

## RELIABILITY REPORT

### Mean Time Between Failure (MTBF) Prediction

**DIDO CPU module**

**S-DOD4182IR**

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#### History

Revisione	Note	Redatto	Controllato	Approvato
1.0.0	First Proposal	LUONI	MP	SDP



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## MTBF CALCULATION criteria CASE A

CALCULATION METHOD: MIL217F Notice 2

CALCULATION PROCEDURE: Part count + suppliers database

ENVIRONMENTAL CONDITION: Ground, mobile (higher environmental stress)

FUNCTIONING: CW – Continuous Working

QUALITY LEVEL: RUGGEDIZED

## MTBF CALCULATION

TEMPERATURE	MTBF (hours)	MTBF(age)	FIT
20°	58017	6	17236
25°	55937	6	17877
30°	53862	6	18565
35°	51543	5	19401
40°	48824	5	20481
45°	45655	5	21903
50°	42081	4	23763
55°	38224	4	26161
60°	34254	3	29193
65°	30339	3	32960
70°	26628	3	37554
75°	23215	2	43075
80°	20154	2	49617



## SURVIVAL PROBABILITY AFTER n HOURS

	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years
<b>HOURS</b>	<b>8760</b>	<b>17520</b>	<b>26280</b>	<b>35040</b>	<b>43800</b>	<b>52560</b>	<b>61320</b>	<b>70080</b>	<b>78840</b>	<b>87600</b>
<b>P% a:°C</b>										
<b>20</b>	85,56	73,20	62,63	53,58	45,84	39,22	33,55	28,71	24,56	21,01
<b>25</b>	85,06	72,35	61,54	52,35	44,53	37,88	32,22	27,41	23,31	19,83
<b>30</b>	84,53	71,46	60,40	51,06	43,16	36,49	30,84	26,07	22,04	18,63
<b>35</b>	83,90	70,38	59,05	49,54	41,56	34,87	29,25	24,54	20,59	17,27
<b>40</b>	83,08	69,02	57,34	47,64	39,58	32,88	27,32	22,70	18,86	15,67
<b>45</b>	82,02	67,27	55,17	45,25	37,11	30,44	24,97	20,48	16,79	13,77
<b>50</b>	80,65	65,04	52,45	42,30	34,12	27,51	22,19	17,90	14,43	11,64
<b>55</b>	78,92	62,28	49,15	38,79	30,61	24,15	19,06	15,04	11,87	9,37
<b>60</b>	76,78	58,95	45,26	34,75	26,68	20,49	15,73	12,08	9,27	7,12
<b>65</b>	74,21	55,07	40,86	30,32	22,50	16,70	12,39	9,19	6,82	5,06
<b>70</b>	71,18	50,67	36,07	25,68	18,28	13,01	9,26	6,59	4,69	3,34
<b>75</b>	67,71	45,85	31,05	21,03	14,24	9,64	6,53	4,42	2,99	2,03
<b>80</b>	63,82	40,73	26,00	16,59	10,59	6,76	4,31	2,75	1,76	1,12