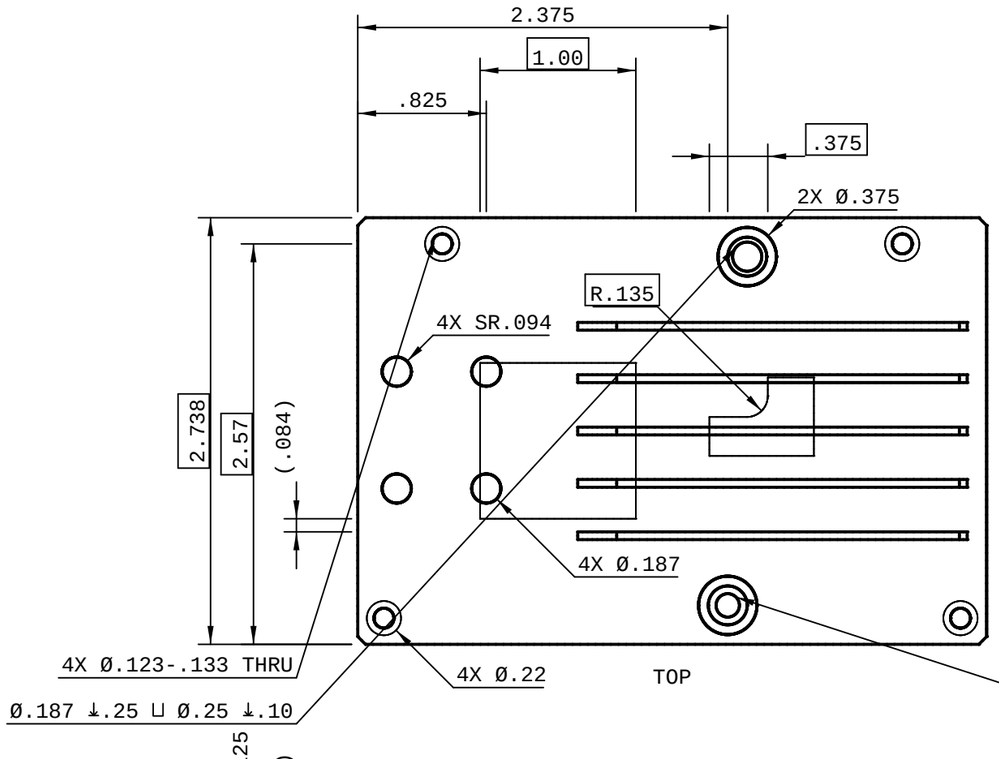
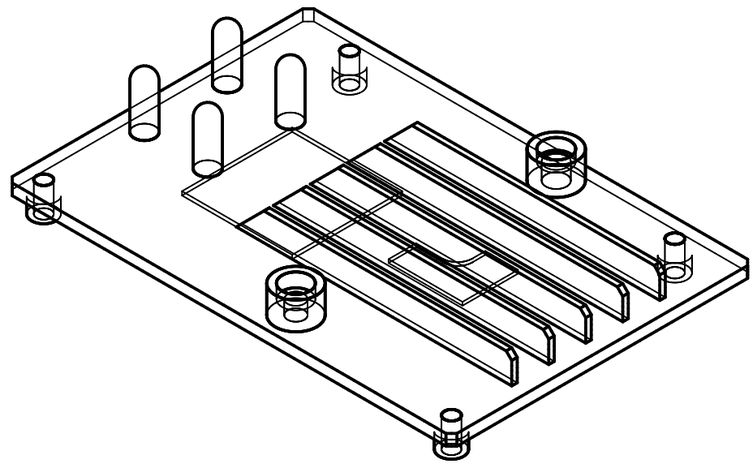
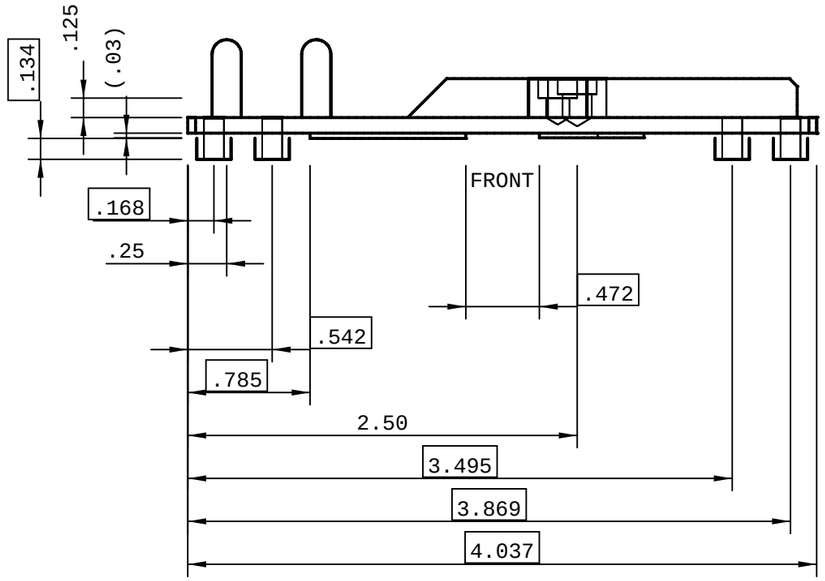
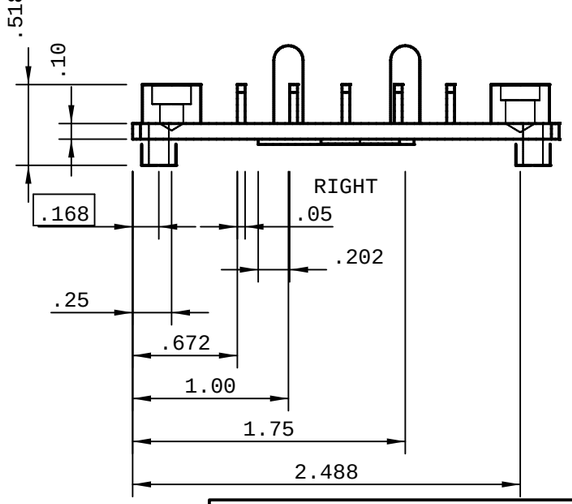
NC-HS-906 REV A

