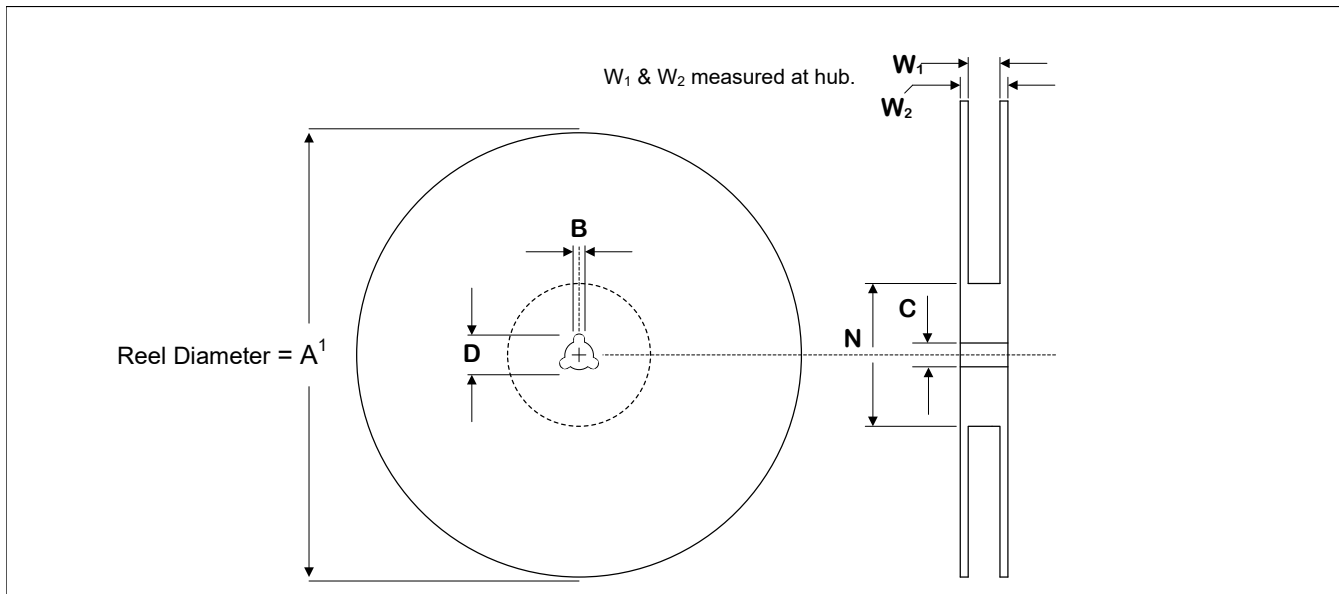


1.0 Introduction

MACOM supplies high power devices in tape wound on standard 7-inch and 13-inch diameter reels. This application note documents the reel and tape dimensions and the orientation of the components within the tape cavities for many of our most popular package styles. Packages covered in this application note:

Package Type
AC-360S-2
AC-400S-2
AC-640B-2
AC-650S-4
AC-780B-2
AC-780B-4
AC-780S-2
AC-780S-4
AC-1230B-4
AC-1230S-4
TO-272-2
TO-272-4
TO-272S-2
TO-272S-4
TO-272S-4I

