

Standard Reliability Prediction Report

Part Number System
Reference Des
Date 12 11, 2003
Environment GB, GC - Ground Benign, Controlled
Temperature 25.00



Description Top-level assembly
File Name VTS1600.RPJ
Time 8:13
Failure Rate 8.287074
MTBF 120,670

Assembly Name	Part Number	Ref Des	Qty	Failure Rate	MTBF
VTS1600	System		1.00	8.287074	120,670
MAIN_BOARD			1.00	8.151589	122,675
PANEL_BOARD			1.00	0.135485	7,380,891

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Failure Rate 8.151589
MTBF 122,675

Part Number	Category	Ref Des	Failure Rate, Unit	Quantity	Failure Rate	Reamarks	Vendor
XPC855TZP50D4	Integrated Circuit		0.182446	1.00	0.182446		PBGA357,Steppi-
CS-306	Miscellaneous		0.029007	1.00	0.029007		32.768Khz,
SX-6	Miscellaneous		0.027256	1.00	0.027256		25.000Mhz,
SCO-060	Miscellaneous		0.062560	1.00	0.062560		5.000Mhz,
SCO-060	Miscellaneous		0.062560	1.00	0.062560		14.7456Mhz,
K4S561632C-TC75	Integrated Circuit		0.012235	2.00	0.024470		SDRAM 8MB,
1N4002	Semiconductor		0.057795	2.00	0.115590		Rectifier Diode,
1N4742	Semiconductor		0.040261	1.00	0.040261		Zener Diode,
K4S281632C-TC75	Integrated Circuit		0.061175	1.00	0.061175		SDRAM 16MB,
AM29DL640D120EI	Integrated Circuit		0.082023	1.00	0.082023		8MB, TSOP48
AT49BV321T-90TI	Integrated Circuit		0.082023	.00	0.000000		4MB, TSOP48
XC95288XL-10PQ208C	Integrated Circuit		0.016405	1.00	0.016405		3.3V CPLD,
LXT972ALC A4	Integrated Circuit		0.006093	1.00	0.006093		Ethernet
TL16C554APN	Integrated Circuit		0.006093	4.00	0.024370		QUAD UART,
MMDF3N02HD	Semiconductor		0.404531	2.00	0.809061		Dual N-Channel
MAX4420CSA	Semiconductor		0.105584	2.00	0.211167		MOSFET Driver,
LT1086CM-3.3	Integrated Circuit		0.006841	1.00	0.006841		Low Dropout
LTC1314CS	Integrated Circuit		0.006841	1.00	0.006841		PCMCIA
MIC811LU	Integrated Circuit		0.006834	1.00	0.006834		5V Voltage
MAX704TCSA	Integrated Circuit		0.006982	1.00	0.006982		3.3V Voltage
DS14C88M	Integrated Circuit		0.041557	14.00	0.581795		QUAD CMOS
DS14C89AM	Integrated Circuit		0.041469	18.00	0.746438		QUAD CMOS
SM8578BV	Integrated Circuit		0.006093	1.00	0.006093		Real-time Clock,
74LCX541WM	Integrated Circuit		0.048253	7.00	0.337773		Octal Buffer,
74LCX573WM	Integrated Circuit		0.048253	4.00	0.193013		Octal Latch,
74LCX574WM	Integrated Circuit		0.048253	2.00	0.096507		Octal D-Type
74FCT162244TPA	Integrated Circuit		0.127778	2.00	0.255556		16bit Buffer,
HB2012	Inductor		0.000030	8.00	0.000240		2012, Bead, 600
TANTAL	Capacitor		0.000601	1.00	0.000601		1µF, 16V, 3216(A)

