

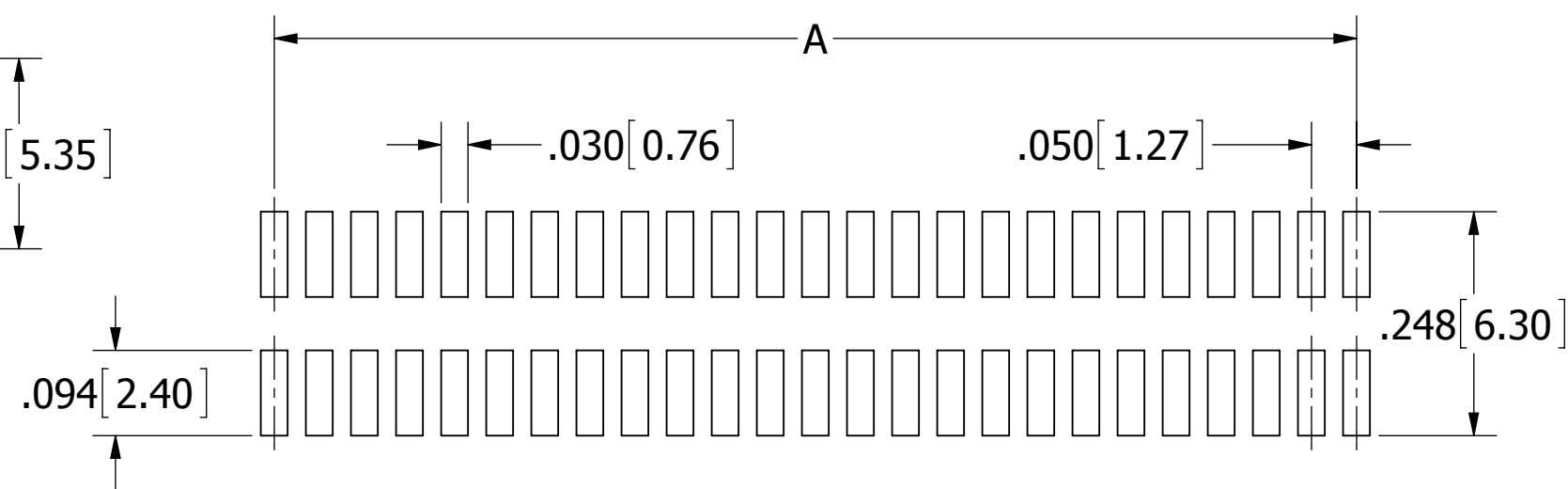
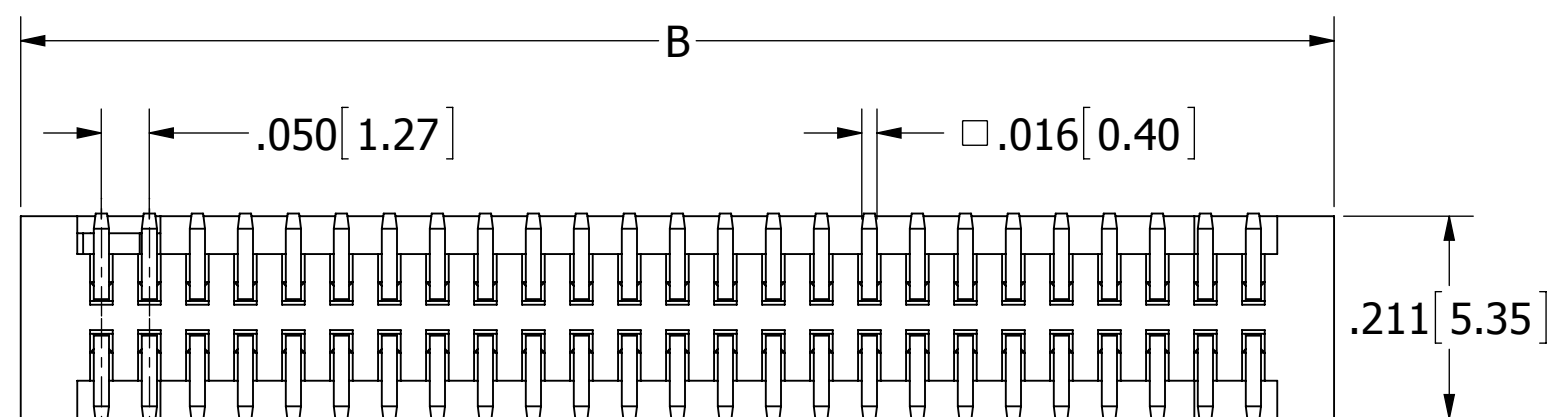
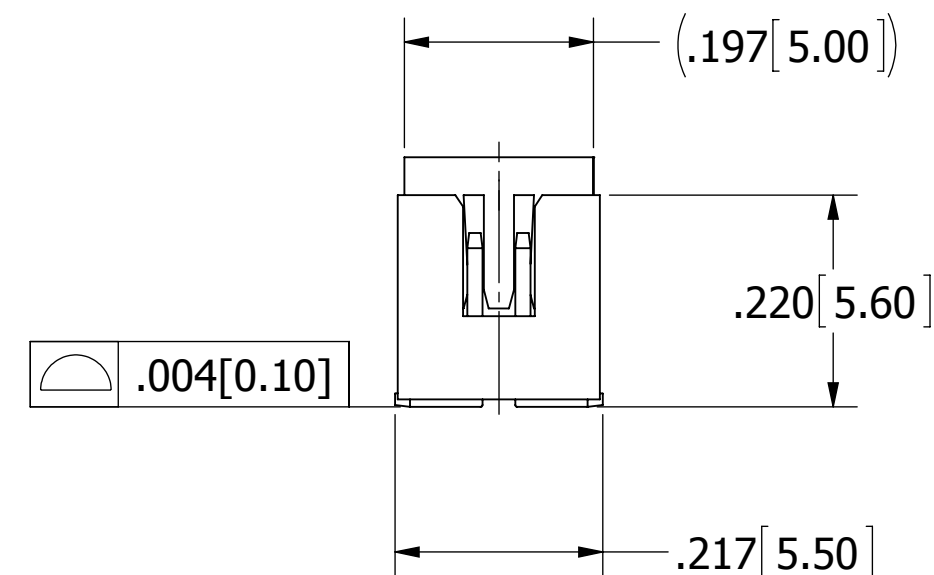
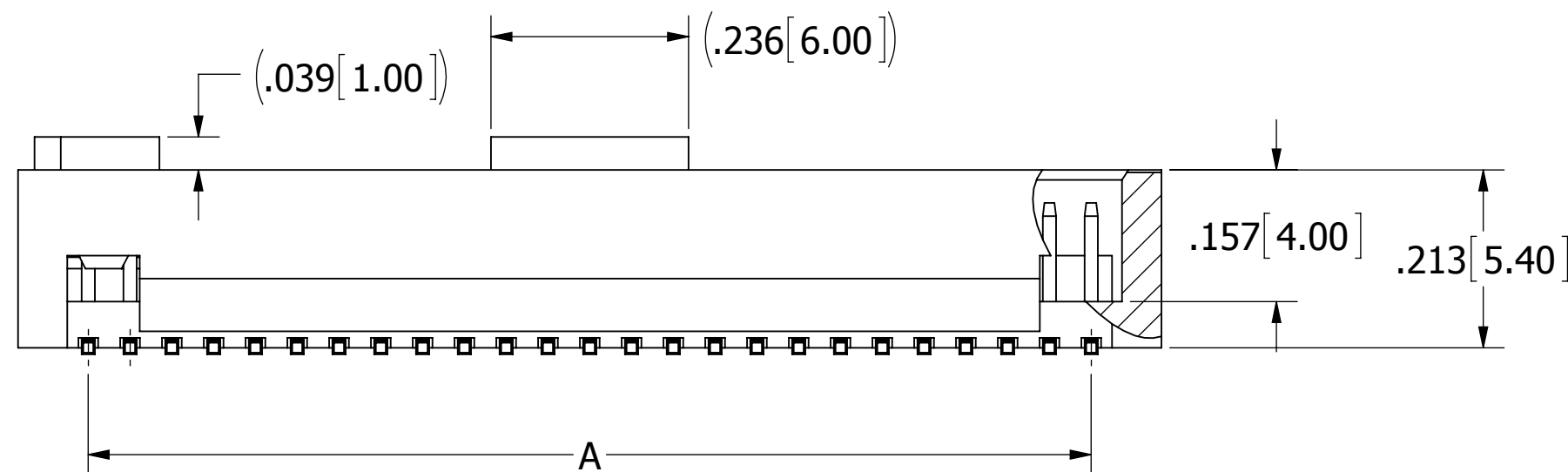
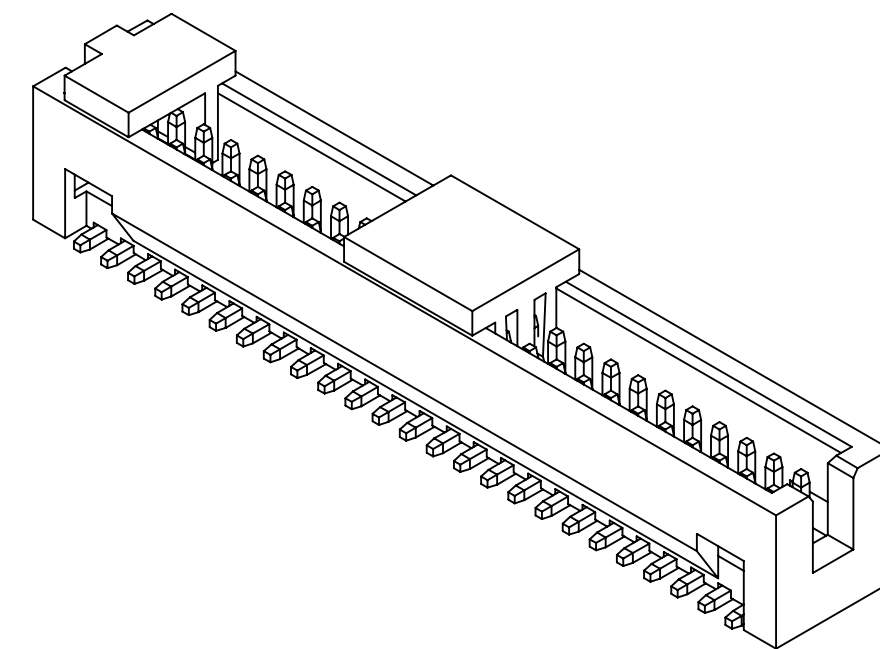
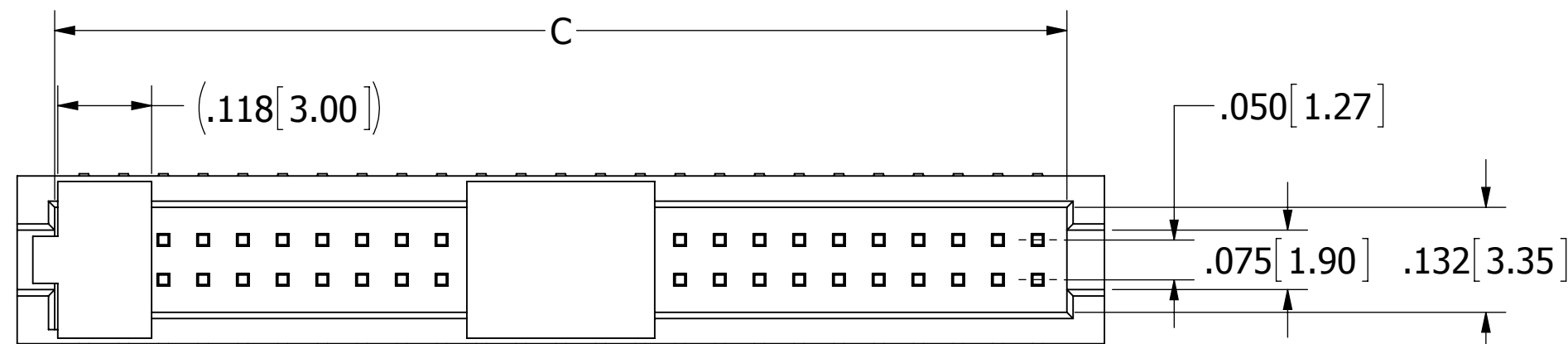
POSITIONS/ CONTACTS	A		B		C	
	INCH	MM	INCH	MM	INCH	MM
03/06	0.100	2.54	0.268	6.81	0.174	4.41
04/08	0.150	3.81	0.318	8.08	0.224	5.68
05/10	0.200	5.08	0.368	9.35	0.274	6.95
06/12	0.250	6.35	0.418	10.62	0.324	8.22
07/14	0.300	7.62	0.468	11.89	0.374	9.49
08/16	0.350	8.89	0.518	13.16	0.424	10.76
09/18	0.400	10.16	0.568	14.43	0.474	12.03
