CUS100MB

RELIABILITY DATA

信頼性データ

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※ 試験結果は、代表データでありますが、全ての製品はほぼ同等な特性を示します。
従いまして、以下の結果は参考値とお考え願います。
Test results are typical data. Nevertheless the following results are considered to be reference data because all units have nearly the same characteristics.

評価負荷条件　　Load conditions

※ 入力電圧が115VAC以下の場合、下記のとおり出力ディレーティングが必要です。
Output derating is needed when input voltage is less than 115VAC.

Output voltage : 5V

Vin	Iout:Full load	5V (Convection cooling)	5V (Force air cooling)
85VAC	80%	9.6A	12.8A
100 - 265VAC	100%	12.0A	16.0A

Output voltage : 24V

Vin	Iout:Full load	24V
85VAC	80%	3.36A
115 - 265VAC	100%	4.2A

1. MTBF計算値 Calculated Values of MTBF

MODEL： CUS100MB-5

(1) 算出方法 Calculating Method

JEITA (RCR-9102B)の部品点数法で算出されています。
それぞれの部品ごとに、部品故障率λ_Gが与えられ、各々の点数によって決定されます。
Calculated based on part count reliability projection of JEITA (RCR-9102B).
Individual failure rates λ_G is given to each part and MTBF is calculated
by the count of each part.

＜算出式＞

$$MTBF = \frac{1}{\lambda_{equip}} \times 10^6 = \frac{1}{\sum_{i=1}^{n} n_i \left(\lambda_G \pi_Q\right)_i} \times 10^6 \quad \text{時間(Hours)}$$

λequip : 全機器故障率 (故障数／10^6時間)
Total Equipment Failure Rate (Failure／10^6Hours)

λ_G : i 番目の同属部品に対する故障率 (故障数／10^6時間)
Generic Failure Rate for The ith Generic Part (Failure／10^6Hours)

n_i : i 番目の同属部品の個数
Quantity of ith Generic Part

n : 異なった同属部品のカテゴリーの数
Number of Different Generic Part Categories

π_Q : i 番目の同属部品に対する品質ファクタ (π_Q=1)
Generic Quality Factor for The ith Generic Part (π_Q=1)

(2) MTBF値 MTBF Values

G_F： 地上固定 (Ground, Fixed)

RCR-9102B

MTBF ≒ 252,564 時間 (Hours)

2. 部品ディレーティング Components Derating

MODEL： CUS100MB

(1) 算出方法 Calculating Method

(a) 測定方法 Measuring method

Output voltage :5V

・取付方法 :標準取付 : A Mounting method Standard mounting : A	・周囲温度 :40℃ Ambient temperature
・入力電圧 :115 , 230VAC Input voltage	・出力電圧、電流 :5V, Full load Output voltage & current

Output voltage :24V

・取付方法 :標準取付 : A Mounting method Standard mounting : A	・周囲温度 :40℃(Convection cooling) Ambient temperature 50℃(Forec air cooling)
・入力電圧 :115 , 230VAC Input voltage	・出力電圧、電流 :24V, Full load Output voltage & current

(b) 半導体 Semiconductors

ケース温度、消費電力、熱抵抗より使用状態の接合点温度を求め
最大定格、接合点温度との比較を求めました。
Compared with maximum junction temperature and actual one which is calculated based on case temperature, power dissipation and thermal impedance.

(c) IC、抵抗、コンデンサ等 IC, Resistors, Capacitors, etc.

周囲温度、使用状態、消費電力など、個々の値は設計基準内に入っています。
Ambient temperature, operating condition, power dissipation and so on are within derating criteria.

(d) 熱抵抗算出方法 Calculating method of thermal impedance

$$\theta j-c = \frac{Tj(max) - Tc}{Pj(max)} \qquad \theta j-l = \frac{Tj(max) - Tl}{Pj(max)}$$

Tc :ディレーティングの始まるケース温度 一般に25℃
Case Temperature at Start Point of Derating;25℃ in General

Tl :ディレーティングの始まるリード温度 一般に25℃
Lead Temperature at Start Point of Derating;25℃ in General

Pj(max) :最大チャネル損失
(Pch(max)) Maximum Channel Dissipation

Tj(max) :最大接合点(チャネル)温度
(Tch(max)) Maximum Junction (channel) Temperature

θj-c :接合点(チャネル)からケースまでの熱抵抗
(θch-c) Thermal Impedance between Junction (channel) and Case

θj-l :接合点(チャネル)からリードまでの熱抵抗
(θch-l) Thermal Impedance between Junction (channel) and Lead

(2) 部品ディレーティング表 Component Derating List

部品番号 Location No.	Vin = 115VAC Vout = 5V Iout = 12A Ta = 40℃ Convection cooling		
Q1 TK16A60W,S4VX TOSHIBA	Tch (max) = 150 ℃ Pch = 1.5 W Tch = Tc + (θch-c × Pch) = 100.7 ℃ D.F. =67.1 %	θch-c = 3.13 ℃/W ΔTc = 56 ℃	 Tc = 96 ℃
D51A, D51B FCQS30A065 NIHON INTER	Tj (max) = 150 ℃ Pd = 2.4 W Tj = Tc + (θj-c × Pd) = 128.5 ℃ D.F. = 85.7 %	θj-c = 1.5 ℃/W ΔTc = 84.9 ℃	 Tc = 124.9 ℃
D1 D3SB60-7000 SHINDENGEN	Tj (max) = 150 ℃ Pd =0.95 W Tj = Tc + (θj-c × Pd) = 107.1 ℃ D.F. =71.4 %	θj-c = 5.5 ℃/W ΔTc = 61.9 ℃	 Tc = 101.9 ℃