REVISIONS				
REV	DESCRIPTION	DATE	ECN	ECR









GEOMETRIC TOLERANCES (ASME Y14.5-2018)		
▱ .005	A	DATUM A — Z- FACE (4 COPLANAR)
⊥ .005 A	B	DATUM B — Y- FACE
⊥ .010 A B	C	DATUM C — X- FACE
4X ⌖ Ø.011Ⓜ A B C		4X Ø.123-.133 HOLES
⌓ .010 A B C		OUTLINE ALL AROUND INCL. 4X CORNER BREAKS
⌓ .010 A B C		PAD 1 1.000 X 1.000
⌓ .010 A B C		PAD 2 .671 X .504
// .005 A		Z+ FACE (OPPOSITE A)

BOXED DIMENSIONS ARE BASIC.
( ) = REFERENCE DIMENSION.
OTHERS: GENERAL TOLERANCE BLOCK.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
.X ±.02
.XX ±.010
.XXX ±.005
ANGLE ±1°
BREAK ALL SHARP EDGES .005-.015

TITLE
HEAT SINK (REBUILT FROM NIST 827-9999-906)

SIZE	PART NUMBER	REV	PROJ
A3	NC-HS-906	A	

MATERIAL	FINISH
AL 6061-T6	

DRAWN BY	DATE	ENG APPR	DATE	INITIAL ECN
	2026-09-30			

SCALE	WEIGHT	SHEET
1:1	0.136 lb	1 OF 2

SHEET FORMAT REV A

NC-HS-906 REV A

REVISIONS				
REV	DESCRIPTION	DATE	ECN	ECR

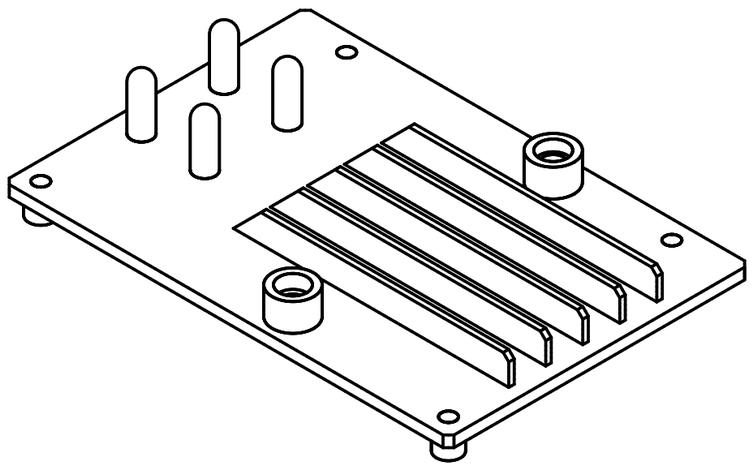
DATUM REFERENCE FRAME

DATUM	ROLE	FEATURE	FACES	FORM / ORIENTATION
A	PRIMARY - MOUNTING PADS	Z- FACE (4 COPLANAR)	4	FLATNESS .005
B	SECONDARY - EDGE FACE	Y- FACE	1	PERPENDICULARITY .005 TO A
C	TERTIARY - CLOCKING FACE	X- FACE	1	PERPENDICULARITY .010 TO A|B

