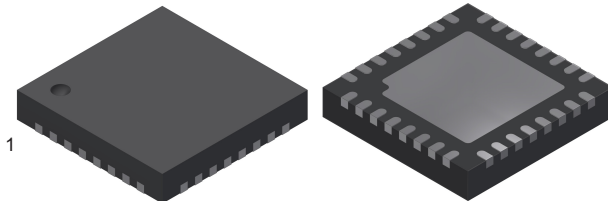
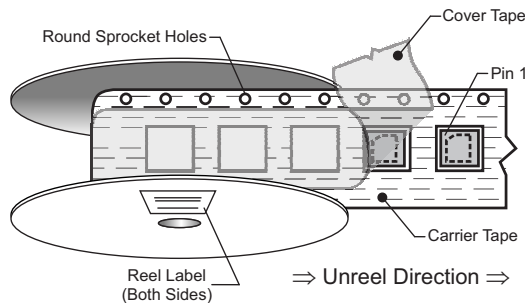


## ET-32 Package, TR Suffix

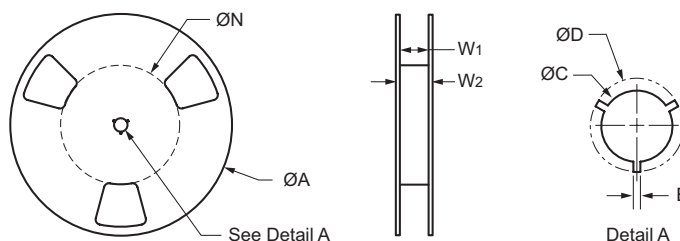


Footprint: 5 mm × 5 mm  
Contact Population: Four Sides (QFN)  
Contact Count: 32 plus exposed pad  
JEDEC: MO-220 VHHD-5



- Embossed tape and reel
- Contacts inward
- Pin 1 on trailing device edge, sprocket hole side
- 1500 devices per 7 in. reel
- 40-50 trailer pockets
- 75-80 leader pockets

Leader pockets are the first off the reel when the tape is unreeled for dispensing devices. Trailer pockets are the last pockets off the reel when unreeled for dispensing devices.

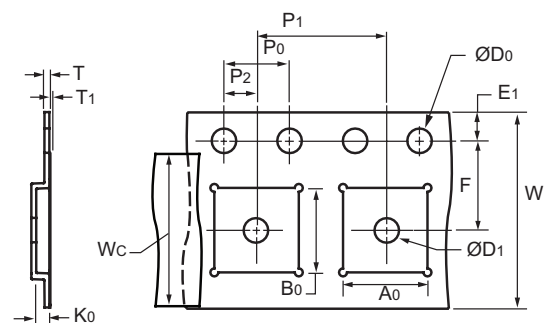


Access hole and hub configuration may vary at supplier discretion within limits shown

### Dimensions in mm

Type	A	B	C	D	N
Plastic 7 in.	178 (Nom)	1.5 (Min)	13 <sup>+0.5</sup> <sub>-0.2</sub>	20.2 (Min)	60 (Nom)
<b>W<sub>1</sub> (inside, at Hub)</b>			12.4 (+2.0/-0.0)		
<b>W<sub>2</sub> (outside, at Hub)</b>			18.4 (Max)		