部品番号 Location No.	Vin = 230VAC Vout = 5V Iout = 12A Ta = 40℃ Convection cooling		
Q1 TK16A60W,S4VX TOSHIBA	Tch (max) = 150 ℃ Pch = 2.03 W Tch = Tc + (θch-c × Pch) = 106.4 ℃ D.F. =70.9 %	θch-c = 3.13 ℃/W ΔTc = 60 ℃	 Tc = 100 ℃
D51A, D51B FCQS30A065 NIHON INTER	Tj (max) = 150 ℃ Pd = 2.4 W Tj = Tc + (θj-c × Pd) = 128.7 ℃ D.F. = 85.8 %	θj-c = 1.5 ℃/W ΔTc = 85.1 ℃	 Tc = 125.1 ℃
D1 D3SB60-7000 SHINDENGEN	Tj (max) = 150 ℃ Pd =0.59 W Tj = Tc + (θj-c × Pd) = 96 ℃ D.F. =64 %	θj-c = 5.5 ℃/W ΔTc = 52.8 ℃	 Tc = 92.8 ℃

(2) 部品ディレーティング表 Component Derating List

部品番号 Location No.	Vin = 115VAC Vout = 5V Iout = 16A Ta = 40℃ Force air cooling		
Q1 TK16A60W,S4VX TOSHIBA	Tch (max) = 150 ℃ Pch = 1.97 W Tch = Tc + (θch-c × Pch) = 90.8 ℃ D.F. =60.5 %	θch-c = 3.13 ℃/W ΔTc = 44.6 ℃	 Tc = 84.6 ℃
D51A, D51B FCQS30A065 NIHON INTER	Tj (max) = 150 ℃ Pd = 3.2 W Tj = Tc + (θj-c × Pd) = 119.7 ℃ D.F. = 79.8 %	θj-c = 1.5 ℃/W ΔTc = 74.9 ℃	 Tc = 114.9 ℃
D1 D3SB60-7000 SHINDENGEN	Tj (max) = 150 ℃ Pd =1.25 W Tj = Tc + (θj-c × Pd) = 98.8 ℃ D.F. =65.9 %	θj-c = 5.5 ℃/W ΔTc = 51.9 ℃	 Tc = 91.9 ℃

部品番号 Location No.	Vin = 230VAC Vout = 5V Iout = 16A Ta = 40℃ Force air cooling		
Q1 TK16A60W,S4VX TOSHIBA	Tch (max) = 150 ℃ Pch = 2.6 W Tch = Tc + (θch-c × Pch) = 99.9 ℃ D.F. =66.6 %	θch-c = 3.13 ℃/W ΔTc = 51.8 ℃	 Tc = 91.8 ℃
D51A, D51B FCQS30A065 NIHON INTER	Tj (max) = 150 ℃ Pd = 3.2 W Tj = Tc + (θj-c × Pd) = 117.5 ℃ D.F. = 78.3 %	θj-c = 1.5 ℃/W ΔTc = 72.7 ℃	 Tc = 112.7 ℃
D1 D3SB60-7000 SHINDENGEN	Tj (max) = 150 ℃ Pd =0.71 W Tj = Tc + (θj-c × Pd) = 85 ℃ D.F. =56.7 %	θj-c = 5.5 ℃/W ΔTc = 41.1 ℃	 Tc = 81.1 ℃

(2) 部品ディレーティング表 Component Derating List

部品番号 Location No.	Vin = 115VAC Vout = 24V Iout = 4.2A Ta = 40℃ Convection cooling		
Q1 TK16A60W,S4VX TOSHIBA	Tch (max) = 150 ℃ Pch = 2.26 W Tch = Tc + (θch-c × Pch) = 128.6 ℃ D.F. =85.7 %	θch-c = 3.13 ℃/W ΔTc = 81.5 ℃	 Tc = 121.5 ℃
D51A YG902C2R FUJI ELECTRIC	Tj (max) = 150 ℃ Pd = 2.73 W Tj = Tc + (θj-c × Pd) = 123 ℃ D.F. = 82 %	θj-c = 3.5 ℃/W ΔTc = 73.4 ℃	 Tc = 113.4 ℃
D1 D3SB60-7000 SHINDENGEN	Tj (max) = 150 ℃ Pd =1.43 W Tj = Tc + (θj-c × Pd) = 130.3 ℃ D.F. =86.8 %	θj-c = 5.5 ℃/W ΔTc = 82.4 ℃	 Tc = 122.4 ℃

部品番号 Location No.	Vin = 230VAC Vout = 24V Iout = 4.2A Ta = 40℃ Convection cooling		
Q1 TK16A60W,S4VX TOSHIBA	Tch (max) = 150 ℃ Pch = 2.7 W Tch = Tc + (θch-c × Pch) = 122 ℃ D.F. =81.3 %	θch-c = 3.13 ℃/W ΔTc = 73.5 ℃	 Tc = 113.5 ℃
D51A YG902C2R FUJI ELECTRIC	Tj (max) = 150 ℃ Pd = 2.73 W Tj = Tc + (θj-c × Pd) = 121 ℃ D.F. = 80.6 %	θj-c = 3.5 ℃/W ΔTc = 71.4 ℃	 Tc = 111.4 ℃
D1 D3SB60-7000 SHINDENGEN	Tj (max) = 150 ℃ Pd =0.8 W Tj = Tc + (θj-c × Pd) = 105 ℃ D.F. =70 %	θj-c = 5.5 ℃/W ΔTc = 60.6 ℃	 Tc = 100.6 ℃

