

VPC-3300S

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 9060.398022 ppm MTBF: 110,370 Hours
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Issue date

QE Manager

Test Engineer

2016-02-24

KJ Wang

Leo Liu

**AAEON Reliability Prediction
Summary**

File Name: VPC-3300S.rfp
Duty Cycle: 100
Calculation Model: Telcordia Issue 2
Method: Method I Case 3

Failure Rate: 9060.398022
MTBF (hrs): 110,370
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
VPC-3300S	9697330000-D		1	9060.398022	110,370

File Name: VPC-3300S.rfp
Assembly: 9697330000-D
Ref Des:
Description:

Failure Rate: 9060.398022
MTBF (hrs): 110,370
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050500104.0000 00000000000	Resistor	R640		2.547039	1	282340674.079668
1050500334.0000 00000000000	Resistor	R311		2.547039	1	282340674.079668
1050501004.0000 00000000000	Resistor	R158,R165		2.547039	2	154078778.388085
1050501054.0000 00000000000	Resistor	R224		2.547039	1	282340674.079668
1050501064.0000 00000000000	Resistor	R260		2.547039	1	282340674.079668
1050501334.0000 00000000000	Resistor	R546,R725		2.547039	2	154078778.388085
1050501634.0000 00000000000	Resistor	R134		2.547039	1	282340674.079668
1050502004.0000 00000000000	Resistor	R222,R424		2.547039	2	154078778.388085
1050502204.0000 00000000000	Resistor	R229,R232,R 234, R239		2.547039	4	82309758.689546
1050502224.0000 00000000000	Resistor	R822,R825		2.547039	2	154078778.388085
1050502234.0000 00000000000	Resistor	R106,R495,R 498		2.547039	3	107020754.986850
1050502734.0000 00000000000	Resistor	R468		2.547039	1	282340674.079668
1050503634.0000 00000000000	Resistor	R375		2.547039	1	282340674.079668
1050503934.0000 00000000000	Resistor	R415,R430		2.547039	2	154078778.388085
1050504724.0000 00000000000	Resistor	R139,R142,R 178, R194,R195,R 278, R287,R327,R 340, R449,R762,R 768		2.547039	12	29507083.749401
1050504734.0000 00000000000	Resistor	R27,R525,R5 27,R528, R530,R554,R 555, R780,R82,R8 5,R87, R89,R90,R91		2.547039	14	25477245.255648
1050505633.0000 00000000000	Resistor	R384		2.547039	1	282340674.079668

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1050510034.0000 00000000000	Resistor	R126,R166,R197, R233,R280,R284,R45, R526,R536,R537, R538,R541,R550, R551,R556,R590, R606,R62,R631,R664, R668,R672,R73,R821		2.547039	24	15190138.820515
	Resistor	R534		2.547039	1	282340674.079668
1050511034.0000 00000000000	Resistor	R332		2.547039	1	282340674.079668
1050511814.0000 00000000000	Resistor	R758		2.547039	1	282340674.079668
1050512124.0000 00000000000	Resistor	R133		2.547039	1	282340674.079668
	Resistor	R869,R870		2.547039	2	154078778.388085
1050512414.0000 00000000000	Resistor	R683,R687		2.547039	2	154078778.388085
1050512734.0000 00000000000	Resistor	R671		2.547039	1	282340674.079668
1050513724.0000 00000000000	Resistor	R637		2.547039	1	282340674.079668
1050514034.0000 00000000000	Resistor	R717		2.547039	1	282340674.079668
1050515034.0000 00000000000	Resistor	R369,R377		2.547039	2	154078778.388085
1050516204.0000 00000000000	Resistor	R148		2.547039	1	282340674.079668
1050516934.0000 00000000000	Resistor	R428		2.547039	1	282340674.079668
1050516964.0000 00000000000	Resistor	R220,R426		2.547039	2	154078778.388085
1050517424.0000 00000000000	Resistor	R33		2.547039	1	282340674.079668
1050520004.0000 00000000000	Resistor	R713		2.547039	1	282340674.079668
1050520034.0000 00000000000	Resistor	R185,R818		2.547039	2	154078778.388085
1050522124.0000 00000000000	Resistor	R378,R547		2.547039	2	154078778.388085
1050523264.0000 00000000000	Resistor	R144		2.547039	1	282340674.079668

