

MTBF's have been calculated using Telcordia SR-332 and MIL-HDBK-217F Ground benign.

The modular nature of the product makes it difficult to determine the MTBF for every combination of output voltages and load, the numbers given are therefore typical.

The tables below give the failure rate per million hours (FPMH) for each of the assembly types at different ambient temperatures.

Telcordia SR-332:

Description	0°C	30°C	40°C	50°C
Converter	0.50	1.18	1.59	2.16
Single Slot Module (B,C,L)	0.12	0.35	0.54	0.87
One and a half or two slot module (D, E, F)	0.2	0.47	0.64	0.90
Twin Module (H)	0.21	0.57	0.85	1.31
Secondary Option	0.10	0.28	0.41	0.61
Primary Option (100mA / 300mA)	0.05	0.22	0.42	0.81
Primary Option (1A)	0.15	0.35	0.51	0.77

MIL-HDBK-217F:

Description	0°C	30°C	40°C	50°C
Converter	5.17	7.10	8.72	10.00
Single Slot Module (B,C,L)	1.19	1.51	1.82	2.13
One and a half or two slot module (D, E, F)	1.36	1.75	2.14	2.52
Twin Module (H)	1.88	2.34	2.80	3.23
Secondary Option	0.22	0.70	1.35	2.06
Primary Option (100mA / 300mA)	1.37	2.37	3.35	4.25
Primary Option (1A)	1.87	4.23	5.55	7.26

To Calculate the MTBF for a given configuration, sum the FPMH figures for each individual assembly/module to produce a total FPMH. The MTBF is then simply given by 1 /FPMH and is expressed in millions of hours.

Examples

Vega 650 B1L_N E5H H2/1H MTBF at 40°C

Description	MIL-HDBK-217F	Telcordia SR-332
650W Converter	8.72	1.59
B Module	1.82	0.54
N Option	1.35	0.41
E Module	2.14	0.64
H Module	2.80	0.85
Total	16.83	4.03
MTBF	59,417 hrs	248,139 hrs

Vega 450 C3 at 30°C

Description	MIL-HDBK-217F	Telcordia SR-332
450W Converter	7.10	1.18
C Module	1.51	0.35
Total	8.61	1.53
MTBF	116,144 hrs	653,594 hrs

Note, the above calculations do not include the cooling fan. MIL217F and Telcordia model the fan as a motor and as such, if included, the figure generated would dominate the overall MTBF figure.

To include the fan then add the FPMH of the fan to the total FPMH:

At 30C failure rate = 4.09

At 50C failure rate = 7.51