(2) 部品ディレーティング表 Component Derating List

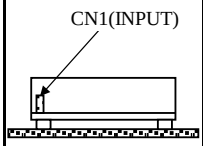
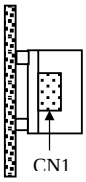
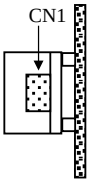
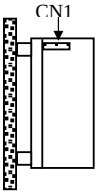
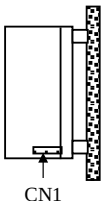
部品番号 Location No.	Vin = 115VAC Vout = 24V Iout = 4.2A Ta = 50℃ Force air cooling		
Q1 TK16A60W,S4VX TOSHIBA	Tch (max) = 150 ℃ Pch = 2.26 W Tch = Tc + (θch-c × Pch) = 105.6 ℃ D.F. =70.4 %	θch-c = 3.13 ℃/W ΔTc = 48.5 ℃	 Tc = 98.5 ℃
D51A YG902C2R FUJI ELECTRIC	Tj (max) = 150 ℃ Pd = 2.73 W Tj = Tc + (θj-c × Pd) = 98.3 ℃ D.F. = 65.5 %	θj-c = 3.5 ℃/W ΔTc = 38.7 ℃	 Tc = 88.7 ℃
D1 D3SB60-7000 SHINDENGEN	Tj (max) = 150 ℃ Pd =1.43 W Tj = Tc + (θj-c × Pd) = 108 ℃ D.F. =72 %	θj-c = 5.5 ℃/W ΔTc = 50.1 ℃	 Tc = 100.1 ℃

部品番号 Location No.	Vin = 230VAC Vout = 24V Iout = 4.2A Ta = 50℃ Force air cooling		
Q1 TK16A60W,S4VX TOSHIBA	Tch (max) = 150 ℃ Pch = 2.7 W Tch = Tc + (θch-c × Pch) = 102.6 ℃ D.F. =68.4 %	θch-c = 3.13 ℃/W ΔTc = 44.1 ℃	 Tc = 94.1 ℃
D51A YG902C2R FUJI ELECTRIC	Tj (max) = 150 ℃ Pd = 2.73 W Tj = Tc + (θj-c × Pd) = 98.6 ℃ D.F. = 65.7 %	θj-c = 3.5 ℃/W ΔTc = 39 ℃	 Tc = 89 ℃
D1 D3SB60-7000 SHINDENGEN	Tj (max) = 150 ℃ Pd =0.8 W Tj = Tc + (θj-c × Pd) = 88.1 ℃ D.F. =58.7 %	θj-c = 5.5 ℃/W ΔTc = 33.7 ℃	 Tc = 83.7 ℃

3. 主要部品温度上昇値 Main Components Temperature Rise △T List

MODEL : CUS100MB-5

(1) 測定条件 Measuring Conditions

	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
取付方法 Mounting Method (標準取付 : A) (Standard Mounting : A)					
入力電圧 Vin Input Voltage	115VAC				
出力電圧 Vo Output Voltage	5VDC				
出力電流 Io Output Current	12A				
空冷条件 Cooling Condition	自然空冷 Convection cooling				

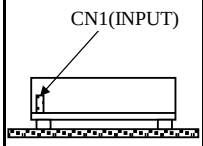
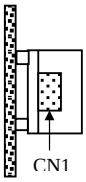
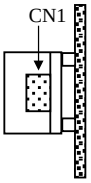
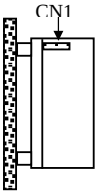
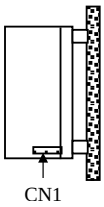
(2) 測定結果 Measuring Results

出力ディレーティング Output Derating		ΔT Temperature Rise (℃)				
		Ta=40℃	Ta=40℃	Ta=40℃	Ta=40℃	Ta=35℃
部品番号	部品名	取付方向	取付方向	取付方向	取付方向	取付方向
Location No.	Part name	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
D1	BRIDGE DIODE	61.9	57.2	58.7	67.6	60.1
D51A	DIODE	83.0	80.0	81.2	84.6	89.4
D51B	DIODE	84.9	83.0	83.6	86.6	92.0
Q1	MOS FET	56.0	57.0	53.7	63.4	56.2
A101	CHIP IC	46.9	41.6	49.7	50.8	50.3
A201	CHIP IC	51.0	47.1	54.1	53.6	58.0
T1	TRANS	72.8	64.6	66.0	77.0	76.6
L1	BALUN	41.8	37.0	41.2	50.0	42.4
L2	BALUN	48.6	44.8	45.0	57.2	44.2
C5	E.CAP.	42.7	36.9	48.5	49.1	47.1
C51A	E.CAP.	44.4	39.8	50.9	47.7	50.1
PC101	PHOTO COUPLER	42.7	37.9	45.8	46.4	47.4

3. 主要部品温度上昇値 Main Components Temperature Rise △T List

MODEL : CUS100MB-5

(1) 測定条件 Measuring Conditions

	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
取付方法 Mounting Method (標準取付 : A) (Standard Mounting : A)					
入力電圧 Vin Input Voltage	230VAC				
出力電圧 Vo Output Voltage	5VDC				
出力電流 Io Output Current	12A				
空冷条件 Cooling Condition	自然空冷 Convection cooling				

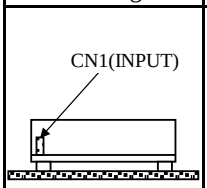
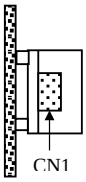
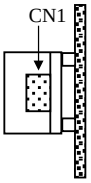
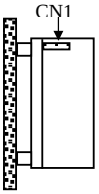
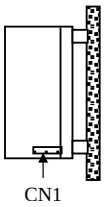
(2) 測定結果 Measuring Results

出力ディレーティング Output Derating		ΔT Temperature Rise (℃)				
		Ta=40℃	Ta=40℃	Ta=40℃	Ta=40℃	Ta=35℃
部品番号	部品名	取付方向	取付方向	取付方向	取付方向	取付方向
Location No.	Part name	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
D1	BRIDGE DIODE	52.8	47.5	51.4	60.4	49.9
D51A	DIODE	83.3	80.8	81.8	84.9	89.2
D51B	DIODE	85.1	83.9	84.4	87.0	92.0
Q1	MOS FET	60.0	59.8	58.4	67.4	58.8
A101	CHIP IC	45.2	39.6	48.4	49.3	47.1
A201	CHIP IC	50.7	47.0	54.2	53.5	56.8
T1	TRANS	75.4	66.6	68.8	79.5	78.3
L1	BALUN	33.6	29.0	33.6	42.7	32.3
L2	BALUN	38.0	33.9	36.3	48.0	33.0
C5	E.CAP.	40.3	34.5	46.9	47.1	43.2
C51A	E.CAP.	44.4	39.7	51.0	47.8	48.6
PC101	PHOTO COUPLER	41.5	36.8	45.1	45.5	44.8