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1050524909.0000 00000000000	Resistor	R403,R404,R 405, R406,R408,R 409, R410,R411,R 843, R844,R858,R 860		2.547039	12	29507083.749401
1050524924.0000 00000000000	Resistor	R325		2.547039	1	282340674.079668
1050526124.0000 00000000000	Resistor	R25		2.547039	1	282340674.079668
1050527034.0000 00000000000	Resistor	R206		2.547039	1	282340674.079668
1050529464.0000 00000000000	Resistor	R582		2.547039	1	282340674.079668
1050530124.0000 00000000000	Resistor	R115		2.547039	1	282340674.079668
1050531624.0000 00000000000	Resistor	R35		2.547039	1	282340674.079668
1050533034.0000 00000000000	Resistor	R21		2.547039	1	282340674.079668
1050540204.0000 00000000000	Resistor	R628,R635,R 638		2.547039	3	107020754.986850
1050540214.0000 00000000000	Resistor	R695		2.547039	1	282340674.079668
1050540224.0000 00000000000	Resistor	R47		2.547039	1	282340674.079668
1050545364.0000 00000000000	Resistor	R282,R699		2.547039	2	154078778.388085
1050547004.0000 00000000000	Resistor	R136,R137,R 146, R147,R156,R 157, R217		2.547039	7	48991237.965885
1050547564.0000 00000000000	Resistor	R700		2.547039	1	282340674.079668
1050549924.0000 00000000000	Resistor	R755,R763		2.547039	2	154078778.388085
1050549934.0000 00000000000	Resistor	R132		2.547039	1	282340674.079668
1050549964.0000 00000000000	Resistor	R588,R600,R 603, R607,R666		2.547039	5	67008142.102588
1050551004.0000 00000000000	Resistor	R399,R401,R 402, R407,R83,R8 57,R861		2.547039	7	48991237.965885
1050551034.0000 00000000000	Resistor	R38,R532,R5 49		2.547039	3	107020754.986850

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1050564924.0000 00000000000	Resistor	R230		2.547039	1	282340674.079668
1050568004.0000 00000000000	Resistor	R548		2.547039	1	282340674.079668
1050568124.0000 00000000000	Resistor	R765		2.547039	1	282340674.079668
1050573264.0000 00000000000	Resistor	R788,R789,R 790		2.547039	3	107020754.986850
1050580614.0000 00000000000	Resistor	R756		2.547039	1	282340674.079668
1050582504.0000 00000000000	Resistor	R767		2.547039	1	282340674.079668
1050700002.0000 00000000000	Resistor	FB26,FB27,R 698, R729		2.547039	4	82309758.689546
1050701504.0000 00000000000	Resistor	R440,R441		2.547039	2	154078778.388085
1050747012.0000 00000000000	Resistor	R775,R779,R 785		2.547039	3	107020754.986850
1051507562.0000 00000000000	Resistor	R752		2.547039	1	282340674.079668
1053500489.0000 00000000000	Resistor	R726		2.547039	1	282340674.079668
1054500789.0000 00000000000	Resistor	R736		2.547039	1	282340674.079668
1054600289.0000 00000000000	Resistor	R312		2.547039	1	282340674.079668
1054700289.0000 00000000000	Resistor	R505,R552		2.547039	2	154078778.388085
1054700389.0000 00000000000	Resistor	R563,R644		2.547039	2	154078778.388085
1059700001.0000 00000000000	Resistor	R289,R42,R4 3,R568, R616,R657,R 692		2.547039	7	48991237.965885
	Resistor	R262,R277,R 309, R315,R319,R 320, R321,R339,R 342, R359,R362,R 379, R381,R385,R 390, R398,R412,R 432, R434,R438,R 451		2.547039	21	17274945.076062
	Resistor	R614		2.547039	1	282340674.079668

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	Resistor	R169,R237,R255, R266,R303,R305, R355,R357,R454, R460,R462,R464, R690,R704,R735, R838,R852		2.547039	17	21160422.299251
	Resistor	R257		2.547039	1	282340674.079668
	Resistor	R769		2.547039	1	282340674.079668
	Resistor	R199,R215,R226, R251,R307,R367, R458,R459,R465, R467,R485,R529, R535,R539,R540, R542,R642,R727, R728,R804		2.547039	20	18104712.511396
	Resistor	R248		2.547039	1	282340674.079668
	Resistor	R105,R210,R48		2.547039	3	107020754.986850
	Resistor	R594,R595		2.547039	2	154078778.388085
	Resistor	R128,R23,R302,R304, R354,R356,R841, R855		2.547039	8	43225424.698300
	Resistor	R203,R256,R267,R30, R437,R450,R680, R712		2.547039	8	43225424.698300
	Resistor	R167,R238,R670, R719		2.547039	4	82309758.689546
	Resistor	R252,R444,R445, R446,R447,R448,R49, R510,R513,R514,R52, R53,R562		2.547039	13	27342571.921361
	Resistor	R688,R694,R710, R716,R724		2.547039	5	67008142.102588