FEATURE CONTROL FRAMES - ZONE BASIS

NO	CONTROL	ZONE	DRF	APPLIES TO	ZONE BASIS
T2	FLATNESS	.005	-	DATUM A: Z- FACE (4 COPLANAR)	PROFILE / 2 = .005
T4	PERPENDICULARITY	.005	A	DATUM B: Y- FACE	PROFILE / 2 = .005
T6	PERPENDICULARITY	.010	A|B	DATUM C: X- FACE	= PROFILE .010
T8	4X POSITION	Ø.011(M)	A|B|C	4X Ø.123-.133 HOLES	T = H - F = .123 - .112 (#4 FLOATING)
T9	PROFILE OF A SURFACE	.010	A|B|C	OUTLINE ALL AROUND INCL. 4X CORNER BREAKS	2 X CNC ±.005 (DFM TABLE)
T10	PROFILE OF A SURFACE	.010	A|B|C	PAD 1 1.000 X 1.000	2 X CNC ±.005 (DFM TABLE)
T11	PROFILE OF A SURFACE	.010	A|B|C	PAD 2 .671 X .504	2 X CNC ±.005 (DFM TABLE)
T7	PARALLELISM	.005	A	Z+ FACE (OPPOSITE A)	REFINES THE THICKNESS ±.005

NOTES
1. SHEET 1 CARRIES THE FRAMES. THIS SHEET RESTATES THEM; VALUES ARE THE SAME.
2. HARDWARE ASSUMED: #4 SCREW, FLOATING FASTENER (F = .112).
   4X Ø.123 AT MMC: T = H - F = Ø.011 (ASME Y14.5 FASTENER FORMULA).
3. PROFILE .010 = 2 X CNC MILLING ±.005; DATUM FORM .005 = PROFILE / 2.
4. ALL OTHER DIMENSIONS: GENERAL TOLERANCE BLOCK (SHEET 1).



ISO

BONUS ENVELOPE AND MINIMUM WALL (INCH)

HOLES	ZONE AT MMC	ZONE AT LMC	BONUS	HARDWARE
4X Ø.123-.133	Ø.011(M)	Ø.021	.010	#4 FLOATING

WALL	AT STATED ZONE	WORST (BONUS)	MIN	OK
HC1.1 TO HC1.3	2.287	2.277	.031	YES
HC1.1 TO EDGE	.091	.086	.031	YES
HC1.2 TO HC1.4	2.287	2.277	.031	YES
HC1.2 TO EDGE	.091	.086	.031	YES
HC1.3 TO EDGE	.091	.086	.031	YES
HC1.4 TO EDGE	.091	.086	.031	YES

TIGHTEST WALL, MMC BONUS APPLIED: .086 (HC1.1 TO EDGE); REQUIRED .031.
LARGEST BONUS = THE HOLE SIZE TOLERANCE, .010. ALL WALLS PASS.
MIN WALL: 0.8 MM CNC FLOOR (DFM TABLE). WALL = MATERIAL LEFT.

COMPARED WITH NIST 827-9999-906

ITEM	NIST	NATIVECAD
UNITS	INCH	INCH (ASME-IN SHOP PROFILE)
DATUMS	A, B, C	A PADS, B EDGE, C CLOCKING FACE
GENERAL PROFILE	.016 A B C (NOTE 4)	.010 A|B|C, OUTLINE + 2 PADS
MOUNTING HOLES	4X .123-.133 POS .005(M)	4X Ø.123-.133 POS Ø.011(M) A|B|C
HOLE ZONE FROM	TYPED IN	T = H - F, THE #4 SCREW
HARDWARE	NOT STATED	#4 FLOATING, NOTE 2
BONUS AND WALL	NOT TABULATED	TABLE ABOVE
PART NUMBER	827-9999-906	NC-HS-906

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
  .X ±.02
  .XX ±.010
  .XXX ±.005
  ANGLE ±1°
BREAK ALL SHARP EDGES .005-.015

TITLE
HEAT SINK (REBUILT FROM NIST 827-9999-906)

SIZE	PART NUMBER	REV	PROJ
A3	NC-HS-906	A	

MATERIAL	FINISH
AL 6061-T6	

DRAWN BY	DATE	ENG APPR	DATE	INITIAL ECN
	2026-09-30			

SCALE	WEIGHT	SHEET
1:1	0.136 lb	2 OF 2

SHEET FORMAT REV A