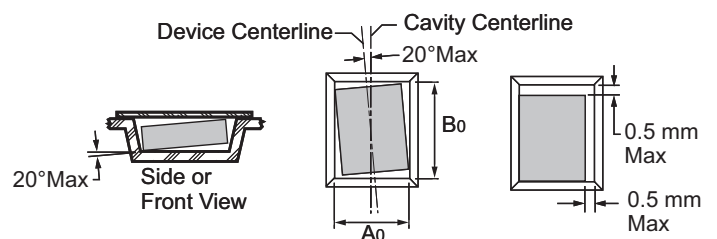
Reference EIA 481



### Dimensions in mm, may vary with supplier

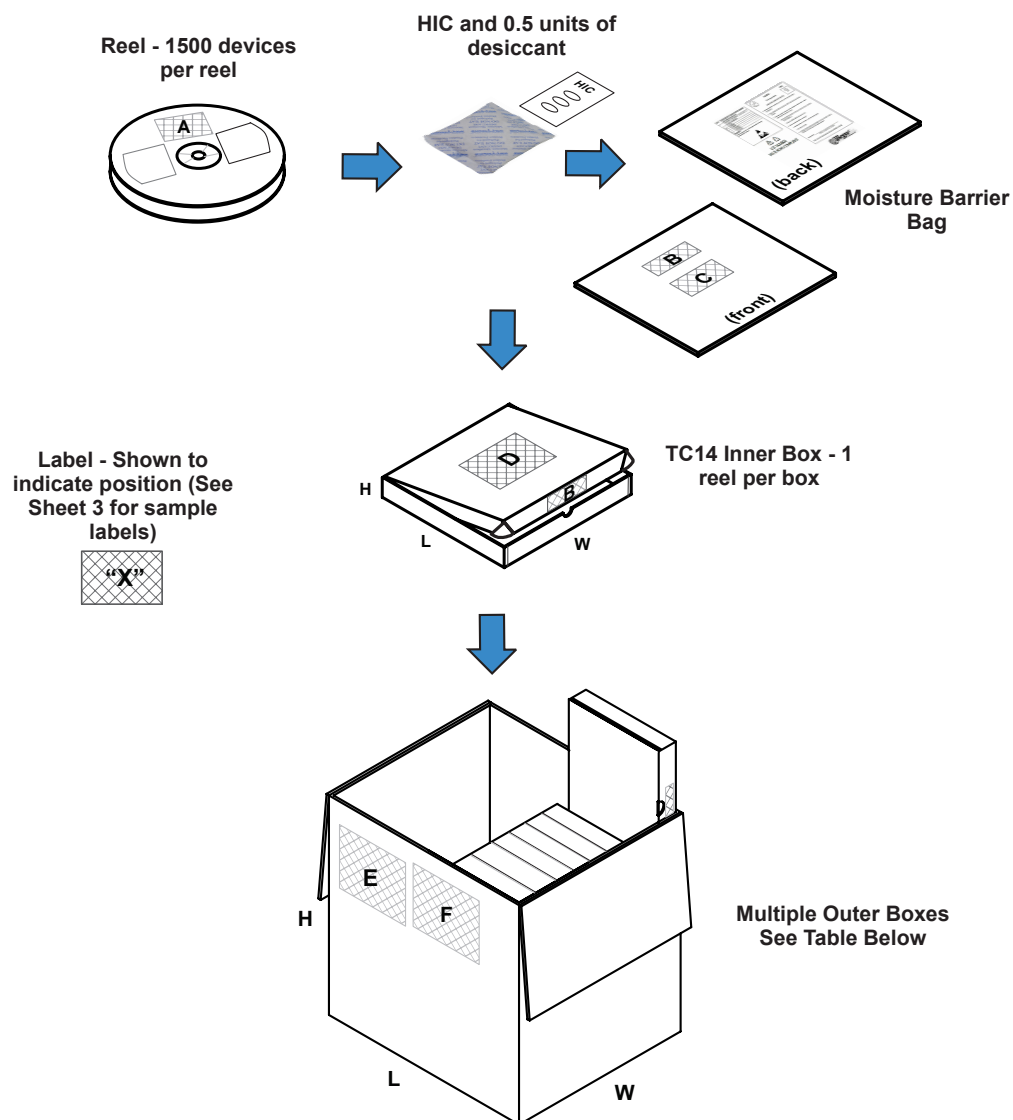
Carrier Tape			Cover Tape
W: 12.00	D <sub>0</sub> : 1.50	A <sub>0</sub> : 5.25	W <sub>C</sub> : 9.3 T <sub>1</sub> : 0.061
E <sub>1</sub> : 1.75	P <sub>0</sub> : 4.00	B <sub>0</sub> : 5.25	
F: 5.5	P <sub>1</sub> : 8.00	K <sub>0</sub> : 1.10	
T: 0.30	P <sub>2</sub> : 2.00	D <sub>1</sub> : 1.50	

1. Pocket centerlines to cavity center, not to pocket detection hole.
2. A<sub>0</sub> and B<sub>0</sub> measured 0.3 mm above bottom of pocket.



Reference EIA 481

## ET-32 Package, TR Suffix



**Carton Dimensions (mm)**


Type	Length	Width	Height	Inner Carton Standard Quantity	Outer Carton Standard Quantity
TC14	185	205	35	1500	
TC11A	245	214	212		9000
TC11	321	318	291		18000
TC17A	536	403	400		72000




\* Carton Details pertain only to Full Standard Increments. Partial orders will only be provided for samples or due to exceptional circumstances. Partial orders may not be packed according to Carton Details but may require protective filler, empty inner boxes or other packing modifications.

