

SMD Steel Spacer

WA-SMSI, WA-SMSE, WA-SMST with outer Diameter 6,0mm

Performance Testing

Breaking Torque



Pull Strength

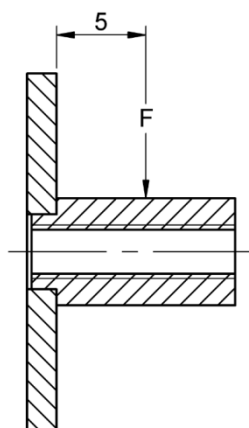


Shearforce



Performance Testing with lead-free solder paste

Data Point	977 1xx 036 0				977 4xx 036 0 / 977 4xx 096 0			
	Shearforce (in N)	Breaking Torque		Pull Strength (in N)	Shearforce (in N)	Breaking Torque		Pull Strength (in N)
		Nm	Point of breaking			Nm	Point of breaking	
1	400	1,2	Thread	500	210	1,8	Solder	530
2	360	1,1	Thread	450	260	1,9	Solder	350
3	285	1,3	Thread	580	270	1,8	Solder	540
4	440	1,3	Thread	600	280	1,9	Solder	450
5	340	1,3	Thread	620	250	2,1	Solder	480
6	400	1,1	Thread	630	235	1,9	Solder	340
7	345	1,2	Thread	570	285	1,6	Solder	500
8	420	1,3	Thread	690	245	1,9	Solder	400
9	330	1,3	Thread	710	290	2,1	Solder	340
10	250	1,1	Thread	800	260	1,7	Solder	350
11	340	1,2	Thread	550	290	2,0	Solder	350
12	320	1,4	Thread	620	310	1,8	Solder	320
13	330	1,4	Thread	610	250	1,7	Solder	440
14	290	1,3	Thread	650	350	1,8	Solder	350
15	295	1,4	Thread	630	410	1,8	Solder	450
16	340	1,2	Thread	500	400	1,6	Solder	500
17	300	1,1	Thread	620	400	2,1	Solder	380
18	350	1,2	Thread	610	410	1,7	Solder	340
19	300	1,1	Solder	520	450	1,7	Solder	350
20	320	1,3	Thread	630	240	1,9	Solder	350
21	490	1,2	Thread	570	350	1,7	Solder	450
22	330	1,2	Thread	640	290	1,6	Solder	340
23	400	1,4	Thread	600	230	1,6	Solder	500
24	290	1,4	Thread	700	330	1,7	Solder	380
25	400	1,4	Thread	780	280	1,8	Solder	430
26	280	1,4	Thread	780	340	1,6	Solder	360
27	320	1,1	Thread	640	240	1,9	Solder	470
28	350	1,2	Thread	740	260	1,6	Solder	420
29	290	1,4	Thread	620	330	1,7	Solder	440
30	330	1,2	Thread	650	240	1,9	Solder	380
Min.	250	1,1		450	210	1,6		320
Max.	490	1,4		800	450	2,1		540
Average	341	1,3		627	300	1,8		409



pressure point Shearforce
(distance 5mm)

Conditions:

- Oven: Solano RO 500
- Soldering profile: IPC/JEDEC J-STD-020D
- PCB: 1,55mm thick, double layer FP-4
- PCB Surface: 35µ Cu, NiAu-finish
- Adhesive strength of copper layer FR4: IPC-TM-650
- Solder Paste: Keatin: Alloy Sn96,5AG3CU0,5/Metall 88%
- Stencil thickness: 150 µm
- Vias: None
- Spokes: 9771xx0360 – 4-spoke stencil
9774xx0360 – 2-spoke stencil
9774xx0960 – 2-spoke stencil