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TANTAL	Capacitor		0.000857	2.00	0.001715		4.7µF, 20V,
TANTAL	Capacitor		0.001456	11.00	0.016016		10µF, 6.3V,
TANTAL	Capacitor		0.001020	4.00	0.004080		10µF, 10V,
TANTAL	Capacitor		0.001223	1.00	0.001223		22µF, 16V,
TANTAL	Capacitor		0.001456	2.00	0.002912		47µF, 16V,
1608, 0.001µF, 50V	Capacitor		0.000123	3.00	0.000368		
1608, 0.01µF, 16V	Capacitor		0.000208	3.00	0.000625		
1608, 0.1µF, 16V	Capacitor		0.000354	145.00	0.051281		
1608, 10pF, 50V	Capacitor		0.000043	1.00	0.000043		
1608, 15pF, 50V	Capacitor		0.000047	2.00	0.000093		
1608, 18pF, 50V	Capacitor		0.000238	2.00	0.000477		
1608, 33pF, 50V	Capacitor		0.000056	119.00	0.006659		
1608, 270pF, 50V	Capacitor		0.000091	2.00	0.000181		
1N4733	Semiconductor		0.040261	1.00	0.040261		Zener Diode,
1N5819	Semiconductor		0.006935	2.00	0.013871		Schottky Diode,
0.001µF, 2KV, DIP 10MM	Capacitor		0.019244	1.00	0.019244		
3216, 0 , 5%, 1/8W	Resistor		0.000060	2.00	0.000121		
1608, 0 , 5%, 1/16W	Resistor		0.000046	122.00	0.005611		
1608, 100kΩ, 5%, 1/16W	Resistor		0.000046	1.00	0.000046		
1608, 10kΩ, 5%, 1/16W	Resistor		0.000046	3.00	0.000138		
1608, 1kΩ, 5%, 1/16W	Resistor		0.000113	51.00	0.005758		
1608, 1.2kΩ, 5%, 1/16W	Resistor		0.000046	1.00	0.000046		
1608, 22.1kΩ, 1%, 1/16W	Resistor		0.000025	1.00	0.000025		
1608, 22 , 5%, 1/16W	Resistor		0.000046	6.00	0.000276		
1608, 3.3kΩ, 5%, 1/16W	Resistor		0.000046	23.00	0.001058		
1608, 4.7kΩ, 5%, 1/16W	Resistor		0.000046	10.00	0.000460		
1608, 49.9 , 1%, 1/16W	Resistor		0.000025	6.00	0.000147		
1X2PIN, CR2032 SOCKET	Other		0.007544	1.00	0.007544		

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1X4PIN, DIP 2.54MM, MALE	Other		0.007544	1.00	0.007544		
1X3PIN, DIP 2.54MM, MALE	Other		0.007544	2.00	0.015088		
2X5PIN, DIP 2.54MM, MALE	Other		0.007544	2.00	0.015088		
CH6160AV100	Other		0.007544	1.00	0.007544		2x30pin,
5273-06	Other		0.011513	1.00	0.011513		Power Connector
61126-050CAH	Connection		0.001051	1.00	0.001051		3.3V PCMCIA
STP-1236A	Switching Device		0.100391	1.00	0.100391		Tact Switch, DIP,
RJ45-JACK / SHIELD, EMI	Other		0.073477	1.00	0.073477		RJ45, 8pin,
XFATM6 COMBO	Other		0.073477	1.00	0.073477		RJ45, 8pin, shield
5808-57G122	Other		0.073477	1.00	0.073477		RJ45, 2x8 Array,
KRC101S	Semiconductor		0.000490	1.00	0.000490		NPN, SOT23
PCB (VTS3200.1600)	Connection		0.040800	1.00	0.040800		8Layers, 337mm
DC TO DC CONVERTER	Other		3.030303	1.00	3.030303		MTBF -
SMDA24C-8	Semiconductor		0.001597	18.00	0.028750		TVS ARRAY
DC 12V	Other		0.492358	1.00	0.492358		Test Life Time -

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MTBF 7,380,891

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BL-HX133A-TR	Semiconductor		0.001265	54.00	0.068310		3216, Green,
TANTAL	Capacitor		0.001020	2.00	0.002040		10µF, 6.3V,
1608, 0.1µF, 16V	Capacitor		0.000354	2.00	0.000707		
1608, 330 , 5%, 1/16W	Resistor		0.000046	33.00	0.001518		
1608, 1kΩ, 5%, 1/16W	Resistor		0.000046	21.00	0.000966		
2X30PIN, 1.27X2.54MM, STRAIGHT, DIP	Other		0.007544	1.00	0.007544		
VTS3200_LED REV. 0.3	Connection		0.054400	1.00	0.054400		4Layers, 306mm