10/20	0.450	11.43	0.618	15.70	0.524	13.30
11/22	0.500	12.70	0.668	16.97	0.574	14.57
12/24	0.550	13.97	0.718	18.24	0.624	15.84
13/26	0.600	15.24	0.768	19.51	0.674	17.11
14/28	0.650	16.51	0.818	20.78	0.724	18.38
15/30	0.700	17.78	0.868	22.05	0.774	19.65
16/32	0.750	19.05	0.918	23.32	0.824	20.92
17/34	0.800	20.32	0.968	24.59	0.874	22.19
18/36	0.850	21.59	1.018	25.86	0.924	23.46
19/38	0.900	22.86	1.068	27.13	0.974	24.73
20/40	0.950	24.13	1.118	28.40	1.024	26.00
21/42	1.000	25.40	1.168	29.67	1.074	27.27
22/44	1.050	26.67	1.218	30.94	1.124	28.54
23/46	1.100	27.94	1.268	32.21	1.174	29.81
24/48	1.150	29.21	1.318	33.48	1.224	31.08
25/50	1.200	30.48	1.368	34.75	1.274	32.35
26/52	1.250	31.75	1.418	36.02	1.324	33.62
27/54	1.300	33.02	1.468	37.29	1.374	34.89
28/56	1.350	34.29	1.518	38.56	1.424	36.16
29/58	1.400	35.56	1.568	39.83	1.474	37.43
30/60	1.450	36.83	1.618	41.10	1.524	38.70
31/62	1.500	38.10	1.668	42.37	1.574	39.97
32/64	1.550	39.37	1.718	43.64	1.624	41.24
33/66	1.600	40.64	1.768	44.91	1.674	42.51
34/68	1.650	41.91	1.818	46.18	1.724	43.78
35/70	1.700	43.18	1.868	47.45	1.774	45.05
36/72	1.750	44.45	1.918	48.72	1.824	46.32
37/74	1.800	45.72	1.968	49.99	1.874	47.59
38/76	1.850	46.99	2.018	51.26	1.924	48.86
39/78	1.900	48.26	2.068	52.53	1.974	50.13
40/80	1.950	49.53	2.118	53.80	2.024	51.40
41/82	2.000	50.80	2.168	55.07	2.074	52.67
42/84	2.050	52.07	2.218	56.34	2.124	53.94
43/86	2.100	53.34	2.268	57.61	2.174	55.21
44/88	2.150	54.61	2.318	58.88	2.224	56.48
45/90	2.200	55.88	2.368	60.15	2.274	57.75
46/92	2.250	57.15	2.418	61.42	2.324	59.02
47/94	2.300	58.42	2.468	62.69	2.374	60.29
48/96	2.350	59.69	2.518	63.96	2.424	61.56
49/98	2.400	60.96	2.568	65.23	2.474	62.83
50/100	2.450	62.23	2.618	66.50	2.524	64.10

