Packing Information

ES-24 Package, SR Suffix

Footprint: 4 mm × 4 mm
Contact Population: Four Sides (QFN)
Contact Count: 24 plus exposed pad
JEDEC: MO-220 WGGD

- Embossed tape and reel
- Contacts inward
- Pin 1 on trailing device edge, sprocket hole side
- 6,000 devices per 13 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.

Dimensions in mm, may vary with supplier

Carrier Tape			Cover Tape
W: 12.00 ±.3 E_1: 1.75 ±.1 F: 5.50 ±.05 T: 0.30 (0.6 MAX)	D_0: 1.50 +.1/ -.0 P_0: 4.00 ±.1 P_1: 8.00 ±.1 P_2: 2.00 ±.05	A_0: 4.35 B_0: 4.35 K_0: 1.10 D_1: 1.50 MIN	W_C: 9.1 T_1: 0.061 (0.1 MAX)

1. Pocket centerlines to cavity center, not to pocket detection hole.
2. A_0 and B_0 measured 0.3 mm above bottom of pocket.

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

Dimensions in mm

Type	A	B	C	D	N
Plastic 13 in.	330 (Nom)	1.5 (Min)	$13^{+0.5}_{-0.2}$	20.2 (Min)	102 (Nom)
W_1 (inside, at Hub)			12.4 (Min)		
W_2 (outside, at Hub)			18.4 (Max)		

Reference EIA 481

Reference EIA 481

Carton Details *

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Carton Dimensions (mm)

Type	Length	Width	Height	Inner Carton Standard Quantity	Outer Carton Standard Quantity
TC17	364	348	56	6000	
TC18A	188	379	365		18000
TC18B	368	379	365		36000
TC17A	556	403	400		54000

* 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.

Label Details *

ES-24 Package, SR Suffix

Reel Production Label [A]

1.125in x 4in

Box Flap Label [B]

1.125in x 4in

1D Production Label [C]

2.5in x 3.75in

Inner Carton Label [D]

4in x 6.5in

Outer Carton Label [E]

4in x 6.5in

Outer Carton Address Label [F]

4in x 6.5in

* 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.

Revision History

Revision No.	Date	ECN Number	Description
0	4/11/2017	OI	ORIGINAL RELEASE
1	3/16/2018	CR-2018-01097	UPDATE PACKAGE GRAPHIC. ADD DEVICE FITMENT GRAPHIC. ADD LABEL DIMENSIONS. UPDATE LABEL GRAPHICS.
2	4/18/2019	CR-2019-01669	UPDATE ORIENTATION GRAPHIC. ADD EIA STANDARD TOLERANCES. UPDATE PACKING GRAPHIC. UPDATE LABEL GRAPHICS. UPDATE COPYRIGHT DATE. UPDATE ALLEGRO ADDRESS. UPDATE LOGO.

This document provides reference information that can be used to identify leadform and packing options offered by Allegro MicroSystems. 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*) 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 (noncancellation, 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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