Cable Analysis of DC Voltage Drops

			Kapton Tail		Support Tube Cable			Exit Cable			Power Cable			Total	
					Pair Count			Pair Count			Pair Count				
					24AWG			24AWG			16AWG			Vdrop(V)	Vdrop(V)
					DC Res (Ohm/km)		Length(m)	DC Res (Ohm/km)		Length(m)	DC Res (Ohm/km)		Length(m)		Round Trip
					76.444		3.30	76.444		12.70	19.23		40.00		
	Vmax(V)*	Imax(mA)*	R(Ohm)	Vdrop(V)		R(Ohm/km)	Vdrop(V)		R(Ohm/km)	Vdrop(V)		R(Ohm/km)	Vdrop(V)		
A2 n	2	350.000	0.1	0.0350	0.5	76.44	0.0883	0.5	76.44	0.3398	1.0	9.62	0.1346	0.5977	1.1619
A0 n **	0	330.363	0.1	0.0330	0.5	76.44	0.0833	0.5	76.44	0.3207	1.0	9.62	0.1271	0.5642	
A5 n	5	250.000	0.1	0.0250	0.5	76.44	0.0631	0.5	76.44	0.2427	0.5	19.23	0.1923	0.5231	1.0872
A0 n **	0	269.637	0.1	0.0270	0.5	76.44	0.0680	0.5	76.44	0.2618	0.5	19.23	0.2074	0.5642	
D5 n	5	580.000	0.1	0.0580	1.0	38.22	0.0732	1.0	38.22	0.2815	1.0	9.62	0.2231	0.6358	1.2715
D0 n	0	580.000	0.1	0.0580	1.0	38.22	0.0732	1.0	38.22	0.2815	1.0	9.62	0.2231	0.6358	
A2 sense n	2	0.001	4.0	0.0000	0.5	76.44	0.0000	0.5	76.44	0.0000	0.5	19.23	0.0000	0.0000	0.0000
A0 sense n	0	0.001	4.0	0.0000	0.5	76.44	0.0000	0.5	76.44	0.0000	0.5	19.23	0.0000	0.0000	
A5 sense n	5	0.001	4.0	0.0000	0.5	76.44	0.0000	0.5	76.44	0.0000	0.5	19.23	0.0000	0.0000	0.0000
A0 sense n	0	0.001	4.0	0.0000	0.5	76.44	0.0000	0.5	76.44	0.0000	0.5	19.23	0.0000	0.0000	
D5 sense n	5	0.001			0.5	76.44	0.0000	0.5	76.44	0.0000	0.5	19.23	0.0000	0.0000	0.0000
D0 sense n	0	0.001			0.5	76.44	0.0000	0.5	76.44	0.0000	0.5	19.23	0.0000	0.0000	
Bias Ring n	50	1.000	0.1	0.0001	0.5	76.44	0.0003	0.5	76.44	0.0010	0.5	19.23	0.0008	0.0021	0.0042
Bias Ring p	50	1.000	0.1	0.0001	0.5	76.44	0.0003	0.5	76.44	0.0010	0.5	19.23	0.0008	0.0021	
Temp Sensor+			4.0	4.0000	0.5	76.44	0.2523	0.5	76.44	0.9708		0.00	0.0000	:= 5.2231	10.4462
Temp Sensor-			4.0	4.0000	0.5	76.44	0.2523	0.5	76.44	0.9708		0.00	0.0000	:= 5.2231	
A2 p	2	350.000	0.1	0.0350	0.5	76.44	0.0883	0.5	76.44	0.3398	1.0	9.62	0.1346	0.5977	1.1619
A0 p **	0	330.363	0.1	0.0330	0.5	76.44	0.0833	0.5	76.44	0.3207	1.0	9.62	0.1271	0.5642	
A5 p	5	250.000	0.1	0.0250	0.5	76.44	0.0631	0.5	76.44	0.2427	0.5	19.23	0.1923	0.5231	1.0872
A0 p **	0	269.637	0.1	0.0270	0.5	76.44	0.0680	0.5	76.44	0.2618	0.5	19.23	0.2074	0.5642	
D5 p	5	580.000	0.1	0.0580	1.0	38.22	0.0732	1.0	38.22	0.2815	1.0	9.62	0.2231	0.6358	1.2715
D0 p	0	580.000	0.1	0.0580	1.0	38.22	0.0732	1.0	38.22	0.2815	1.0	9.62	0.2231	0.6358	
A2 sense p	2	0.001	4.0	0.0000	0.5	76.44	0.0000	0.5	76.44	0.0000	0.5	19.23	0.0000	0.0000	0.0000
A0 sense p	0	0.001	4.0	0.0000	0.5	76.44	0.0000	0.5	76.44	0.0000	0.5	19.23	0.0000	0.0000	
A5 sense p	5	0.001	4.0	0.0000	0.5	76.44	0.0000	0.5	76.44	0.0000	0.5	19.23	0.0000	0.0000	0.0000
A0 sense p	0	0.001	4.0	0.0000	0.5	76.44	0.0000	0.5	76.44	0.0000	0.5	19.23	0.0000	0.0000	
D5 sense p	5	0.001			0.5	76.44	0.0000	0.5	76.44	0.0000	0.5	19.23	0.0000	0.0000	0.0000
D0 sense p	0	0.001			0.5	76.44	0.0000	0.5	76.44	0.0000	0.5	19.23	0.0000	0.0000	
Bias Ring n	50	1.000	0.1	0.0001	0.5	76.44	0.0003	0.5	76.44	0.0010	0.5	19.23	0.0008	0.0021	0.0041
Edge Guard p	50	1.000	4.0		0.5	76.44	0.0003	0.5	76.44	0.0010	0.5	19.23	0.0008	0.0020	
SVT Common					1.0			1.0			1.0				
LD5 p	5	500.000									0.5	19.23	0.3846	0.3846	0.7692
LD0 p	0	500.000									0.5	19.23	0.3846	0.3846	
LD5 n	5	500.000									0.5	19.23	0.3846	0.3846	0.7692
LD0 n	0	500.000									0.5	19.23	0.3846	0.3846	
LD5 sense p	5	0.001									0.5	19.23	0.0000	0.0000	0.0000
LD0 sense p	0	0.001									0.5	19.23	0.0000	0.0000	
LD5 sense n	5	0.001									0.5	19.23	0.0000	0.0000	0.0000
LD0 sense n	0	0.001									0.5	19.23	0.0000	0.0000	
Total Pair Counts					18.0	0.0		18.0	0.0		23.0	0.0			

* Note that, except for "Bias Ring n" and "Bias Ring p", Vmax is voltage relative to offset potential for each side of HDI. Also, note that Imax assumes that the maximum number of ICs per single side of HDI is given by MaxICs.

MaxICs = 10.000

** Note that the currents on A2 Com and A5 Com are adjusted assume they are tied at both ends.