### PART NUMBER CODING

**SBH31-NBPB-D -SM-BK-M81**

**TERMINATION TYPE**  
SURFACE MOUNT W/O GUIDE POSTS  
**NUMBER OF POSITIONS**  
(CONTACTS PER ROW, 03 TO 50)

REVISIONS				
REV.	ECO. NO	DESCRIPTION	DATE	BY
A	2671	INITIAL RELEASE	09/11/2012	LH

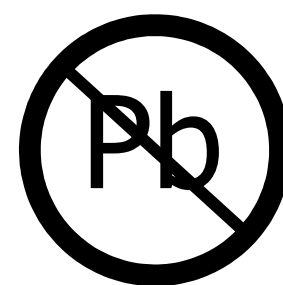


### RECOMMENDED PCB LAYOUT

#### NOTES:

- INSULATOR MATERIAL: NYLON 6T, 94V-0. COLOR: BLACK.
- CONTACT MATERIAL: BRASS.
- CONTACT PLATING: .000030" ~ .000050" NICKEL UNDERPLATE, GOLD FLASH OVER ALL.
- CONTACT RESISTANCE: 20 MILLIOHMS MAX.
- INSULATOR RESISTANCE: 5000 MEGAOHMS MIN.
- CURRENT RATING: 1 AMP.
- DIELECTRIC WITHSTANDING: 500V AC.
- OPERATING TEMPERATURE: -40° C ~ +105° C.
- \*PROCESSING TEMP.: 230° C FOR 60 SECONDS MAX.  
(260° C FOR 10 SECONDS MAX.)
- MODIFICATION: WITH PICK & PLACE CAP IN TAPE & REEL.

\*INDICATED TEMPERATURE AND TIME IS FOR COMPONENT INSULATOR. HIGHER PROCESSING TEMPERATURES MAY BE USED, PROVIDED HEAT IS APPLIED FROM BACK SIDE OF PCB, AND INSULATOR DOES NOT EXCEED INDICATED TEMPERATURE AND TIME.



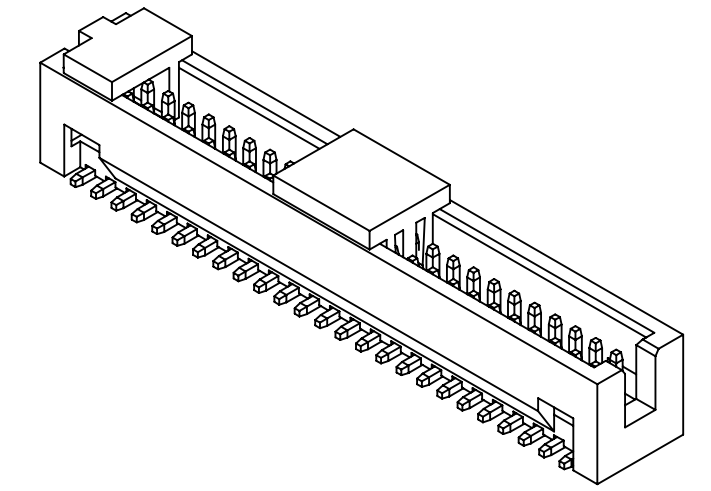
RoHS COMPLIANT

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES [MM]	DRAWN	DATE	NAME	
		09/11/2012	LH	
TOLERANCES:  ANGULAR:  .XX=± .012 [0.3] .XXX=± .008 [0.20] .XXXX=± .0040 [0.100]	THE INFORMATION HEREIN CONTAINS PROPRIETARY INFORMATION OF SULLINS ELECTRONICS AND IS NOT TO BE REPRODUCED, USED OR DISCLOSED TO OTHERS FOR ANY PURPOSE EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY AN OFFICER OF SULLINS ELECTRONICS.			TITLE
				BOX HEADER .050 [1.27] PITCH, 2 ROWS, SMT W/ T & R
PART NUMBER				REV
SBH31-NBPB-D -SM-BK-M81				A
SIZE	CAGE CODE	DWG. NO.		
C	54453	12089		
SCALE: 5:1			SHEET 1 OF 2	