2.0 Reel Dimensions

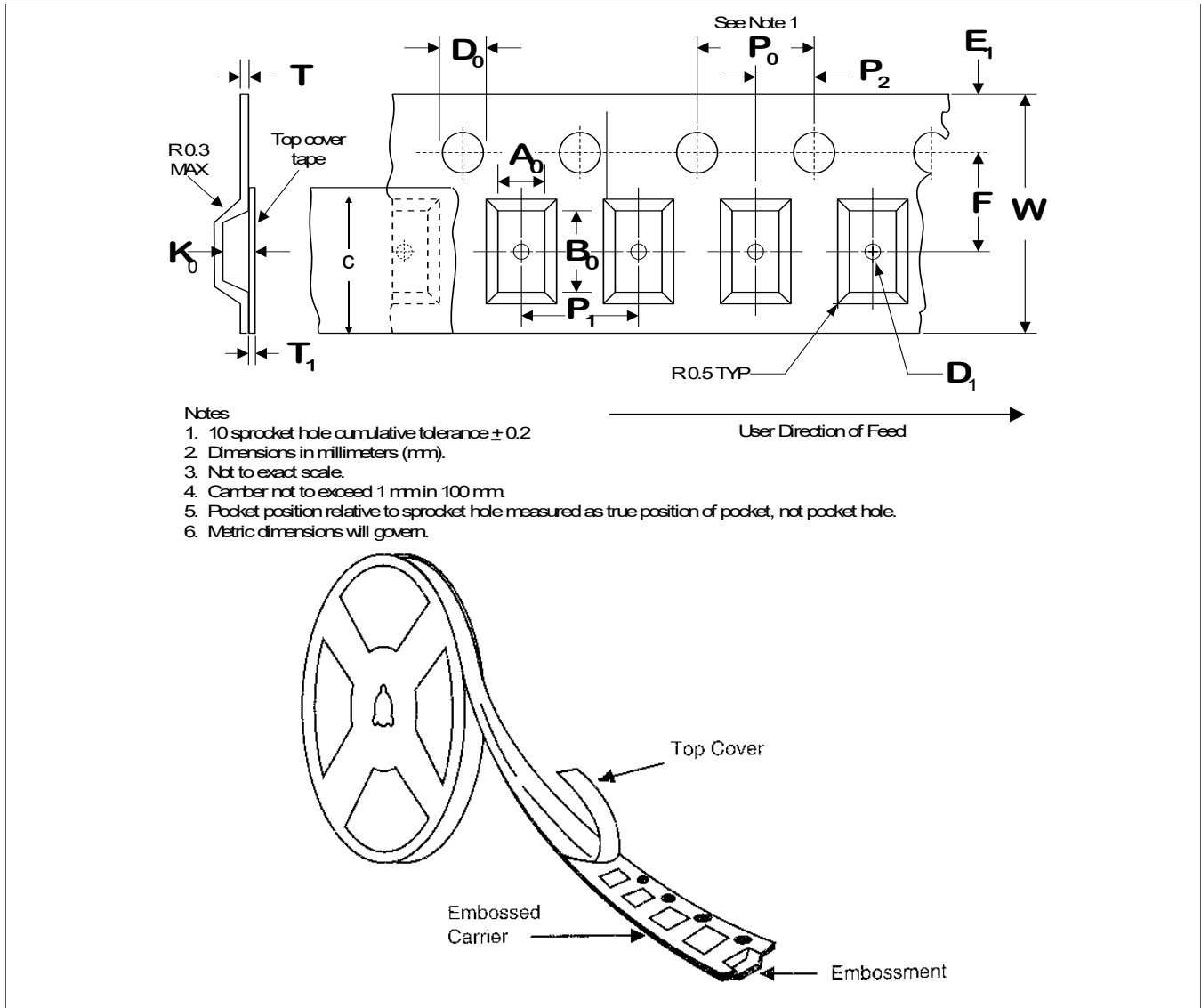


Reel Dimensions in mm

W Tape Width ²	W ₁ (+2.0/-0.0)	W ₂ (max.)	N (min.)		B (min.)	C (+0.5/-0.2)	D (min.)
			A = 7 inch	A = 13 inch			
8	8.4	14.4	50	N/A	1.5	13	20.2
12	12.4	18.4	50	100	1.5	13	20.2
16	16.4	22.4	50	100	1.5	13	20.2
24	24.4	30.4	N/A	100	1.5	13	20.2
32	32.4	38.4	N/A	100	1.5	13	20.2

1. See section 5.0 Reel Diameter Dimensions.
2. See section 3.0 Tape Dimensions.

3.0 Tape Dimensions



Application Note

Tape Dimensions

Tape Dimensions	Description	Symbol	Size (mm)
Perforation	Diameter	D_0	$1.5 +0.1 / -0.0$
	Pitch	P_0	4 ± 0.1
	Position	E_1	1.75 ± 0.1
	Thickness	T	0.25 ± 0.1
Cover Tape	Thickness	T_1	0.06 ± 0.02

AC-360S-2

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	6.25 ± 0.10
	Width	B ₀	10.05 ± 0.15
	Depth	K ₀	3.90 ± 0.15
	Pitch	P ₁	16.00 ± 0.10
	Diameter	D ₁	1.5 (min.)
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.0 ± 0.1
	Cavity to Perforation (width)	F	11.50 ± 0.10
Cover Tape	Width	C	21.15 ± 0.10
Carrier Tape	Width	W	24.00 ± 0.30