3. 主要部品温度上昇値 Main Components Temperature Rise △T List

MODEL : CUS100MB-5

(1) 測定条件 Measuring Conditions

取付方法 Mounting Method (標準取付 : A) (Standard Mounting : A)	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
					
入力電圧 Vin Input Voltage	115VAC				
出力電圧 Vo Output Voltage	5VDC				
出力電流 Io Output Current	16A				
空冷条件 Cooling Condition	強制空冷 Force air cooling				

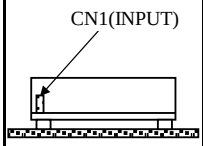
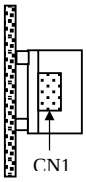
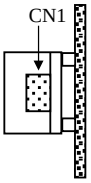
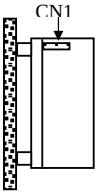
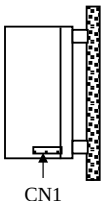
(2) 測定結果 Measuring Results

出力ディレーティング Output Derating		ΔT Temperature Rise (℃)				
		Ta=40℃	Ta=40℃	Ta=40℃	Ta=40℃	Ta=40℃
部品番号	部品名	取付方向	取付方向	取付方向	取付方向	取付方向
Location No.	Part name	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
D1	BRIDGE DIODE	51.9	48.6	49.9	52.9	49.5
D51A	DIODE	71.5	73.9	72.2	77.2	70.0
D51B	DIODE	74.9	77.9	78.3	81.5	76.1
Q1	MOS FET	44.6	46.9	45.8	47.6	45.5
A101	CHIP IC	29.4	29.4	36.7	37.3	35.8
A201	CHIP IC	33.2	35.2	36.8	41.4	34.8
T1	TRANS	63.1	64.8	63.5	71.2	62.6
L1	BALUN	30.6	26.5	31.0	34.5	30.5
L2	BALUN	32.6	33.6	34.4	34.8	33.5
C5	E.CAP.	26.8	27.5	32.7	33.1	31.9
C51A	E.CAP.	21.9	23.4	24.3	26.9	23.1
PC101	PHOTO COUPLER	24.8	26.0	32.0	32.1	30.4

3. 主要部品温度上昇値 Main Components Temperature Rise △T List

MODEL : CUS100MB-5

(1) 測定条件 Measuring Conditions

	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
取付方法 Mounting Method (標準取付 : A) (Standard Mounting : A)					
入力電圧 Vin Input Voltage	230VAC				
出力電圧 Vo Output Voltage	5VDC				
出力電流 Io Output Current	16A				
空冷条件 Cooling Condition	強制空冷 Force air cooling				

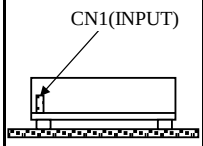
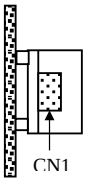
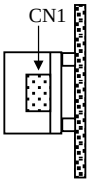
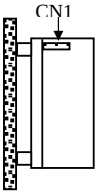
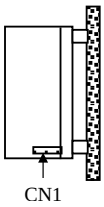
(2) 測定結果 Measuring Results

出力ディレーティング Output Derating		ΔT Temperature Rise (℃)				
		Ta=40℃	Ta=40℃	Ta=40℃	Ta=40℃	Ta=40℃
部品番号	部品名	取付方向	取付方向	取付方向	取付方向	取付方向
Location No.	Part name	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
D1	BRIDGE DIODE	41.1	36.2	37.8	40.1	37.5
D51A	DIODE	69.5	72.2	69.5	74.7	67.6
D51B	DIODE	72.7	77.9	75.6	78.8	73.4
Q1	MOS FET	51.8	53.2	53.1	54.4	52.4
A101	CHIP IC	26.9	26.5	32.7	32.9	31.9
A201	CHIP IC	32.2	33.7	34.8	38.9	32.7
T1	TRANS	61.3	62.8	61.1	69.0	60.6
L1	BALUN	21.3	18.1	21.7	23.6	21.0
L2	BALUN	23.3	21.5	22.8	22.9	22.3
C5	E.CAP.	22.9	23.2	27.6	27.1	27.1
C51A	E.CAP.	21.0	22.5	23.2	25.2	21.7
PC101	PHOTO COUPLER	22.9	23.7	28.9	28.5	27.3

3. 主要部品温度上昇値 Main Components Temperature Rise △T List

MODEL : CUS100MB-24

(1) 測定条件 Measuring Conditions

	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
取付方法 Mounting Method (標準取付 : A) (Standard Mounting : A)					
入力電圧 Vin Input Voltage	115VAC				
出力電圧 Vo Output Voltage	24VDC				
出力電流 Io Output Current	4.2A				
空冷条件 Cooling Condition	自然空冷 Convection cooling				

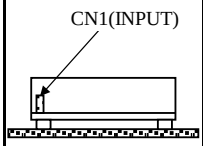
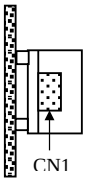
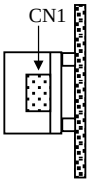
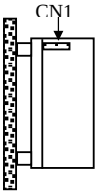
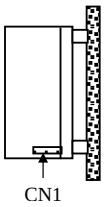
(2) 測定結果 Measuring Results