- NOTE:
1. CUMULATIVE PITCH TOLERANCE FOR 10 SPROCKET HOLES IS  $\pm 0.20\text{mm}$ .
  2. CARRIER CAMBER IS 1mm IN 100mm.
  3. A0 AND B0 MEASURED ON A PLANE 0.3mm ABOVE THE BOTTOM OF THE POCKET.
  4. K0 MEASURED FROM A PLANE ON THE INSIDE BOTTOM OF THE POCKET TO THE TOP SURFACE OF THE CARRIER.
  5. PACKING CONFORMS EIA-481-2 STANDARDS.
  6. ONE  $\phi 13"$  REEL = 7.0 METER (OVERALL LENGTH OF TAPE), 500 PIECES.

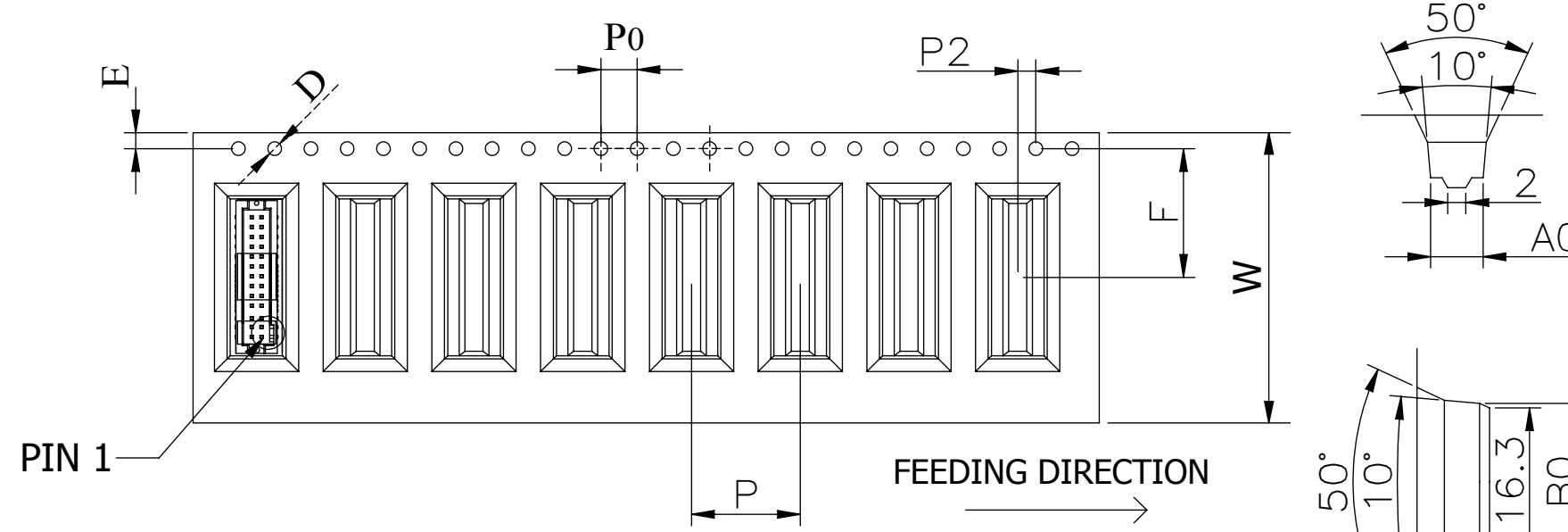
DEVICE TYPE: SBH31-NBPB-D\_\_-SM-BK-M81 MATERIAL: P.S 0.4 BLACK

DIMENSIONS	A0 $\pm 0.1$	K0 $\pm 0.1$	P $\pm 0.1$	E $\pm 0.1$	D $+0.1/-0.0$	P0 $\pm 0.1$	P2 $\pm 0.1$
(unit: mm)	5.8	8.0	12.0	1.75	1.5	4.0	2.0