## ET-32 Package, TR Suffix

### Reel Production Label [A]


1.125in x 4in




	Part No: XXXXXXXXXXXXXXXXXXXX	Date: 20150106
	Catalog: AXXXXXXXXXXXXXXXXX-X	MS-Level: 2
	Qty: XXXX	Moisture Sensitive Device
	Lot 1: 1234567ABCD	Qty 1: XXXX Peak Reflow: 260C
	Lot 2: N/A	Qty 2: 0

 Reel  

### Moisture Barrier Bag / Box Flap Label [B]




1.125in x 4in


	Part No: XXXXXXXXXXXXXXXXXXXX	Date: 20150106
	Catalog: AXXXXXXXXXXXXXXXXX-X	MS-Level: 2
	Qty: XXXX	Moisture Sensitive Device
	Lot 1: 1234567ABCD	Qty 1: XXXX Peak Reflow: 260C
	Lot 2: N/A	Qty 2: 0

### 1D Production Label [C]



2.5in x 3.75in




Allegro MicroSystems, LLC Manchester, NH 03103 USA		
Cust PN: 999999XXX-XXX99999XX_000000000		
Mfr PN: 999999XXX-XXX99999XX_000000000		
Alg In: 000000XXX-XXX00000XX		
Lot 1: 1234567XXX Qty 1: 10000		
Lot 2: 1234567XXX Qty 2: 5000		
D/C: 1234 Total Qty: 15000		



### Inner Carton Label [D]






4in x 6.5in

Allegro MicroSystems, LLC Manchester, NH 03103, USA		Made In USA
(P) Customer Part A12345XXX-XXXXXXXX-000000000	(1K) Sales Order 00000000	
(1P) Manufacturer Part A12345XXX-XXXXXXXX-000000000	(9D) Date Code 1234	
(1T) Lot 1234567XXX	(Q) Quantity 100000	
(K) Purchase Order 000000000-000000000	(16K) Delivery 00000000	
		


### Outer Carton Label [E]

4in x 6.5in

Allegro MicroSystems, LLC Manchester, NH 03103, USA		Made In USA
(P) Customer Part A12345XXX-XXXXXXXX-000000000	(1K) Sales Order 00000000	
(1P) Manufacturer Part A12345XXX-XXXXXXXX-000000000	(Q) Quantity 100000	
(K) Purchase Order 000000000-000000000	(16K) Delivery 00000000	
		
  		

### Outer Carton Address Label [F]

4in x 6.5in

Allegro MicroSystems, LLC 955 Perimeter Rd Manchester, NH 03103 United States	
Ship To (Shipping Mark): Allegro MicroSystems, LLC ATTN: Corporate Label Team 955 Perimeter Rd Manchester, NH 03103	
Package 1 / 1	

\* Label examples are shown for content purposes only. Labels are not shown to scale. Given label dimensions are approximate. As required, the necessary compliance symbols on the labels will meet the ship to country regulations.



## ET-32 Package, TR Suffix

### Revision History

Revision No.	Date	ECN Number	Description
0	10/9/2015	OI	ORIGINAL RELEASE
1	7/29/2016	CR-2016-02116	UPDATE PACKING SHEET TO REFLECT CHANGES TO LABEL FORMAT, UPDATED DESICCANT QTY.
2	8/14/2018	CR-2018-03312	UPDATE PACKAGE GRAPHIC. CORRECT JEDEC REFERENCE. UPDATE ORIENTATION GRAPHIC. COMBINE INNER/OUTER PACKING TABLES. ADD ADDRESS LABEL. ADD LABEL DIMENSIONS. UPDATE LABEL GRAPHICS (1D, INNER, OUTER). UPDATE COPYRIGHT DATE. UPDATE ALLEGRO ADDRESS. SPLIT TK PACKING SUFFIX TO NEW MARCOM DOCUMENT.

This document provides reference information that can be used to identify leadform and packing options offered by Allegro MicroSystems, LLC. This information is for reference only, and not for tooling use. This information is subject to change without notice. Packing and labelling for shipment may vary with device type, quantities, and other conditions; specifications may vary with contract terms and availability.

Packing options vary according to the individual device being offered. Refer to the device datasheet (visit our website at: [www.allegromicro.com](http://www.allegromicro.com)) for a listing of packing options for that device. Not all options are available for any particular package designation or device type, and provision of certain configurations may be subject to minimum volume or NCNR (nuncancellation, nonreturn) limitations. Contact your local Allegro field service representative for additional information.

For more information on the physical appearance of device packages and leadforms, refer to the device datasheet or the application note [Allegro Package Designations](#) on the Allegro website.

When applicable, references are provided to industry standards, such as for tape and reel specifications standard package outline designations. These references are provided for informational purposes only, and do not necessarily indicate full conformity with that standard in all respects.

No dimensional tolerances are guaranteed or implied for bulk packing.

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