出力ディレーティング Output Derating		ΔT Temperature Rise (℃)				
		Ta=40℃	Ta=40℃	Ta=40℃	Ta=40℃	Ta=40℃
部品番号	部品名	取付方向	取付方向	取付方向	取付方向	取付方向
Location No.	Part name	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
D1	BRIDGE DIODE	82.4	81.0	81.4	86.5	80.5
D51A	DIODE	73.4	73.4	70.6	75.2	87.0
Q1	MOS FET	81.5	86.1	79.1	84.9	79.4
A101	CHIP IC	48.8	43.4	51.9	50.9	56.2
A201	CHIP IC	45.3	40.5	46.4	45.4	55.5
T1	TRANS	76.3	69.8	70.9	79.8	89.0
L1	BALUN	61.8	57.4	62.6	69.9	63.4
L2	BALUN	69.8	70.5	70.5	79.8	68.8
C5	E.CAP.	43.8	38.2	50.5	46.1	52.9
C51A	E.CAP.	36.5	32.3	42.7	36.4	49.9
PC101	PHOTO COUPLER	42.0	37.0	44.6	43.4	50.1

3. 主要部品温度上昇値 Main Components Temperature Rise △T List

MODEL : CUS100MB-24

(1) 測定条件 Measuring Conditions

	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
取付方法 Mounting Method (標準取付 : A) (Standard Mounting : A)					
入力電圧 Vin Input Voltage	230VAC				
出力電圧 Vo Output Voltage	24VDC				
出力電流 Io Output Current	4.2A				
空冷条件 Cooling Condition	自然空冷 Convection cooling				

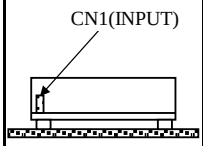
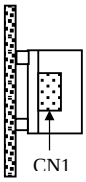
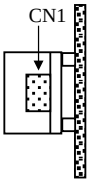
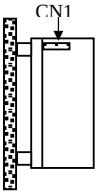
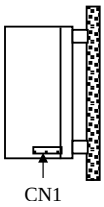
(2) 測定結果 Measuring Results

出力ディレーティング Output Derating		ΔT Temperature Rise (℃)				
		Ta=40℃	Ta=40℃	Ta=40℃	Ta=40℃	Ta=40℃
部品番号	部品名	取付方向	取付方向	取付方向	取付方向	取付方向
Location No.	Part name	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
D1	BRIDGE DIODE	60.6	60.5	62.6	74.1	63.7
D51A	DIODE	71.4	73.1	70.1	74.9	84.3
Q1	MOS FET	73.5	76.5	73.4	79.2	69.5
A101	CHIP IC	40.3	38.2	46.5	46.5	48.0
A201	CHIP IC	41.0	38.8	44.5	44.1	51.0
T1	TRANS	73.4	71.3	72.6	82.4	87.3
L1	BALUN	41.0	39.5	43.6	52.1	43.3
L2	BALUN	45.3	47.3	49.6	60.1	45.9
C5	E.CAP.	35.0	33.2	45.2	41.8	44.8
C51A	E.CAP.	33.3	31.4	41.0	35.4	45.7
PC101	PHOTO COUPLER	40.1	33.0	40.6	40.2	43.4

3. 主要部品温度上昇値 Main Components Temperature Rise △T List

MODEL : CUS100MB-24

(1) 測定条件 Measuring Conditions

	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
取付方法 Mounting Method (標準取付 : A) (Standard Mounting : A)					
入力電圧 Vin Input Voltage	115VAC				
出力電圧 Vo Output Voltage	24VDC				
出力電流 Io Output Current	4.2A				
空冷条件 Cooling Condition	強制空冷 Force air cooling				

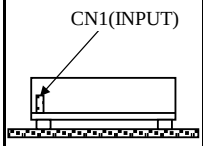
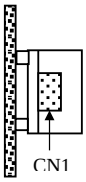
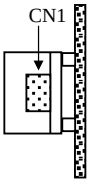
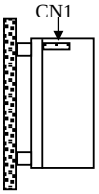
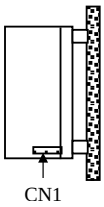
(2) 測定結果 Measuring Results

出力ディレーティング Output Derating		ΔT Temperature Rise (℃)				
		Ta=50℃	Ta=50℃	Ta=50℃	Ta=50℃	Ta=50℃
部品番号	部品名	取付方向	取付方向	取付方向	取付方向	取付方向
Location No.	Part name	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
D1	BRIDGE DIODE	50.1	52.6	48.3	59.8	53.6
D51A	DIODE	38.7	43.8	39.4	44.8	40.0
Q1	MOS FET	48.5	53.1	47.7	60.1	49.8
A101	CHIP IC	23.5	22.8	21.7	26.3	25.8
A201	CHIP IC	13.2	16.2	12.4	16.9	14.8
T1	TRANS	38.3	43.8	41.2	49.3	40.5
L1	BALUN	32.2	32.3	29.0	38.1	35.1
L2	BALUN	34.8	38.2	33.0	45.1	38.2
C5	E.CAP.	15.4	16.6	14.0	18.6	17.4
C51A	E.CAP.	7.6	9.9	6.6	9.7	7.9
PC101	PHOTO COUPLER	14.7	15.2	13.4	17.4	16.8

3. 主要部品温度上昇値 Main Components Temperature Rise △T List

MODEL : CUS100MB-24

(1) 測定条件 Measuring Conditions

	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
取付方法 Mounting Method (標準取付 : A) (Standard Mounting : A)					
入力電圧 Vin Input Voltage	230VAC				
出力電圧 Vo Output Voltage	24VDC				
出力電流 Io Output Current	4.2A				
空冷条件 Cooling Condition	強制空冷 Force air cooling				