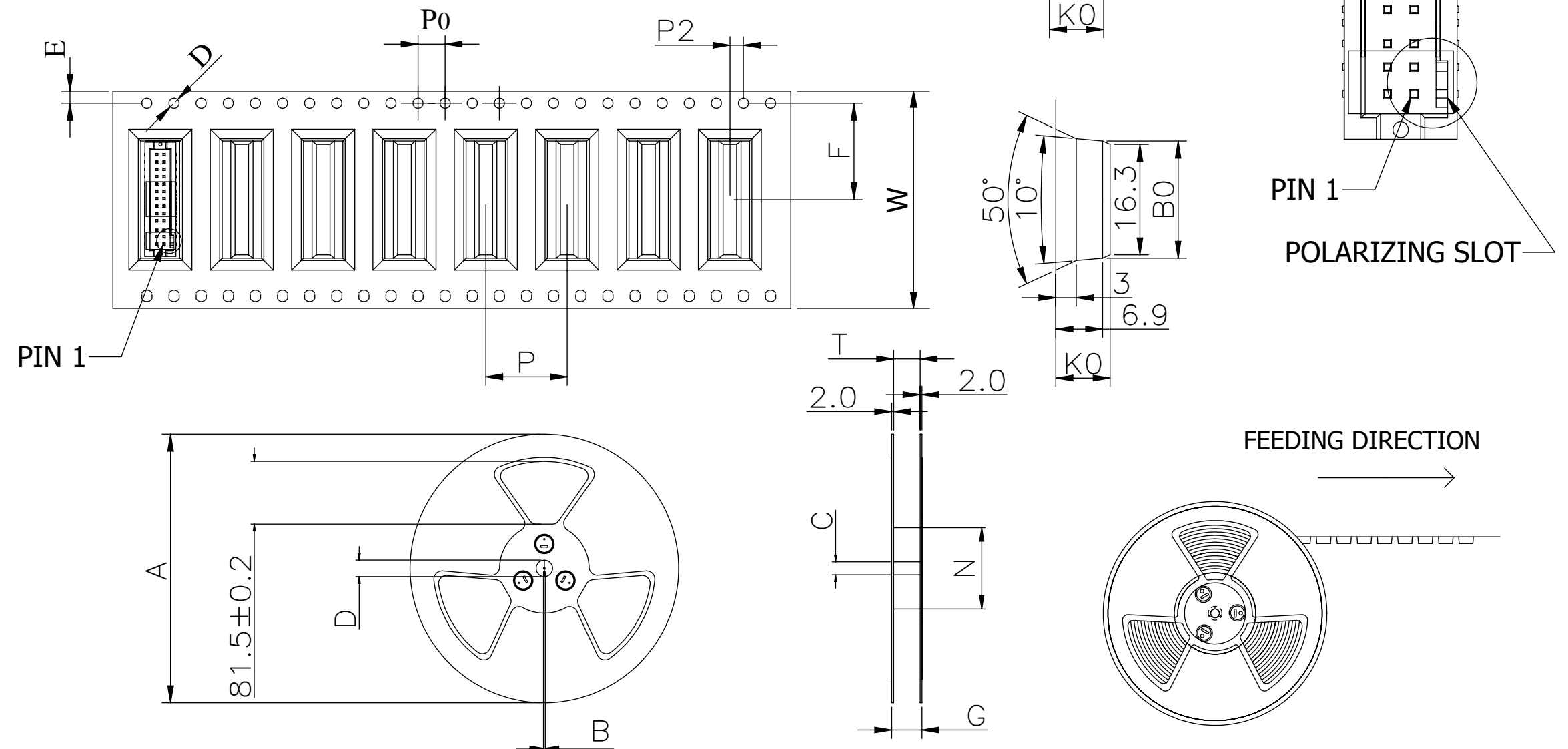


SBH31-NBPB-D\_\_-SM-BK-M81

TAPE TYPE 1: FOR POSITION NUMBERS 03 THRU 05 (TAPE WIDTH < 32mm)

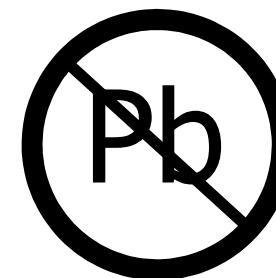


TAPE TYPE 2: FOR POSITION NUMBERS 06 THRU 50 (TAPE WIDTH  $\geq 32\text{mm}$ )