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	Resistor	R413,R455,R466, R486		2.547039	4	82309758.689546
	Resistor	R416		2.547039	1	282340674.079668
	Resistor	R474,R475,R476, R496,R497,R823, R826		2.547039	7	48991237.965885
	Resistor	R201,R205,R207, R211,R28,R34,R626, R639,R645,R679, R734,R737,R805		2.547039	13	27342571.921361
	Resistor	R11,R40		2.547039	2	154078778.388085
	Resistor	R499		2.547039	1	282340674.079668
	Resistor	R558		2.547039	1	282340674.079668
	Resistor	R200,R204,R208, R439,R442,R443		2.547039	6	56573956.677649
	Resistor	R787		2.547039	1	282340674.079668
	Resistor	R183		2.547039	1	282340674.079668
	Resistor	R365,R774		2.547039	2	154078778.388085
	Resistor	R630		2.547039	1	282340674.079668
	Resistor	R370		2.547039	1	282340674.079668
	Resistor	R335,R337,R391, R393,R833,R847		2.547039	6	56573956.677649
	Resistor	R326,R360		2.547039	2	154078778.388085
	Resistor	R533		2.547039	1	282340674.079668
	Resistor	R427		2.547039	1	282340674.079668
	Resistor	R212		2.547039	1	282340674.079668
	Resistor	R754		2.547039	1	282340674.079668
	Resistor	R117,R723		2.547039	2	154078778.388085
	Resistor	R380		2.547039	1	282340674.079668
	Resistor	R559		2.547039	1	282340674.079668
	Resistor	R786		2.547039	1	282340674.079668
	Resistor	R154		2.547039	1	282340674.079668
	Resistor	R796,R797,R798, R799,R800,R801, R802,R803		2.547039	8	43225424.698300
	Resistor	R783		2.547039	1	282340674.079668
	Resistor	R418		2.547039	1	282340674.079668
	Resistor	R545		2.547039	1	282340674.079668

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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
	Resistor	R625		2.547039	1	282340674.079668
	Resistor	R225,R228,R620, R676,R684,R730, R781,R791		2.547039	8	43225424.698300
	Resistor	R113,R114,R116, R124,R135,R138,R15, R152,R153,R181, R182,R187,R190, R192,R196,R202, R209,R213,R214, R218,R219,R223, R227,R231,R24,R240, R264,R265,R269, R273,R281,R283, R292,R293,R294, R298,R328,R343, R345,R349,R36,R366, R373,R387,R388, R389,R39,R392,R396, R107,R127,R155, R254,R308,R334, R376,R417,R419, R520,R55,R564,R573, R577,R591,R612, R618,R667,R669, R714,R749,R750, R776,R777,R836, R850		2.547039	144	2643445.579884
	Resistor	R107,R127,R155, R254,R308,R334, R376,R417,R419, R520,R55,R564,R573, R577,R591,R612, R618,R667,R669, R714,R749,R750, R776,R777,R836, R850		2.547039	26	14061076.827148

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	Resistor	R288,R477,R478, R479,R480,R516, R732,R759,R764, R793		2.547039	10	35079934.879747
	Resistor	R358,R561,R566		2.547039	3	107020754.986850
	Resistor	R108,R110,R121, R123,R129,R14,R141, R150,R16,R17,R18, R19,R198,R20,R241, R244,R246,R247, R249,R285,R286,R29, R296,R300,R323, R324,R347,R351, R353,R361,R382, R383,R463,R506, R509,R524,R553, R578,R579,R58,R584, R589,R602,R610, R619,R622,R624, R648,R651,R653		2.547039	63	5949421.035389
	Resistor	R560		2.547039	1	282340674.079668
	Resistor	R102		2.547039	1	282340674.079668
	Resistor	R696,R817,R830		2.547039	3	107020754.986850
	Resistor	R103,R104		2.547039	2	154078778.388085
	Resistor	R470,R471,R473, R483,R808,R815, R819,R820		2.547039	8	43225424.698300
	Resistor	R26,R37,R66,R69, R97,R98		2.547039	6	56573956.677649
	Resistor	R420		2.547039	1	282340674.079668

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	Resistor	R179,R46,R557,R633,R663		2.547039	5	67008142.102588
	Resistor	R22,R395,R433,R435		2.547039	4	82309758.689546
	Resistor	R753		2.547039	1	282340674.079668
	Resistor	R13,R188,R216,R253,R268,R270,R271,R272,R274,R275,R291,R461,R469,R5,R6,R7,R733,R74,R77,R78,R81,R84,R86,R88,R883,R92,R93,R99		2.547039	28	13089488.559853
	Resistor	R10,R41		2.547039	2	154078778.388085
	Resistor	R831		2.547039	1	282340674.079668
	Resistor	R456,R457		2.547039	2	154078778.388085
	Resistor	R236,R276,R423,R429,R519,R731,R772,R794		2.547039	8	43225424.698300
	Resistor	R12		2.547039	1	282340674.079668
	Resistor	R1,R2,R3,R4		2.547039	4	82309758.689546
	Resistor	R31,R32		2.547039	2	154078778.388085
	Resistor	R386		2.547039	1	282340674.079668
	Resistor	R507,R508,R517,R518,R744,R746,R747,R748		2.547039	8	43225424.698300
	Resistor	RT1,RT2,RT3,RT6		7.724580	4	21923287.146155
	Resistor	RT4,RT5		7.724580	2	38596617.434771
1112610102.0000000000000000	Capacitor	C308,C335		1.128806	2	375289731.076049
1115610090.0000000000000000	Capacitor	C287		1.128806	1	704977644.692287
1121415090.0000000000000000	Capacitor	C267,C270		1.128806	2	375289731.076049
1121501050.0000000000000000	Capacitor	C212		1.128806	1	704977644.692287