(2) 測定結果 Measuring Results

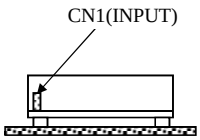
出力ディレーティング Output Derating		ΔT Temperature Rise (℃)				
		Ta=50℃	Ta=50℃	Ta=50℃	Ta=50℃	Ta=50℃
部品番号	部品名	取付方向	取付方向	取付方向	取付方向	取付方向
Location No.	Part name	Mounting A	Mounting B	Mounting C	Mounting D	Mounting E
D1	BRIDGE DIODE	33.7	36.1	32.5	42.6	36.0
D51A	DIODE	39.0	44.1	39.7	45.1	40.2
Q1	MOS FET	44.1	48.1	43.7	55.0	45.2
A101	CHIP IC	19.9	19.2	18.2	22.6	21.0
A201	CHIP IC	12.4	15.8	12.1	16.2	14.3
T1	TRANS	40.2	45.8	43.1	51.5	42.0
L1	BALUN	19.4	19.9	17.3	23.8	21.3
L2	BALUN	19.2	21.7	18.3	27.0	21.5
C5	E.CAP.	12.4	13.4	11.2	15.1	13.8
C51A	E.CAP.	7.3	9.7	6.3	9.1	7.4
PC101	PHOTO COUPLER	12.6	13.0	11.5	15.0	13.9

4. 電解コンデンサ推定寿命計算値　Electrolytic Capacitor Lifetime

MODEL : CUS100MB

空冷条件:自然空冷　Cooling condition : Convection cooling

取付方向 A
Mounting A

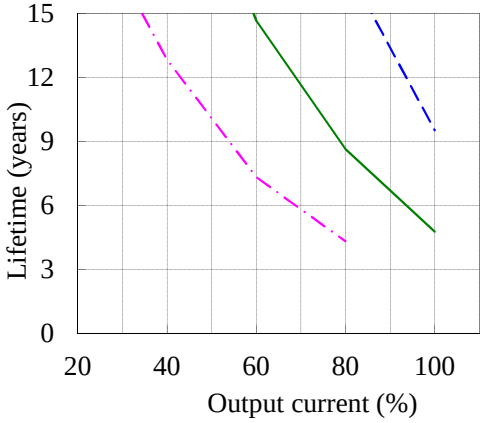


Conditions　Ta　30℃ :
40℃ :
50℃ :

5V

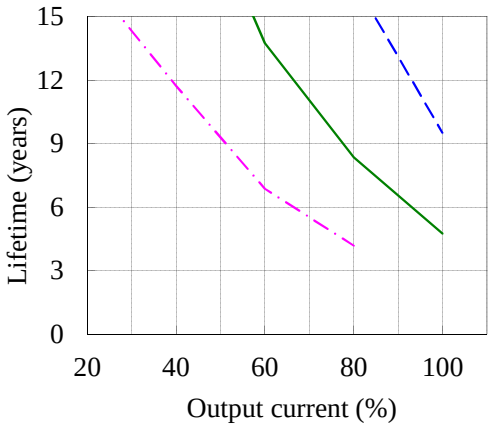
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	12.8
60%	15.0	14.6	7.3
80%	15.0	8.6	4.3
100%	9.5	4.8	-



Vin=230VAC

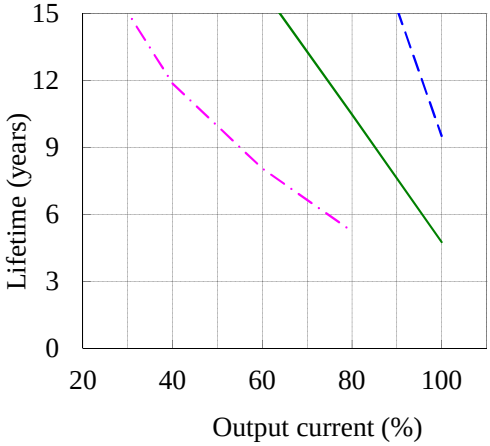
Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	11.7
60%	15.0	13.7	6.9
80%	15.0	8.3	4.2
100%	9.5	4.8	-



24V

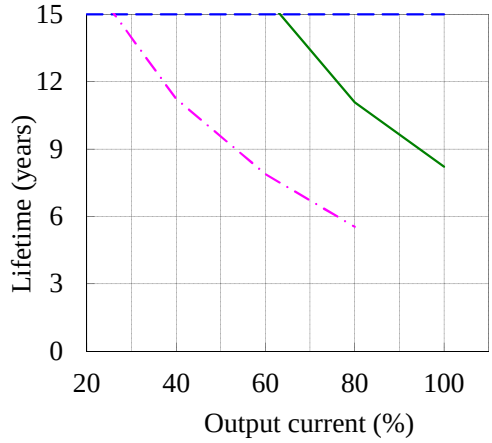
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	11.9
60%	15.0	15.0	8.1
80%	15.0	10.5	5.2
100%	9.5	4.8	-



Vin=230VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	11.2
60%	15.0	15.0	7.9
80%	15.0	11.1	5.5
100%	15.0	8.2	-



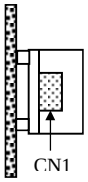
上記推定寿命は、弊社計算方法により算出した値であり、封口ゴムの劣化等の影響を含めておりません。
The life time is calulated based on our method and doesn't include the seal rubber degradation effect etc.

