

5 mm pitch SMT & THR connectors without anchoring elements for automatic handling

Table # 1 GENERAL GUIDELINE FOR SIZING EMBOSSED CARRIER TAPING

Reference standard: EIA - 481 - C

Number of poles	Length of connector (mm)	Tape size for single row (mm)
2	10 to 12	24
3	15 to 17	24
4	20 to 22	32
5	25 to 27	44
6	30 to 32	44
7	35 to 37	56
8	40 to 42	56
9	45 to 47	72
10	50 to 52	72
11	55 to 57	72
12	60 to 62	88
13	65 to 67	88
14	70 to 72	88
15	75 to 77	104
16	80 to 82	104
17	85 to 87	104
18	90 to 92	120
19	95 to 97	120
20	100 to 102	120
21	105 to 107	120
22	110 to 112	136
23	115 to 117	136
24	120 to 122	136

Most popular Sizes

Table # 2 Connector Pole Quantity and Length

Type	Poles	Length (mm)
120-M-211-SMD	2 to 12	No. poles x 5 + 2mm
120-M-211-THR	2 to 24	No. poles x 5 + 2mm
120-M-221-SMD	2 to 24	No. poles x 5 + 2mm
120-M-221-THR	2 to 24	No. poles x 5 + 2mm
971-SLK-SMD	2 to 12	No. poles x 5
971-SLK-THR	2 to 12	No. poles x 5
971-SLR-SMD	2 to 12	No. poles x 5
971-SLR-THR	2 to 12	No. poles x 5
971-SLT-SMD	2 to 12	No. poles x 5
950-THR	2 to 12	No. poles x 5
970-THR	2 to 12	No. poles x 5 + 1mm

Table # 3 Reel sizes, hub and overall diameters:

Carrier tape width mm	Minimum reel hub mm diam	Maximum reel overall mm diam	Carrier tape width inch	Minimum reel hub inch diam	Maximum reel overall inch diam	Preferred mfg. Method
12	50	330	0.47	2	13	embossed
16	50	330	0.63	2	13	embossed
24	50	360	0.94	2	14	embossed
32	50	360	1.26	2	14	embossed
44	50	360	1.73	2	14	embossed
56	100	609	2.2	4	24	embossed
72	80	609	2.83	3	24	embossed
88	80	609	3.46	3	24	embossed
104	80	609	4.09	3	24	embossed
120	80	609	4.72	3	24	embossed
136	80	609	5.35	3	24	embossed
152	80	609	5.98	3	24	embossed
168	80	609	6.61	3	24	embossed

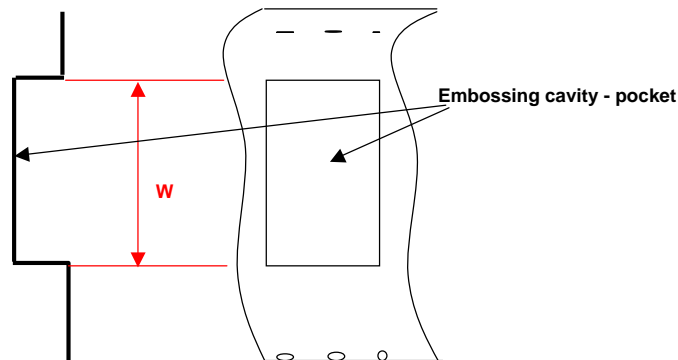
EXPLANATORY NOTES FOR REEL SIZE:

- * Typical product quantity packed in tape & reel is 200 - 300 parts per reel.
- * Quantities per reel depend on product shape, reel's hub & overall diameter, the amount of empty pockets in the leader & trailer, and weight & other.
- * As shown in table 1 the most popular sizes for Tape & Reel are: 44 mm and 56 mm.
- * Double or triple row reels can be developed if requested. These have two or three products in two or three cavities per pitch position.
- * The leader is the first end out of the full reel. It is on the outside of the reel and typically 390 mm (15 in.) to 560 mm (22 in.) long
- * The trailer is the last end out of the reel that has just been emptied. It is inside near the hub and typically 160 mm (6 in.) long.

