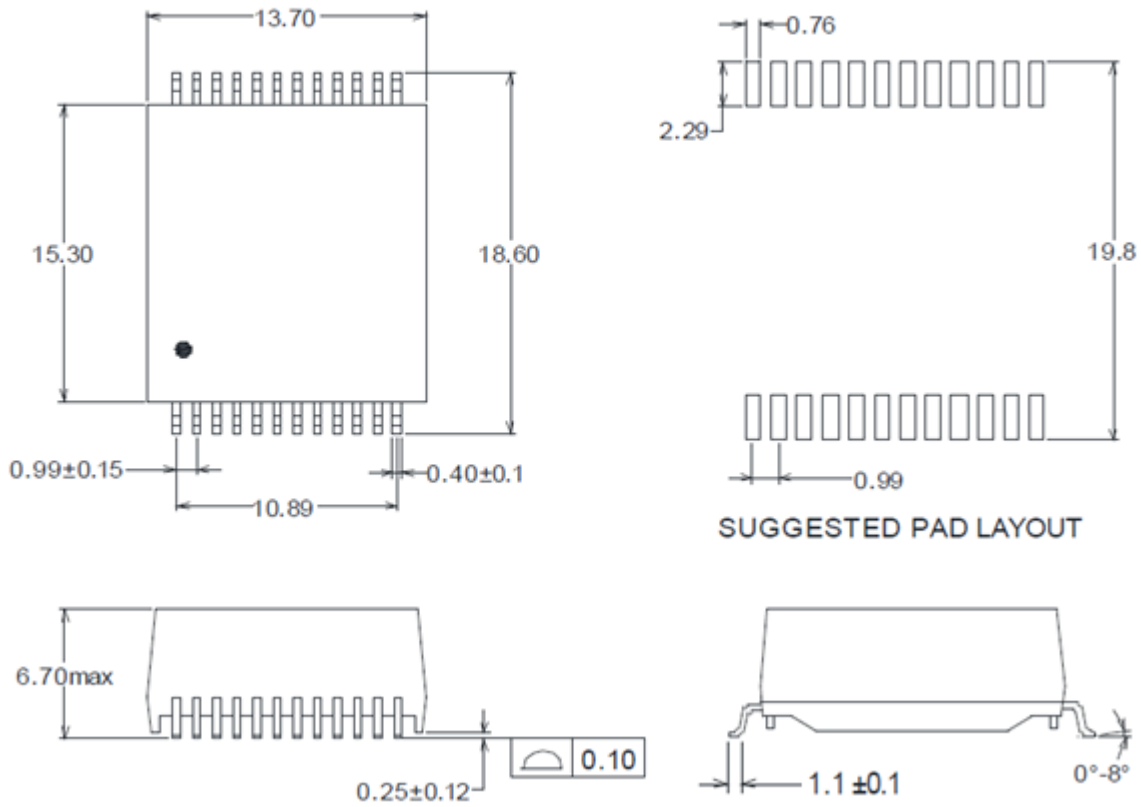
Mechanical Dimensions

7.0 Mechanical Dimensions

3: 24-pin option 1

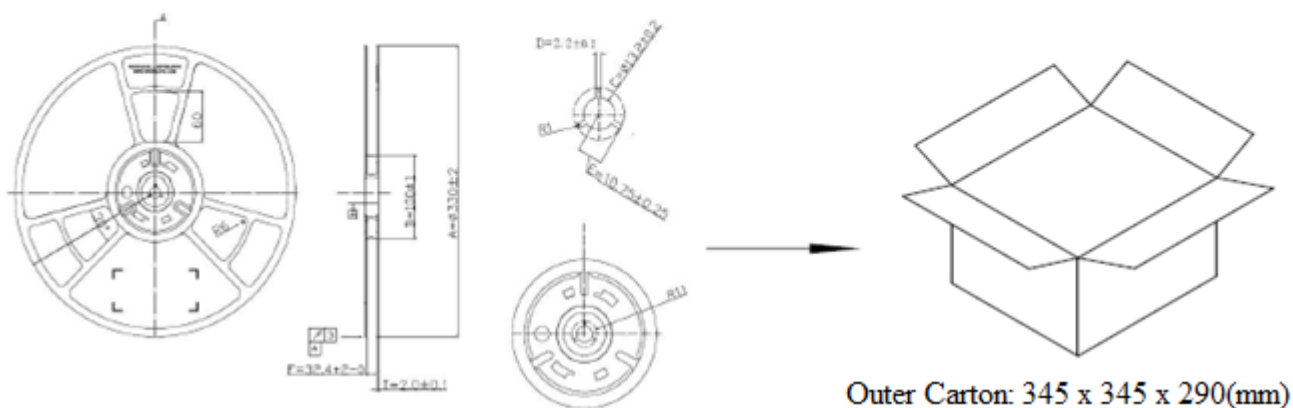
