

MTBF's have been calculated using 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 table below gives the failure rate per million hours (FPMH) for each of the assembly types at different ambient temperatures.

Description	0C	25C	40C	50C
Vega 650W Converter	5.17	7.1	8.72	10
Vega 450W Converter	5.17	7.1	8.72	10
Any module starting with B (Std single)	1.19	1.51	1.82	2.13
Any module starting with C (HC single)	1.23	1.57	1.91	2.25
Any module starting with D (one and a half slot)	1.36	1.75	2.14	2.52
Any module starting with E (dual slot)	1.36	1.75	2.14	2.52
Any module starting with H (twin)	1.88	2.34	2.8	3.23
Any module starting with L (Single)	1.19	1.51	1.82	2.13
Any Secondary N Option	0.22	0.70	1.35	2.06
Any Primary Option	1.37	2.37	3.35	4.25

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 hours.

Example.

Vega 650 B1L_N E5H H2/1H MTBF at 40°C.

FPMH 650W converter	8.72
FPMH B module	1.82
FPMH N option	1.35
FPMH E module	2.14
FPMH H module	<u>2.80</u>
	16.83

MTBF = 1/FPMH = 1/16.83 = 0.0594 million hours or 59,400 Hours

NB, the above calculation does not include the cooling fan. MIL217F models 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 25C Failure rate = 4.09

At 50C failure rate = 7.51