4. 電解コンデンサ推定寿命計算値　Electrolytic Capacitor Lifetime

MODEL : CUS100MB

空冷条件:自然空冷　Cooling condition : Convection cooling

取付方向 B
Mounting B

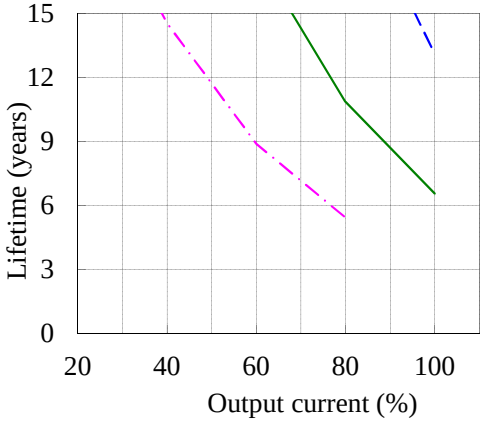


Conditions　Ta　30℃ :
40℃ :
50℃ :

5V

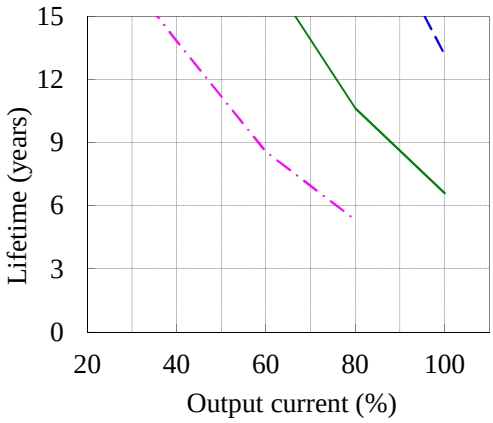
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	14.5
60%	15.0	15.0	8.9
80%	15.0	10.9	5.4
100%	13.1	6.5	-



Vin=230VAC

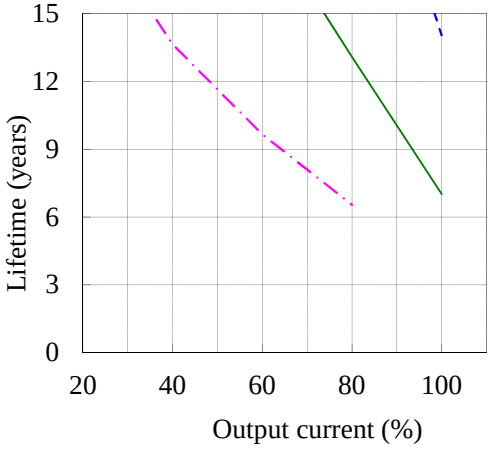
Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	13.8
60%	15.0	15.0	8.6
80%	15.0	10.6	5.3
100%	13.2	6.6	-



24V

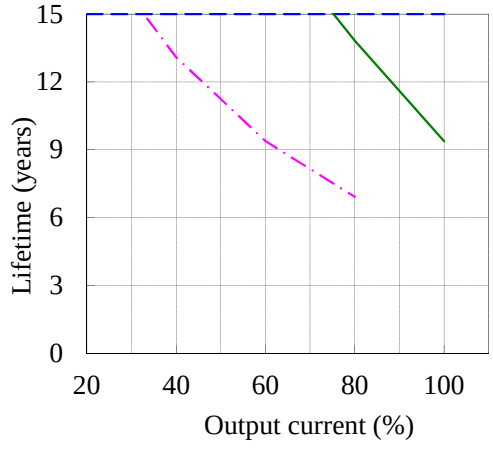
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	13.6
60%	15.0	15.0	9.6
80%	15.0	13.1	6.5
100%	14.0	7.0	-



Vin=230VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	13.1
60%	15.0	15.0	9.4
80%	15.0	13.8	6.9
100%	15.0	9.4	-



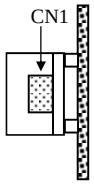
上記推定寿命は、弊社計算方法により算出した値であり、封口ゴムの劣化等の影響を含めておりません。
The life time is calulated based on our method and doesn't include the seal rubber degradation effect etc.

4. 電解コンデンサ推定寿命計算値　Electrolytic Capacitor Lifetime

MODEL : CUS100MB

空冷条件:自然空冷　Cooling condition : Convection cooling

取付方向 C
Mounting C

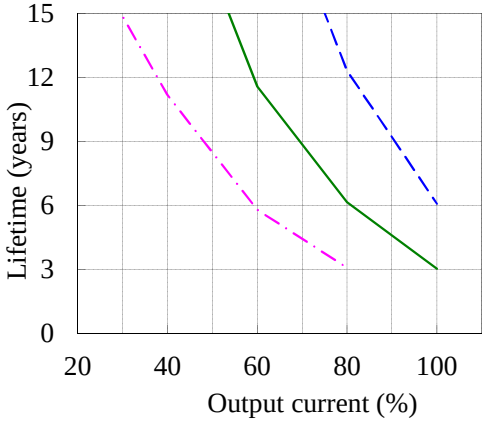


Conditions　Ta　30℃ :
40℃ :
50℃ :

5V

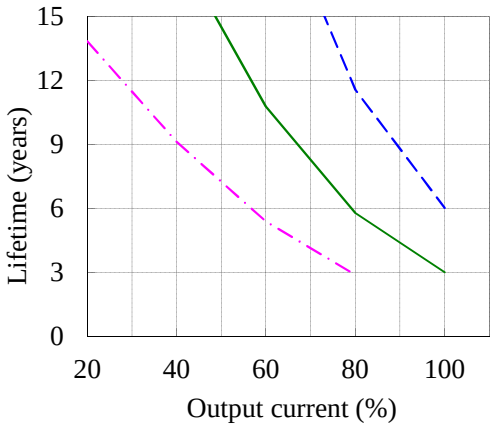
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	11.2
60%	15.0	11.6	5.8
80%	12.3	6.2	3.1
100%	6.1	3.0	-



Vin=230VAC

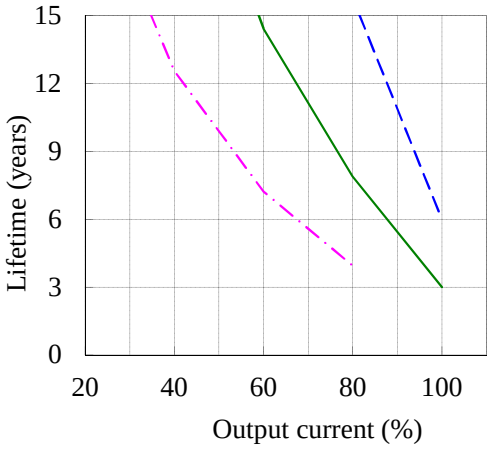
Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	13.8
40%	15.0	15.0	9.1
60%	15.0	10.8	5.4
80%	11.6	5.8	2.9
100%	6.0	3.0	-