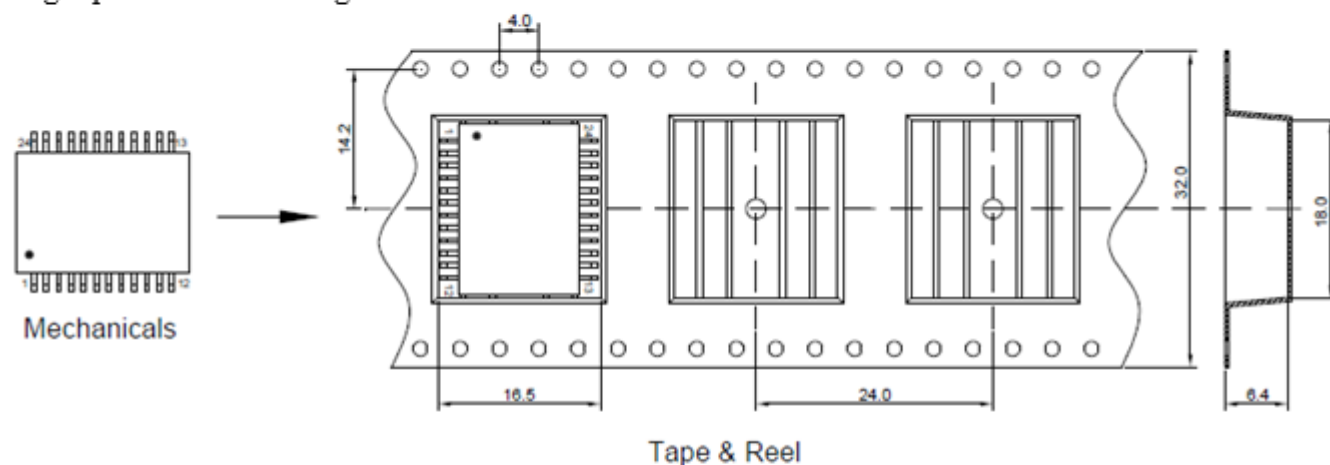


4: 24-pin option 2



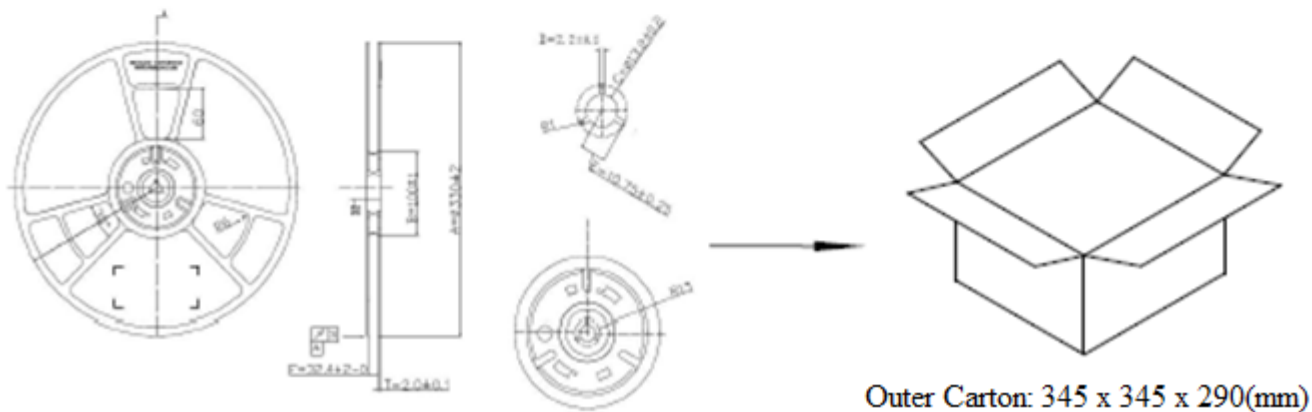
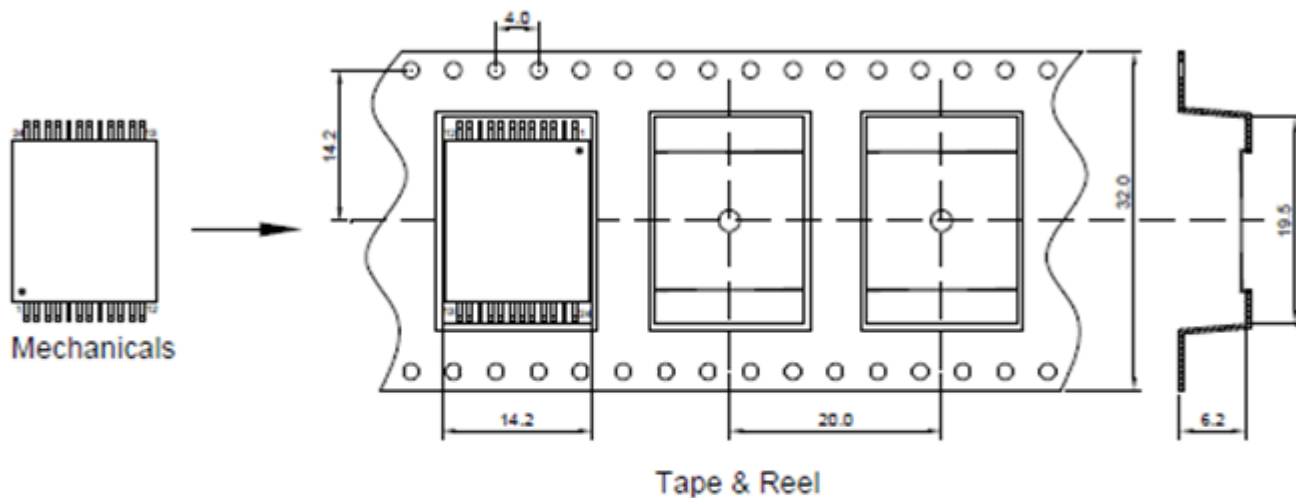
Packaging
Package size option 1:

Tape and Reel: 400 pcs/reel
 Pieces per Carton: 2800
 T&R per Carton: 7
 Weight per Carton: 9.0kg
 Weight per Piece: 1.47g



Package size option 2:

Tape and Reel: 400 pcs/reel
 Pieces per Carton: 2800pcs
 T&R per Carton: 7
 Weight per Carton: 9.5kg
 Weight per Piece: 1.62g


Materials

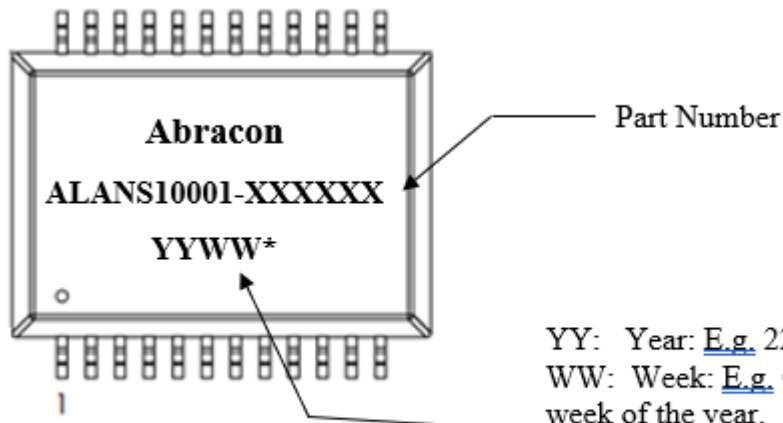
Conformal coating for exposed toroids
 E57H Varnish

Product Marking

All product uses varnish as conformal coating over the toroids. The product date code is represented as YYWW*, where YY is the year and WW is the work week when the product was manufactured. The asterisk indicates the product used varnish as the conformal coating.

One exception is date code 2230. This date code, shipped to a single customer, implements varnish but does not have the * indicator.

Example Marking:



YY: Year: E.g. 22 for 2022
 WW: Week: E.g. 05 for the 5th week of the year.
 Date codes with * indicates varnish is used to coat the toroids, otherwise coating is RTV silicone.

Cause/Reason for Change:

Customer experienced thermal expansion of RTV silicone material during reflow. Coils could protrude underneath the body causing solder reflow/adhesion issues. Moved to production line that implements E57H varnish as the protective conformal coating for the exposed toroids.

Change Plan

| | |
|-------------------------------------|--|
| Effective Date: 8/10/2022 | Additional Remarks: <ul style="list-style-type: none"> No change to part numbers. Date codes with * indicates varnish was used as the conformal coating. Product date codes without the asterisk indicate RTV silicone was used as the conformal coating. |
|-------------------------------------|--|

Change Declaration:

The changes described in this document do not affect the products function. The package height has increased slightly, so it is recommended the design engineer review to ensure existing designs have adequate clearance.

| | | |
|--|---|--|
| Issued Date: 8/10/2022 | Issued By: <i>Gerald Capwell</i> | Issued Department: Engineering |
| Approval: <i>Syed Raza</i> Engineering VP | Approval: <i>Reuben Quintanilla</i> Quality Director | Approval: <i>Ying Huang</i> Purchasing Director |

For Abracon EOL only

| | |
|---------------------------------------|---|
| Last Time Buy (if applicable): | Alternate Part Number / Part Series: |
| Additional Approval: | Additional Approval: |

Customer Approval (If Applicable)

| | | |
|---|--------------------------------|----------------------------------|
| Qualification Status: <div style="text-align: center;"> <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Not accepted </div> <p><i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i></p> | | |
| Customer Part Number: | Customer Project: | |
| Company Name: | Company Representative: | Representative Signature: |
| Customer Remarks: | | |