AC-400S-2

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	10.50 ± 0.15
	Width	B ₀	10.50 ± 0.15
	Depth	K ₀	4.55 ± 0.15
	Pitch	P ₁	24.00 ± 0.10
	Diameter	D ₁	1.5 (min)
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.0 ± 0.1
	Cavity to Perforation (width)	F	11.50 ± 0.15
Cover Tape	Width	C	21.15 ± 0.10
Carrier Tape	Width	W	24.00 ± 0.30

AC-640B-2

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	23.80 ± 0.15
	Width	B ₀	24.50 ± 0.15
	Depth	K ₀	4.10 ± 0.15
	Pitch	P ₁	28.00 (min)
	Diameter	D ₁	2.0 ± 0.1
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.0 ± 0.1
	Cavity to Perforation (width)	F	20.20 ± 0.20
Cover Tape	Width	C	37.5 ± 0.10
Carrier Tape	Width	W	44.00 ± 0.30

AC-650S-4

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	11.50 ± 0.15
	Width	B ₀	17.80 ± 0.15
	Depth	K ₀	4.60 ± 0.15
	Pitch	P ₁	16.00 (min)
	Diameter	D ₁	2.00 +0.1/0.0
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.00 ± 0.10
	Cavity to Perforation (width)	F	14.20 ± 0.10
Cover Tape	Width	C	25.5 ± 0.10
Carrier Tape	Width	W	32.00 ± 0.30

AC-780B-2

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	10.20 ± 0.15
	Width	B ₀	34.50 ± 0.15
	Depth	K ₀	4.05 ± 0.15
	Pitch	P ₁	28.00 ± 0.10
	Diameter	D ₁	2.00 +0.2/-0.0
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.00 ± 0.15
	Cavity to Perforation (width)	F	26.20 ± 0.15
Cover Tape	Width	C	49.5 ± 0.10
Carrier Tape	Width	W	56.00 ± 0.30

AC-780B-4

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	10.20 ± 0.15
	Width	B ₀	34.50 ± 0.15
	Depth	K ₀	4.05 ± 0.15
	Pitch	P ₁	28.00 ± 0.10
	Diameter	D ₁	2.00 +0.2/-0.0
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.00 ± 0.15
	Cavity to Perforation (width)	F	26.20 ± 0.15
Cover Tape	Width	C	49.5 ± 0.10
Carrier Tape	Width	W	56.00 ± 0.30

AC-780S-2

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	10.20 ± 0.15
	Width	B ₀	21.00 ± 0.15
	Depth	K ₀	4.05 ± 0.15
	Pitch	P ₁	28.00 ± 0.1
	Diameter	D ₁	2.0 (min)
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.00 ± 0.05
	Cavity to Perforation (width)	F	14.20 ± 0.10
Cover Tape	Width	C	25.5 ± 0.10
Carrier Tape	Width	W	32.00 ± 0.30

AC-780S-4

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	10.20 ± 0.15
	Width	B ₀	21.00 ± 0.15
	Depth	K ₀	4.05 ± 0.15
	Pitch	P ₁	28.00 ± 0.10
	Diameter	D ₁	2.0 (min)
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.00 ± 0.05
	Cavity to Perforation (width)	F	14.20 ± 0.15
Cover Tape	Width	C	25.5 ± 0.10
Carrier Tape	Width	W	32.00 ± 0.30

AC-1230B-4

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	10.60 ± 0.15
	Width	B ₀	41.70 ± 0.15
	Depth	K ₀	4.90 ± 0.15
	Pitch	P ₁	24.00 (min)
	Diameter	D ₁	2.00 +0.1/-0.0
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.00 ± 0.15
	Cavity to Perforation (width)	F	26.20 ± 0.15
Cover Tape	Width	C	49.5 ± 0.10
Carrier Tape	Width	W	56.00 ± 0.30

AC-1230S-4

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	10.55 ± 0.15
	Width	B ₀	32.70 ± 0.15
	Depth	K ₀	4.90 ± 0.15
	Pitch	P ₁	20.20 ± 0.15
	Diameter	D ₁	2.0 (min)
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.0 ± 0.15
	Cavity to Perforation (width)	F	20.20 ± 0.15
Cover Tape	Width	C	37.5 ± 0.10
Carrier Tape	Width	W	44.00 ± .30

TO-272-2

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	6.75 ± 0.10
	Width	B ₀	24.05 ± 0.15
	Depth	K ₀	2.90 ± 0/15
	Pitch	P ₁	16.00 ± 0.10
	Diameter	D ₁	2.0 (min)
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.00 ± 0.15
	Cavity to Perforation (width)	F	20.20 ± 0.15
Cover Tape	Width	C	37.5 ± 0.10
Carrier Tape	Width	W	44.00 ± 0.30