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1121501690.0000 00000000000	Capacitor	C1,C111,C115,C179,C18,C180,C181,C187,C188,C189,C19,C190,C199,C2,C204,C206,C307,C339,C340,C352,C353,C361,C374,C380,C386,C388,C390,C391,C392,C396,C48,C49,C54,C577,C579,C580,C581,C599,C600,C61,C613,C655,C694,C695,C696,C697,C698,C699,C700,C701,C		1.128806	54	15865848.114680
1121501691.0000 00000000000	Capacitor	C129,C149,C159,C185,C196,C268,C282,C284,C290,C291,C306,C336,C341,C347,C350,C351,C542,C546,C553,C564,C587,C693,C707,C708,C720,C723,C724,C96,C99		1.128806	29	29193260.380640
1121533480.0000 00000000000	Capacitor	C687		1.128806	1	704977644.692287
1121622780.0000 00000000000	Capacitor	C10,C6,C660,C682,C689,C692		1.128806	6	133979725.056342
1121647480.0000 00000000000	Capacitor	C632		1.128806	1	704977644.692287

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1124410190.0000 00000000000	Capacitor	C498,C592		1.128806	2	375289731.076049
1124410191.0000 00000000000	Capacitor	C152,C636		1.128806	2	375289731.076049
1124418090.0000 00000000000	Capacitor	C184,C193		1.128806	2	375289731.076049
1124418190.0000 00000000000	Capacitor	C326,C327,C 328, C329,C330,C 331, C332,C333		1.128806	8	101746760.035398
1124427090.0000 00000000000	Capacitor	C163,C166,C 228, C229,C233,C 234, C259,C260,C 263, C264,C732,C 746, C758,C772		1.128806	14	59316298.011235
1124433190.0000 00000000000	Capacitor	C657		1.128806	1	704977644.692287
1124522190.0000 00000000000	Capacitor	C487		1.128806	1	704977644.692287
1124522290.0000 00000000000	Capacitor	C231,C261,C 510		1.128806	3	257514172.353070
1124522680.0000 00000000000	Capacitor	C128,C144,C 153		1.128806	3	257514172.353070
1124522880.0000 00000000000	Capacitor	C670		1.128806	1	704977644.692287
1124533190.0000 00000000000	Capacitor	C566		1.128806	1	704977644.692287
1124533191.0000 00000000000	Capacitor	C532		1.128806	1	704977644.692287
1129522790.0000 00000000000	Capacitor	C175		1.128806	1	704977644.692287

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Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1129610080.0000 00000000000	Capacitor	C103,C104,C 139, C140,C145,C 147, C148,C156,C 165, C168,C172,C 177, C201,C29,C2 93,C305, C33,C334,C3 42,C365, C366,C367,C 368, C369,C38,C3 9,C394, C417,C458,C 505, C511,C530,C 534, C535,C538,C 551, C563,C565,C 569, C570,C573,C 574, C575,C576,C 578, C606,C608,C 652, C654 C779,C784		1.128806	61	14072541.885825
1129610260.0000 00000000000	Capacitor	C779,C784		1.128806	2	375289731.076049
1129622690.0000 00000000000	Capacitor	C451,C477,C 479, C485,C491,C 494		1.128806	6	133979725.056342
1129701690.0000 00000000000	Capacitor	C133,C142,C 143, C151,C154,C 158, C160,C164,C 167, C202,C239,C 88,C89 C375		1.128806	13	63728475.410842
1129701790.0000 00000000000	Capacitor	C375		1.128806	1	704977644.692287
1129710090.0000 00000000000	Capacitor	C27,C357		1.128806	2	375289731.076049
1129710091.0000 00000000000	Capacitor	C295,C296,C 297, C320,C321,C 322		1.128806	6	133979725.056342

**Reliability Prediction
Summary**

File Name: VPC-3300S.rfp
Assembly: 9697330000-D
Ref Des:
Description:

Failure Rate: 9060.398022
MTBF (hrs): 110,370
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1129710390.0000 00000000000	Capacitor	C313		1.128806	1	704977644.692287
1129722091.0000 00000000000	Capacitor	C294,C299,C302, C303,C67,C68		1.128806	6	133979725.056342
1181633190.0000 00000000000	Capacitor	C194,C195,C203		4.744484	3	59399119.141203
1184610190.0000 00000000000	Capacitor	C106,C107,C108		4.744484	3	59399119.141203
1189610153.0000 00000000000	Capacitor	C324,C325,C709, C710		4.744484	4	45505862.704531
1189610193.0000 00000000000	Capacitor	C155		4.744484	1	159663026.715137
1189633091.0000 00000000000	Capacitor	C278,C279		4.744484	2	86049450.747498
1189633151.0000 00000000000	Capacitor	C211,C226,T C1,TC2		4.744484	4	45505862.704531
	Capacitor	C200,TC3		4.744484	2	86049450.747498
	Capacitor	C237,C244,C258		4.744484	3	59399119.141203
	Capacitor	C8,C9		1.128806	2	375289731.076049
	Capacitor	C337,C338,C717, C725,C726		1.128806	5	159367490.199266
	Capacitor	C381,C383		1.128806	2	375289731.076049
	Capacitor	C280		1.128806	1	704977644.692287
	Capacitor	C150		1.128806	1	704977644.692287
	Capacitor	C544		1.128806	1	704977644.692287
	Capacitor	C161,C182,C554		1.128806	3	257514172.353070
	Capacitor	C205,C504		1.128806	2	375289731.076049
	Capacitor	C690		1.128806	1	704977644.692287
	Capacitor	C53,C56,C57,C59, C60,C63,C64,C66		1.128806	8	101746760.035398
	Capacitor	C265		1.128806	1	704977644.692287
	Capacitor	C398		1.128806	1	704977644.692287
	Capacitor	C354,C360,C371, C399,C401,C402, C403,C408		1.128806	8	101746760.035398
	Capacitor	C465		1.128806	1	704977644.692287
	Capacitor	C183,C192		1.128806	2	375289731.076049
	Capacitor	C359,C397,C413		1.128806	3	257514172.353070
	Capacitor	C681,C684		1.128806	2	375289731.076049

File Name: VPC-3300S.rfp
Assembly: 9697330000-D
Ref Des:
Description:

Failure Rate: 9060.398022
MTBF (hrs): 110,370
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
	Capacitor	C286		1.128806	1	704977644.692287
	Capacitor	C685		1.128806	1	704977644.692287
	Capacitor	C227,C245,C269, C289		1.128806	4	196873384.410843
	Capacitor	C609,C627		1.128806	2	375289731.076049
	Capacitor	C101,C124,C125, C136,C137,C141, C169,C191,C207, C208,C209,C210, C213,C214,C219, C220,C222,C223, C224,C225,C230, C240,C241,C242, C243,C246,C247, C249,C250,C252, C253,C256,C257,C28, C285,C288,C315, C316,C319,C323,C34, C343,C344,C345, C346,C35,C36, C362, C363		1.128806	198	4396126.978241
	Capacitor	C373		1.128806	1	704977644.692287
	Capacitor	C642		1.128806	1	704977644.692287
	Capacitor	C23,C232,C25, C275, C304		1.128806	5	159367490.199266
	Capacitor	C318,C715		1.128806	2	375289731.076049
	Capacitor	C134		1.128806	1	704977644.692287
	Capacitor	C277,C283,C377, C382,C418,C661,C74, C800		1.128806	8	101746760.035398
	Capacitor	C162,C173,C355, C356,C548,C557, C558,C559		1.128806	8	101746760.035398
	Capacitor	C254		1.128806	1	704977644.692287

**Reliability Prediction
Summary**

File Name: VPC-3300S.rfp
Assembly: 9697330000-D
Ref Des:
Description:

Failure Rate: 9060.398022
MTBF (hrs): 110,370
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
	Capacitor	C131,C157,C235, C358,C370,C420, C433,C537,C567, C586,C635,C656, C703,C716		1.128806	14	59316298.011235
	Capacitor	C215,C216,C217, C518,C519,C539, C540,C541,C612, C626,C630,C631, C671,C680,C686, C688		1.128806	16	52112480.802928
	Capacitor	C118,C123,C26,C271, C490,C568,C90		1.128806	7	115633865.771428
	Capacitor	C411,C438		1.128806	2	375289731.076049
	Capacitor	C281		1.128806	1	704977644.692287

File Name: VPC-3300S.rfp
Assembly: 9697330000-D
Ref Des:
Description:

Failure Rate: 9060.398022
MTBF (hrs): 110,370
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
	Capacitor	C130,C132,C135,C15,C170,C171,C174,C176,C178,C186,C292,C298,C3,C310,C311,C312,C32,C395,C415,C425,C426,C437,C446,C450,C452,C453,C454,C456,C457,C459,C460,C462,C464,C466,C467,C468,C471,C472,C475,C476,C480,C481,C483,C489,C492,C499,C500,C501,C508		1.128806	75	11480604.167884
	Capacitor	C13,C14,C348,C349,C4,C5		1.128806	6	133979725.056342
	Capacitor	C262,C266,C547,C691		1.128806	4	196873384.410843
	Capacitor	C448		1.128806	1	704977644.692287
	Capacitor	C255		1.128806	1	704977644.692287
	Capacitor	C138,C713,C714		1.128806	3	257514172.353070
	Capacitor	C431,C432		1.128806	2	375289731.076049
	Capacitor	C22,C24		1.128806	2	375289731.076049
	Capacitor	C31,C400,C461,C524,C555		1.128806	5	159367490.199266

File Name: VPC-3300S.rfp
Assembly: 9697330000-D
Ref Des:
Description:

Failure Rate: 9060.398022
MTBF (hrs): 110,370
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
	Capacitor	C146,C317,C428, C430,C434,C470, C473,C478,C560, C562,C572,C582, C583,C678,C679		1.128806	15	55479656.844874
	Capacitor	C11,C12,C16,C17, C20,C21		1.128806	6	133979725.056342
	Capacitor	C218,C221,C248, C251,C496,C497, C588,C589,C637, C638,C738,C748, C765,C774		1.128806	14	59316298.011235
	Capacitor	C550		1.128806	1	704977644.692287
	Capacitor	C378		1.128806	1	704977644.692287
	Capacitor	C444,C445,C447, C789,C790,C791, C792,C793,C794, C795,C803,C804		1.128806	12	68856937.301178
1211100166.0000 00000000000	Capacitor	C393		1.128806	1	704977644.692287
	Inductor	L4		4.944252	1	154760964.143460
	Inductor	L2		4.944252	1	154760964.143460
1211101202.0000 00000000000	Inductor	L10		4.944252	1	154760964.143460
	Inductor	L8		4.944252	1	154760964.143460
	Inductor	L1		4.944252	1	154760964.143460
	Inductor	L13		4.944252	1	154760964.143460
	Inductor	L12		4.944252	1	154760964.143460
1211104270.0000 00000000000	Inductor	L11,L9		4.944252	2	83201062.149749
	Inductor	L14,L15,L16, L17, L18,L19		4.944252	6	30055900.223009
1211115076.0000 00000000000	Inductor	L6		4.944252	1	154760964.143460
	Inductor	L7		4.944252	1	154760964.143460

File Name: VPC-3300S.rfp
Assembly: 9697330000-D
Ref Des:
Description:

Failure Rate: 9060.398022
MTBF (hrs): 110,370
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1212306030.0000 00000000000	Inductor	FB22,FB23		4.944252	2	83201062.149749
	Inductor	FB12,FB13,F B14, FB16,FB17,F B18		4.944252	6	30055900.223009
	Inductor	FB15,FB3,FB 4,FB8		4.944252	4	43912872.424775
	Inductor	FB10,FB11,F B2,FB28, FB29,FB30		4.944252	6	30055900.223009
	Inductor	FB19,FB20,F B32, FB33		4.944252	4	43912872.424775
1214309000.0000 00000000000	Inductor	CH2,CH3,CH 4		4.944252	3	57363284.375370
	Inductor	CH1,CH5		4.944252	2	83201062.149749
1214901080.0000 00000000000	Inductor	L3		4.944252	1	154760964.143460
	Miscellaneous	Y10,Y11,Y2,Y 4,Y5, Y6,Y7		19.200000	7	2747550.850695
	Miscellaneous	Y1,Y8		19.200000	2	8854051.752197
1231332726.0000 00000000000	Miscellaneous	Y3		19.200000	1	23844262.770939
	Miscellaneous	Y9		19.200000	1	23844262.770939
1251005055.0000 00000000000	Inductor	U4,U6		4.944252	2	83201062.149749
	Inductor	TF1,TF2		14.982581	2	26078786.237273
1300010440.0000 00000000000	Semiconductor	D30,D31,D32 ,D33, D34,D35,D37 ,D38		7.793411	8	14161142.003130
1300041480.0000 00000000000	Semiconductor	D2,D23,D24, D6		7.793411	4	26989084.126235
1300414843.0000 00000000000	Semiconductor	D13		7.793411	1	92807310.010983
1301000541.0000 00000000000	Semiconductor	D29		7.793411	1	92807310.010983
1301000560.0000 00000000000	Semiconductor	D25		7.793411	1	92807310.010983
1301003100.0000 00000000000	Semiconductor	D11		7.793411	1	92807310.010983
1301005442.0000 00000000000	Semiconductor	D1,D22		7.793411	2	50578095.223398
1301010600.0000 00000000000	Semiconductor	D26,D27,D5, D7		7.793411	4	26989084.126235
1301053040.0000 00000000000	Semiconductor	D14,D15,D39 ,D8,D9		7.793411	5	21965031.404253
1301400541.0000 00000000000	Semiconductor	D16		7.793411	1	92807310.010983

File Name: VPC-3300S.rfp
Assembly: 9697330000-D
Ref Des:
Description:

