Test Location: CKC Laboratories, Inc. • 5473A Clouds Rest • Mariposa, CA 95338 • 800-500-4362

Customer: **HID**
Specification: **FCC 15.209**
Work Order #: **77304** Date: 07/19/2001
Test Type: **Maximized Emissions** Time: 15:53:51
Equipment: **Proximity Card Reader** Sequence#: 6
Manufacturer: HID Tested By: Randal Clark
Model: 5455/8B (5455-310)
S/N: 2901-2

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer RF Section	2209A01404	11/03/2000	11/03/2001	490
Spectrum Analyzer Display	2403A08241	11/03/2000	11/03/2001	489
QP Adapter	2811A01267	11/03/2000	11/03/2001	478
Preamplifier	1937A02604	03/29/2001	03/29/2002	0
Log Periodic	154	05/07/2001	05/07/2002	0
Biconical Antenna	156	12/18/2000	12/18/2001	0

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Proximity Card Reader*	HID	5455/8B (5455-310)	2901-2

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward Electric Instruments	TPS-2000	920035

Test Conditions / Notes:

EUT is a proximity card reader operating on a frequency of 125kHz. EUT is powered by 12VDC though a DC power supply. EUT is operating in normal mode with no card in the field. Frequency Range Tested: 30MHz - 1000MHz

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	Amp dB	Bicon dB	Log 1 dB	Cable dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	151.559M QP	40.8	-26.8	+12.7	+0.0	+2.3	+10.0	39.0	43.5	-4.5	Vert
^	151.550M	43.0	-26.8	+12.7	+0.0	+2.3	+10.0	41.2	43.5	-2.3	Vert
^	151.600M	42.9	-26.8	+12.7	+0.0	+2.3	+10.0	41.1	43.5	-2.4	Vert

4	344.480M	35.3	- 26.7	+0.0	+18.6	+3.9	+10.0	41.1	46.0	- 4.9	Vert
5	302.640M	32.3	- 26.5	+0.0	+21.1	+3.7	+10.0	40.6	46.0	- 5.4	Vert
6	164.400M	38.3	- 26.8	+14.1	+0.0	+2.5	+10.0	38.1	43.5	- 5.4	Vert
7	151.561M QP	39.1	- 26.8	+12.7	+0.0	+2.3	+10.0	37.3	43.5	- 6.2	Vert
8	151.025M QP	38.9	- 26.8	+12.7	+0.0	+2.3	+10.0	37.1	43.5	- 6.4	Vert
^	151.050M	42.5	- 26.8	+12.7	+0.0	+2.3	+10.0	40.7	43.5	- 2.8	Vert
10	190.070M QP	33.6	- 26.7	+17.2	+0.0	+2.8	+10.0	36.9	43.5	- 6.6	Vert
^	190.090M	35.9	- 26.7	+17.2	+0.0	+2.8	+10.0	39.2	43.5	- 4.3	Vert
12	36.082M	38.4	- 27.2	+11.0	+0.0	+1.1	+10.0	33.3	40.0	- 6.7	Vert
13	304.940M	30.9	- 26.5	+0.0	+21.0	+3.7	+10.0	39.1	46.0	- 6.9	Vert
14	278.450M	32.8	- 26.4	+19.2	+0.0	+3.4	+10.0	39.0	46.0	- 7.0	Vert
15	279.730M	32.2	- 26.4	+19.4	+0.0	+3.4	+10.0	38.6	46.0	- 7.4	Vert
16	341.940M	32.5	- 26.7	+0.0	+18.8	+3.9	+10.0	38.5	46.0	- 7.5	Horiz
17	283.500M	31.7	- 26.4	+19.8	+0.0	+3.4	+10.0	38.5	46.0	- 7.5	Vert
18	344.480M	32.5	- 26.7	+0.0	+18.6	+3.9	+10.0	38.3	46.0	- 7.7	Horiz
19	80.080M	40.2	- 27.0	+6.8	+0.0	+1.7	+10.0	31.7	40.0	- 8.3	Vert
20	192.614M QP	31.6	- 26.7	+17.4	+0.0	+2.8	+10.0	35.1	43.5	- 8.4	Vert
^	192.610M	35.2	- 26.7	+17.4	+0.0	+2.8	+10.0	38.7	43.5	- 4.8	Vert
22	348.240M	31.7	- 26.7	+0.0	+18.4	+3.9	+10.0	37.3	46.0	- 8.7	Horiz

23	81.280M	39.4	- 27.0	+7.1	+0.0	+1.7	+10.0	31.2	40.0	- 8.8	Vert
24	194.126M QP	31.0	- 26.7	+17.5	+0.0	+2.8	+10.0	34.6	43.5	- 8.9	Vert
^	194.130M	34.2	- 26.7	+17.5	+0.0	+2.8	+10.0	37.8	43.5	- 5.7	Vert
26	309.950M	29.1	- 26.5	+0.0	+20.7	+3.7	+10.0	37.0	46.0	- 9.0	Horiz
27	78.580M	38.9	- 27.0	+7.0	+0.0	+1.7	+10.0	30.6	40.0	- 9.4	Vert
28	310.690M	28.8	- 26.5	+0.0	+20.6	+3.7	+10.0	36.6	46.0	- 9.4	Horiz
29	232.130M	33.7	- 26.5	+16.4	+0.0	+3.0	+10.0	36.6	46.0	- 9.4	Vert
30	274.600M	30.1	- 26.4	+18.8	+0.0	+3.3	+10.0	35.8	46.0	- 10.2	Vert
31	76.530M	37.5	- 27.0	+7.2	+0.0	+1.7	+10.0	29.4	40.0	- 10.6	Vert
32	258.600M	30.9	- 26.5	+16.8	+0.0	+3.2	+10.0	34.4	46.0	- 11.6	Vert
33	150.975M	33.6	- 26.8	+12.7	+0.0	+2.3	+10.0	31.8	43.5	- 11.7	Horiz
34	248.985M	31.5	- 26.6	+15.7	+0.0	+3.1	+10.0	33.7	46.0	- 12.3	Vert
35	150.315M	32.9	- 26.8	+12.6	+0.0	+2.3	+10.0	31.0	43.5	- 12.5	Horiz
36	426.830M	29.4	- 27.3	+0.0	+16.3	+4.4	+10.0	32.8	46.0	- 13.2	Horiz
37	393.790M	29.7	- 27.1	+0.0	+16.0	+4.1	+10.0	32.7	46.0	- 13.3	Vert
38	449.480M	28.8	- 27.5	+0.0	+16.8	+4.6	+10.0	32.7	46.0	- 13.3	Horiz
39	249.980M	30.5	- 26.6	+15.7	+0.0	+3.1	+10.0	32.7	46.0	- 13.3	Vert