GENERAL RULE FOR TAPE WIDTH:

- * Because of the pocket draft angle a wider tape than the standard may be required. This draft angle depends on pocket depth and connector shape.
- * Depending on shape a narrower tape may be adequate or a wider tape may be required than table 1.
- * 44 mm and 56 mm tapes tend to be practical; connectors fit well into them; loaders are usually available at the CEM or OEM.
- * 32, 44, 56, 72, 88 & 104 mm tapes have two sets of sprocket holes.
- * Applies to deep embossed, adhesive sealed carrier tape and to mechanically interlocked tape.
- * **Tape width** shall be chosen as per the **table 4** (ANSI/EIA-481-C, Table 1):

Table # 4	Pocket width
Tape Size (mm)	W max (mm)
24	20
32	23
44	35
56	46
72	60
88	76
104	91
120	107
136	123
152	139
168	153
184	169
200	185



Examples of computing:

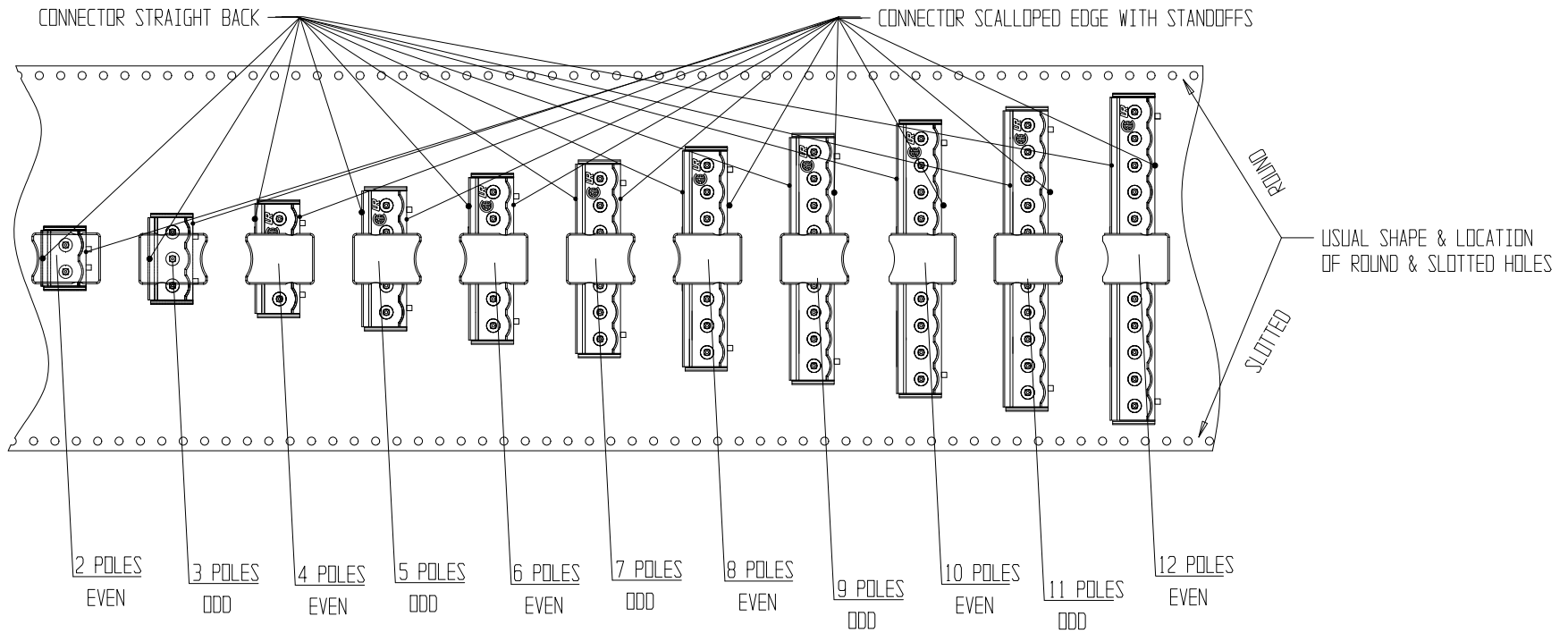
- * 120-M-211-SMD/05 --> From Table 2 L = 27 mm length, thus pocket width W = 27 mm which fits within Wmax 35 mm (Table 4), from here tape size = 44 mm.
- * 971-SLR-SMD/08 --> From Table 2 L = 40 mm length, thus pocket width W = 40 mm which fits within Wmax 46 mm (Table 4), from here tape size = 56 mm.
- * 970-THR/10 --> From Table 2 L = 51 mm length, thus pocket width W = 51 mm which fits within Wmax 60 mm (Table 4), from here tape size = 72 mm.

POSITIONING IN T&R POCKET FOR: - 120-M-221-SMD
 - 120-M-221-THR



UNREELING/UNLOADING DIRECTION AT CUSTOMER

CONNECTOR SCALLOPED EDGE WITH STANDOFFS LEADING AT CUSTOMER
 CONNECTOR STRAIGHT BACK TRAILING AT CUSTOMER



LOADING DIRECTION AT WECO

CONNECTOR STRAIGHT BACK LEADING AT WECO
 CONNECTOR SCALLOPED EDGE WITH STANDOFFS TRAILING AT WECO

TAPE WIDTH WILL VARY WITH CONNECTOR POLE SIZE