Failure Rate: 9060.398022
MTBF (hrs): 110,370
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1301400642.0000 00000000000	Semiconductor	D28		7.793411	1	92807310.010983
1302003942.0000 00000000000	Semiconductor	D12		7.793411	1	92807310.010983
1302005641.0000 00000000000	Semiconductor	D10		7.793411	1	92807310.010983
1304000053.0000 00000000000	Optical Device	LED1,LED2,L ED3, LED4		79.003355	4	2148119.082046
1305005840.0000 00000000000	Semiconductor	D36		7.793411	1	92807310.010983
	Semiconductor	D3		7.793411	1	92807310.010983
1305050040.0000 00000000000	Semiconductor	U49		22.463360	1	31642600.748419
1305099140.0000 00000000000	Semiconductor	D17,D18,D19 ,D20, D21		22.463360	5	7551839.591592
1305100541.0000 00000000000	Semiconductor	U39,U40,U41 ,U42, U43,U44		22.463360	6	6378891.324740
1310390410.0000 00000000000	Semiconductor	Q2,Q43		22.463360	2	17315095.066101
1310390411.0000 00000000000	Semiconductor	Q28		22.463360	1	31642600.748419
1310390413.0000 00000000000	Semiconductor	Q26,Q27		22.463360	2	17315095.066101
1311095510.0000 00000000000	Semiconductor	Q61		22.463360	1	31642600.748419
1311390610.0000 00000000000	Semiconductor	Q29,Q30		22.463360	2	17315095.066101
1315012010.0000 00000000000	Semiconductor	Q18,Q20,Q2 1,Q23		22.463360	4	9270607.712006
1315034430.0000 00000000000	Semiconductor	Q36		22.463360	1	31642600.748419
1315056180.0000 00000000000	Semiconductor	Q63		22.463360	1	31642600.748419
1315070020.0000 00000000000	Semiconductor	Q11,Q24,Q2 5,Q31, Q32,Q33,Q3 4,Q35,Q6, Q65,Q9		22.463360	11	3618924.681337
1315088200.0000 00000000000	Semiconductor	Q50,Q52,Q5 3		22.463360	3	12043329.789539
1315230511.0000 00000000000	Semiconductor	Q56,Q59		22.463360	2	17315095.066101
1315700211.0000 00000000000	Semiconductor	Q22,Q37,Q3 8,Q39, Q40,Q41,Q4 2,Q55, Q60,Q64		22.463360	10	3960370.776745

File Name: VPC-3300S.rfp
Assembly: 9697330000-D
Ref Des:
Description:

Failure Rate: 9060.398022
MTBF (hrs): 110,370
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1315700216.0000 00000000000	Semiconductor	Q62		22.463360	1	31642600.748419
1315762010.0000 00000000000	Semiconductor	Q15,Q51,Q54		22.463360	3	12043329.789539
1315861010.0000 00000000000	Semiconductor	Q57,Q58		22.463360	2	17315095.066101
1315865000.0000 00000000000	Semiconductor	Q46,Q47,Q49		22.463360	3	12043329.789539
1315865001.0000 00000000000	Semiconductor	Q44,Q45		22.463360	2	17315095.066101
	Semiconductor	Q19		22.463360	1	31642600.748419
	Semiconductor	Q1,Q16,Q17,Q48,Q7		22.463360	5	7551839.591592
1430012830.0000 00000000000	Integrated Circuit	U13		43.803003	1	11739202.588727
1430021430.0000 00000000000	Integrated Circuit	U12		43.803003	1	11739202.588727
1430042660.0000 00000000000	Integrated Circuit	U26		43.803003	1	11739202.588727
1430051220.0000 00000000000	Integrated Circuit	U62		43.803003	1	11739202.588727
1430051750.0000 00000000000	Integrated Circuit	U18		43.803003	1	11739202.588727
1430087620.0000 00000000000	Integrated Circuit	U1,U2		43.803003	2	6834791.244197
1430973950.0000 00000000000	Integrated Circuit	U31		43.803003	1	11739202.588727
	Integrated Circuit	U35		43.803003	1	11739202.588727
	Integrated Circuit	U29		43.803003	1	11739202.588727
1440010500.0000 00000000000	Integrated Circuit	U45		43.803003	1	11739202.588727
	Integrated Circuit	U17		21.706765	1	23689035.791249
	Integrated Circuit	U8		11.063278	1	58231413.220643
	Integrated Circuit	U63		11.063278	1	58231413.220643
	Integrated Circuit	U7		26.018600	1	25551442.237972
1490011870.0000 00000000000	Integrated Circuit	U76		43.803003	1	11739202.588727
1490051030.0000 00000000000	Integrated Circuit	U10		43.803003	1	11739202.588727
	Integrated Circuit	U50		43.803003	1	11739202.588727
	Integrated Circuit	U11,U30		43.803003	2	6834791.244197
	Integrated Circuit	U20		43.803003	1	11739202.588727
	Integrated Circuit	U70,U71		43.803003	2	6834791.244197
	Integrated Circuit	U56		43.803003	1	11739202.588727
	Integrated Circuit	U19		43.803003	1	11739202.588727
	Integrated Circuit	U51		43.803003	1	11739202.588727
	Integrated Circuit	U52		43.803003	1	11739202.588727

**Reliability Prediction
Summary**

File Name: VPC-3300S.rfp
Assembly: 9697330000-D
Ref Des:
Description:

Failure Rate: 9060.398022
MTBF (hrs): 110,370
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
	Integrated Circuit	U16,U5,U54, U55,U9		43.803003	5	3214211.402100
	Integrated Circuit	U32,U64		43.803003	2	6834791.244197
	Integrated Circuit	U23		43.803003	1	11739202.588727
	Integrated Circuit			26.018600	1	25551442.237972
	Integrated Circuit	U24,U25,U27, U28, U73,U75		43.803003	6	2750969.191556
	Integrated Circuit	U66,U67		43.803003	2	6834791.244197
	Integrated Circuit	U65		26.018600	1	25551442.237972
	Integrated Circuit	U69		26.018600	1	25551442.237972
	Integrated Circuit	U33		26.018600	1	25551442.237972
	Integrated Circuit	U15,U68		26.018600	2	14194252.866846
	Integrated Circuit			11.063278	1	58231413.220643
	Integrated Circuit	U57,U58,U59, U60, U72,U74		11.063278	6	12335628.727423
	Integrated Circuit	U47,U48		43.803003	2	6834791.244197
	Integrated Circuit	U3,U46		43.803003	2	6834791.244197
1540533080.0000 00000000000	Resistor	RP2,RP3		9.971436	2	30043399.401299
1540722281.0000 00000000000	Resistor	RP1		9.971436	1	51606907.671214
1540775082.0000 00000000000	Resistor	RP4,RP5		9.971436	2	30043399.401299
1600001600.0000 00000000000	Connection	SW3		16.184835	1	35685591.360212
1601110201.0000 00000000000	Connection	SW1		16.184835	1	35685591.360212
1601615600.0000 00000000000	Connection	SW2		16.184835	1	35685591.360212
1651508010.0000 00000000000	Connection	CN26,CN7		16.184835	2	20390152.380746
	Connection	DIMM2		16.184835	1	35685591.360212
1652210200.0000 00000000000	Connection	CN2		16.184835	1	35685591.360212
1652514210.0000 00000000000	Connection	AUDIO1		16.184835	1	35685591.360212
1652602107.0000 00000000000	Connection	CN1		16.184835	1	35685591.360212
	Connection	CN12		16.184835	1	35685591.360212
1652606202.0000 00000000000	Connection	CN3		16.184835	1	35685591.360212
1652824202.0000 00000000000	Connection	CN27		16.184835	1	35685591.360212
1652832202.0000 00000000000	Connection	CN21,CN22		16.184835	2	20390152.380746

File Name: VPC-3300S.rfp
Assembly: 9697330000-D
Ref Des:
Description:

Failure Rate: 9060.398022
MTBF (hrs): 110,370
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1653002101.0000 00000000000	Connection	CN16		16.184835	1	35685591.360212
1653003101.0000 00000000000	Connection	CN18,CN19,C N4,CN5		16.184835	4	11344857.509064
	Connection	CN14		16.184835	1	35685591.360212
1653003201.0000 00000000000	Connection	CN6		16.184835	1	35685591.360212
1653005100.0000 00000000000	Connection	CN13		16.184835	1	35685591.360212
	Connection	COM1,COM2		16.184835	2	20390152.380746
	Connection	CN14(1-2), CN18(2-3), CN19(2-3), CN4(1-2), CN5(2-3), CN6(1-2)		16.184835	6	7958792.615968
1654226303.0000 00000000000	Connection	MSATA1,SLO T1,SLOT2, SLOT3		16.184835	4	11344857.509064
1654434300.0000 00000000000	Connection	CN25		16.184835	1	35685591.360212
1654800936.0000 00000000000	Connection	CN23		16.184835	1	35685591.360212
1654808306.0000 00000000000	Connection	CN24		16.184835	1	35685591.360212
1654903600.0000 00000000000	Connection	CN11		16.184835	1	35685591.360212
	Connection	SATA1		16.184835	1	35685591.360212
1655004011.0000 00000000000	Connection	CN10		16.184835	1	35685591.360212
1655902030.0000 00000000000	Connection	CN15		16.184835	1	35685591.360212
	Miscellaneous	BAT1		306.000000	1	1681683.006787
1752310000.0000 00000000000	Miscellaneous	FS1,FS2		2.400000	2	143944727.196625

Reliability Prediction (MTBF)

I . Model Name: VPC-3300S

II . Prediction Date: February. 24, 2016

III . Prediction Site: AAEON Q.E. Dept.

IV . Predicted by: Leo Liu

V . Equipment: Windchill Quality Solutions 10.1

VI. Simulation Environment:

- Temperature: 30 degrees C
- Standard: Telcordia (Bellcore) Standard

VII. Term and Definition:

- Unit : An assembly of device.
- Duty Cycle : Used to specify the percentage of time that the element is in an on state, and it is equal to the percentage of total time the item is in the active environment.
- Quantity : The quantity of the selected item.
- Failure Rate : Used to specify that the failure rate is to be calculated based the selected Calculation models. The Failure rate multiplier is 1000000000.
- MTBF : MTBF is always specified in hours.

VIII. Prediction Result:

VPC-3300S (9697330000-D):

- Failure Rate: 9060.398022 ppm

- MTBF: 110,370 Hours