POSITIONS/ CONTACTS	DIMENSIONS (unit: mm)			POSITIONS/ CONTACTS	DIMENSIONS (unit: mm)		
	W	B0	F		W	B0	F
03/06	24.00	6.81	10.25	27/54	56.00	37.29	26.25
04/08	24.00	8.08	10.25	28/56	56.00	38.56	26.25
05/10	24.00	9.35	10.25	29/58	56.00	39.83	26.25
06/12	32.00	10.62	14.25	30/60	56.00	41.10	26.25
07/14	32.00	11.89	14.25	31/62	56.00	42.37	26.25
08/16	32.00	13.16	14.25	32/64	56.00	43.64	26.25
09/18	32.00	14.43	14.25	33/66	72.00	44.91	34.25
10/20	32.00	15.70	14.25	34/68	72.00	46.18	34.25
11/22	32.00	16.97	14.25	35/70	72.00	47.45	34.25
12/24	32.00	18.24	14.25	36/72	72.00	48.72	34.25
13/26	32.00	19.51	14.25	37/74	72.00	49.99	34.25
14/28	32.00	20.78	14.25	38/76	72.00	51.26	34.25
15/30	44.00	22.05	20.25	39/78	72.00	52.53	34.25
16/32	44.00	23.32	20.25	40/80	72.00	53.80	34.25
17/34	44.00	24.59	20.25	41/82	72.00	55.07	34.25
18/36	44.00	25.86	20.25	42/84	72.00	56.34	34.25
19/38	44.00	27.13	20.25	43/86	88.00	57.61	42.25
20/40	44.00	28.40	20.25	44/88	88.00	58.88	42.25
21/42	44.00	29.67	20.25	45/90	88.00	60.15	42.25
22/44	44.00	30.94	20.25	46/92	88.00	61.42	42.25
23/46	56.00	32.21	26.25	47/94	88.00	62.69	42.25
24/48	56.00	33.48	26.25	48/96	88.00	63.96	42.25
25/50	56.00	34.75	26.25	49/98	88.00	65.23	42.25
26/52	56.00	36.02	26.25	50/100	88.00	66.50	42.25

DIMENSIONS (unit: mm)							CARRIER TAPE
A	B $\pm 0.5$	C $\pm 0.2$	D $\pm 1.0$	N $\pm 1.0$	T $\pm 0.1$	G $\pm 0.1$	W
330	2.2	13	20.2	100	8.5	13.1	8
330	2.2	13	20.2	100	12.5	17.1	12
330	2.2	13	20.2	100	17.0	21.1	16
330	2.2	13	20.2	100	24.5	29.1	24
330	2.2	13	20.2	100	32.5	37.0	32
330	2.2	13	20.2	100	44.5	49.1	44
330	2.2	13	20.2	100	56.5	61.1	56
330	2.2	13	20.2	100	72.5	77.1	72
330	2.2	13	20.2	100	88.5	93.1	88



RoHS COMPLIANT

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES [MM]	DRAWN	DATE	NAME	
		09/11/2012	LH	
TOLERANCES:  ANGULAR:  .XX = $\pm .012$ [.30] .XXX = $\pm .008$ [.20] .XXXX = $\pm .0040$ [.100]	THE INFORMATION HEREIN CONTAINS PROPRIETARY INFORMATION OF SULLINS ELECTRONICS AND IS NOT TO BE REPRODUCED, USED OR DISCLOSED TO OTHERS FOR ANY PURPOSE EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY AN OFFICER OF SULLINS ELECTRONICS.			TITLE
				BOX HEADER .050 [1.27] PITCH, 2 ROWS, SMT W/ T & R
PART NUMBER				REV
SBH31-NBPB-D__-SM-BK-M81				A
SIZE	CAGE CODE	DWG. NO.		
C	54453	12089		
SCALE: 4:1	SHEET 2 OF 2			