TO-272-4

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	6.75 ± 0.10
	Width	B ₀	24.05 ± 0.15
	Depth	K ₀	2.90 ± 0.15
	Pitch	P ₁	16.00 ± 0.10
	Diameter	D ₁	2.0 (min)
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.00 ± 0.15
	Cavity to Perforation (width)	F	20.20 ± 0.15
Cover Tape	Width	C	37.5 ± 0.10
Carrier Tape	Width	W	44.00 ± 0.30

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TO-272S-2

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	6.75 ± 0.10
	Width	B ₀	17.65 ± 0.15
	Depth	K ₀	2.90 ± 0.15
	Pitch	P ₁	16.00 ± 0.15
	Diameter	D ₁	2.0 (min)
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.0 ± 0.10
	Cavity to Perforation (width)	F	14.20 ± 0.15
Cover Tape	Width	C	25.5 ± 0.10
Carrier Tape	Width	W	32.00 ± 0.30

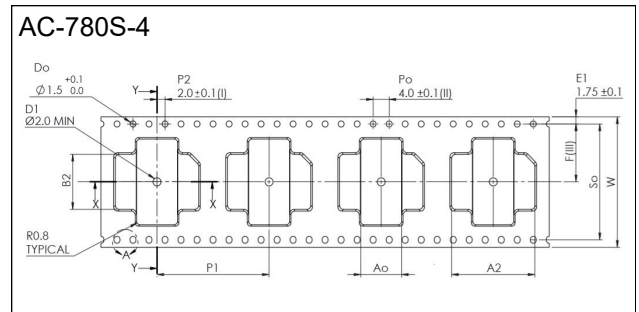
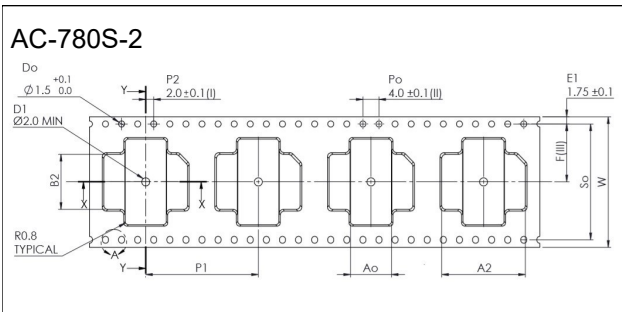
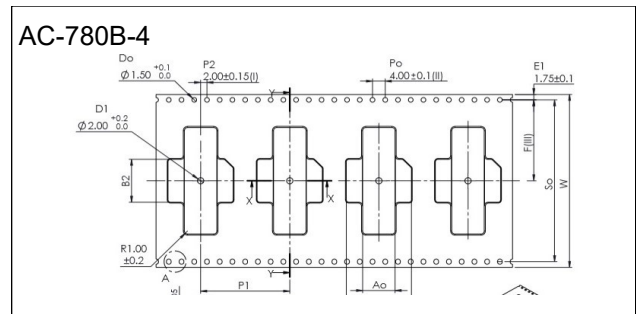
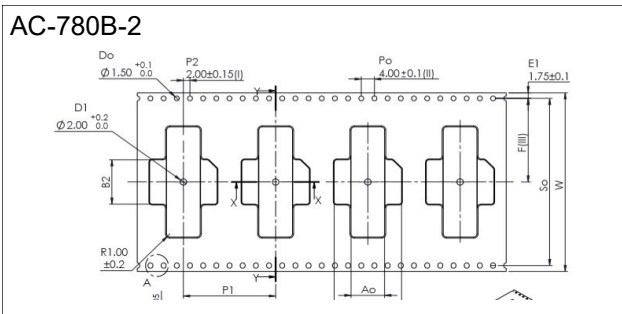
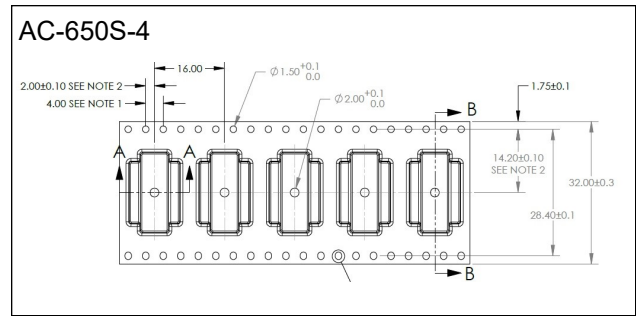
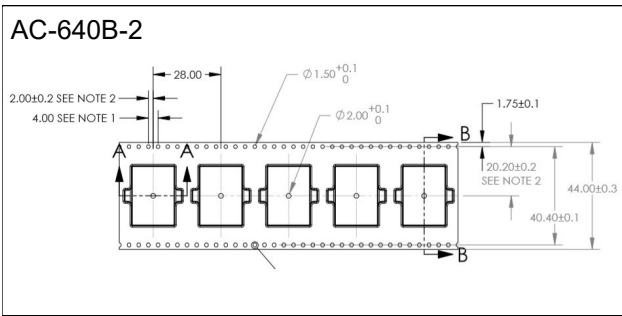
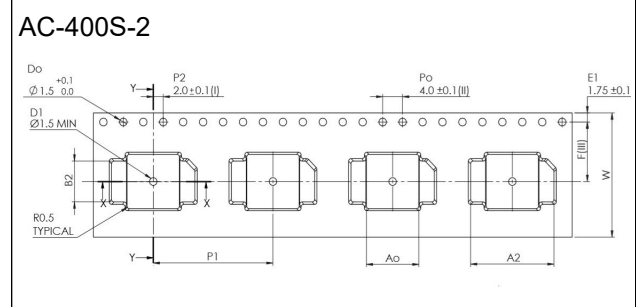
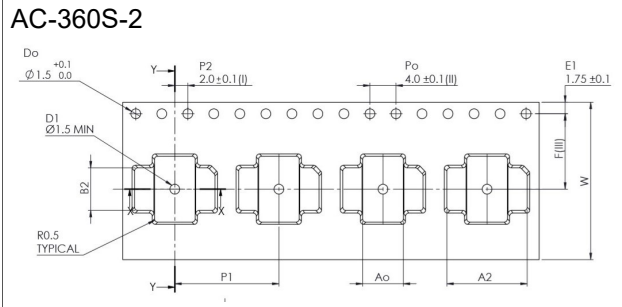
TO-272S-4

Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	6.75 ± 0.10
	Width	B ₀	17.65 ± 0.15
	Depth	K ₀	2.90 ± 0.15
	Pitch	P ₁	16.00 ± 0.10
	Diameter	D ₁	2.0 (min)
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.0 ± 0.1
	Cavity to Perforation (width)	F	14.20 ± 0.10
Cover Tape	Width	C	25.5 ± 0.10
Carrier Tape	Width	W	32.00 ± 0.20

TO-272S-4I

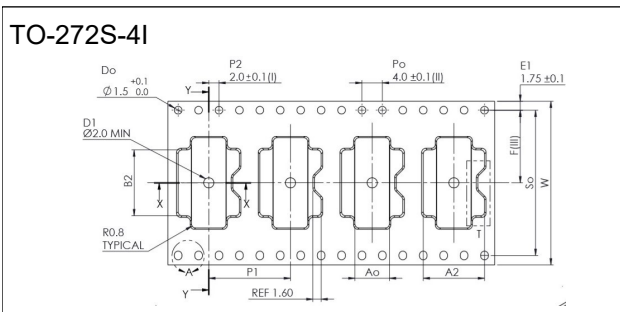
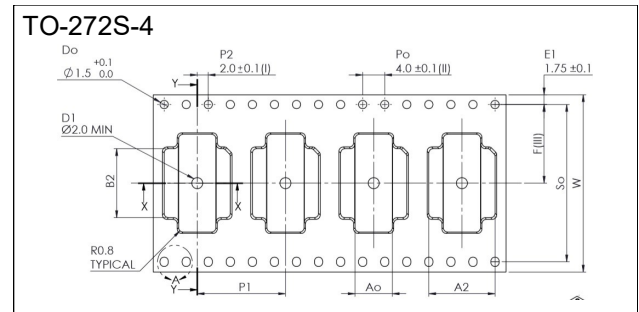
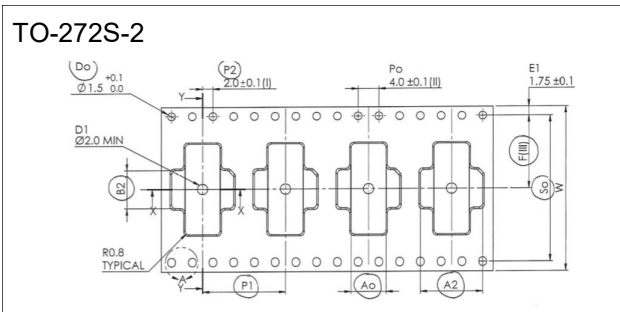
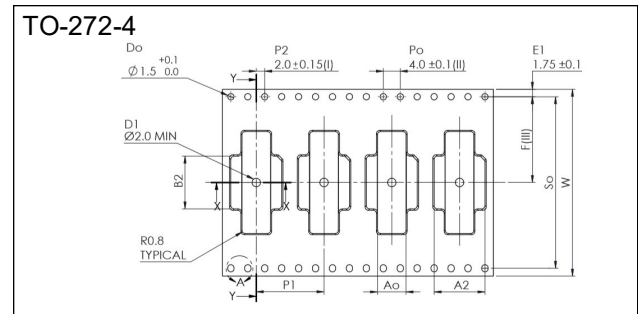
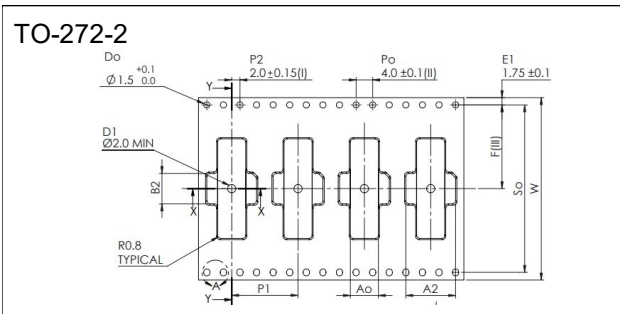
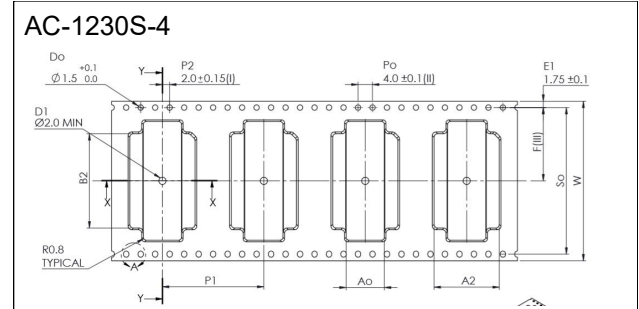
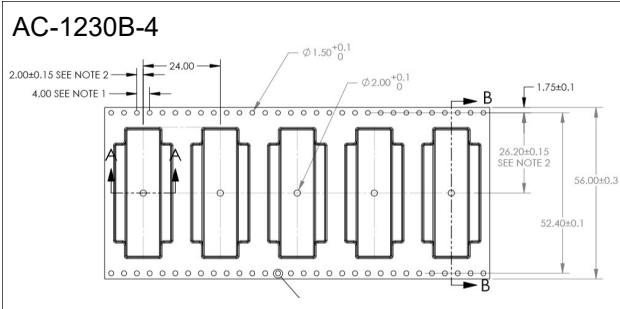
Tape Dimensions	Description	Symbol	Size (mm)
Cavity	Length	A ₀	6.75 ± 0.10
	Width	B ₀	17.65 ± 0.15
	Depth	K ₀	2.90 ± 0.15
	Pitch	P ₁	16.00 ± 0.15
	Diameter	D ₁	2.0 (min)
Distance Between Centerlines	Cavity to Perforation (length)	P ₂	2.0 ± 0.1
	Cavity to Perforation (width)	F	14.20 ± 0.15
Cover Tape	Width	C	25.5 ± 0.10
Carrier Tape	Width	W	32.00 ± 0.30

4.0 Component Orientation for Tape and Reel



Application Note

4.0 Component Orientation for Tape and Reel



Application Note

5.0 Reel Information^{3,4}

Package Type	Max. Devices per Reel	Reel Diameter (inches)
AC-360S-2	250	13
AC-400S-2	250	13
AC-640B-2	250	13
AC-650S-4	250	13
AC-780B-2 AC-780B-4 AC-780S-2 AC-780S-4	250	13
AC-1230B-4 AC-1230S-4	250	13
TO-272-2 TO-272-4 TO-272S-2 TO-272S-4 TO272S-4I	250	13

3. See individual data sheets for part number ordering information.

4. No more than 3 date codes, at no more than 8 weeks apart, will be combined on the same reel

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