24V

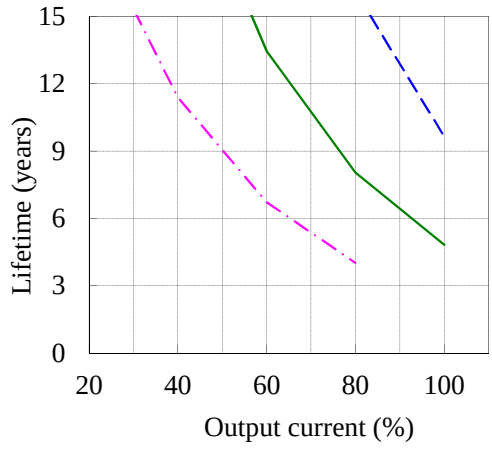
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	12.5
60%	15.0	14.4	7.2
80%	15.0	7.9	3.9
100%	6.0	3.0	-



Vin=230VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	11.4
60%	15.0	13.4	6.7
80%	15.0	8.1	4.0
100%	9.6	4.8	-



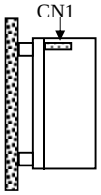
上記推定寿命は、弊社計算方法により算出した値であり、封口ゴムの劣化等の影響を含めておりません。
The life time is calulated based on our method and doesn't include the seal rubber degradation effect etc.

4. 電解コンデンサ推定寿命計算値　Electrolytic Capacitor Lifetime

MODEL : CUS100MB

空冷条件:自然空冷　Cooling condition : Convection cooling

取付方向 D
Mounting D

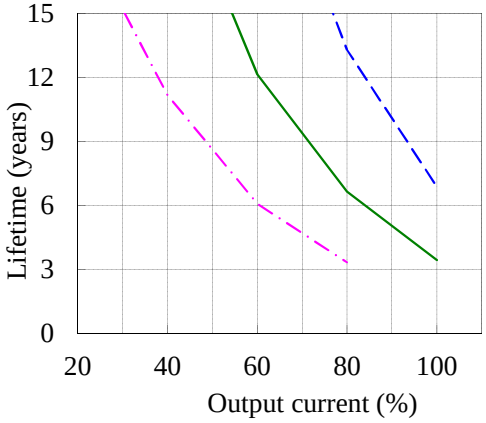


Conditions　Ta　30℃ :
40℃ :
50℃ :

5V

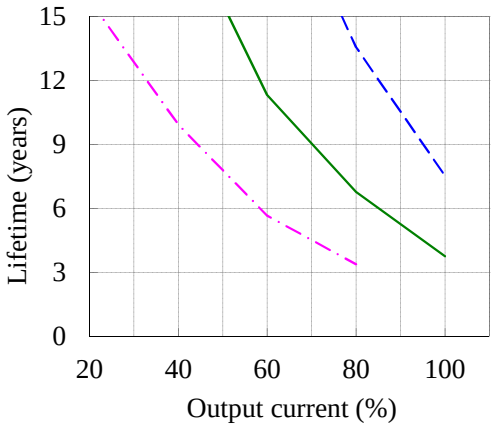
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	11.2
60%	15.0	12.1	6.1
80%	13.3	6.6	3.3
100%	6.9	3.4	-



Vin=230VAC

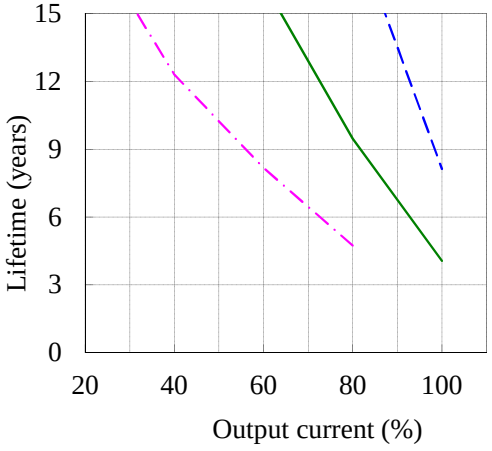
Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	9.9
60%	15.0	11.3	5.7
80%	13.6	6.8	3.4
100%	7.5	3.8	-



24V

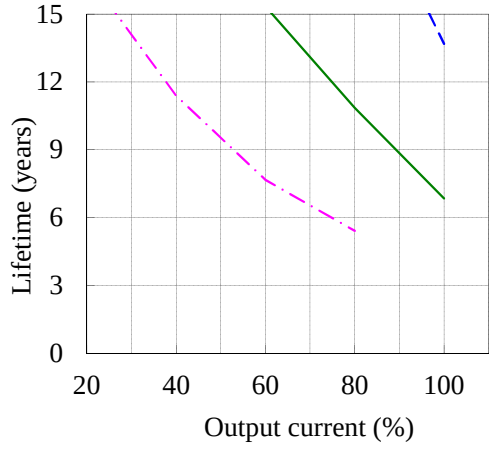
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	12.3
60%	15.0	15.0	8.2
80%	15.0	9.5	4.7
100%	8.1	4.1	-



Vin=230VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	11.4
60%	15.0	15.0	7.7
80%	15.0	10.8	5.4
100%	13.7	6.8	-



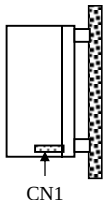
上記推定寿命は、弊社計算方法により算出した値であり、封口ゴムの劣化等の影響を含めておりません。
The life time is calulated based on our method and doesn't include the seal rubber degradation effect etc.

4. 電解コンデンサ推定寿命計算値　Electrolytic Capacitor Lifetime

MODEL : CUS100MB

空冷条件: 自然空冷　**Cooling condition : Convection cooling**

取付方向 E
Mounting E

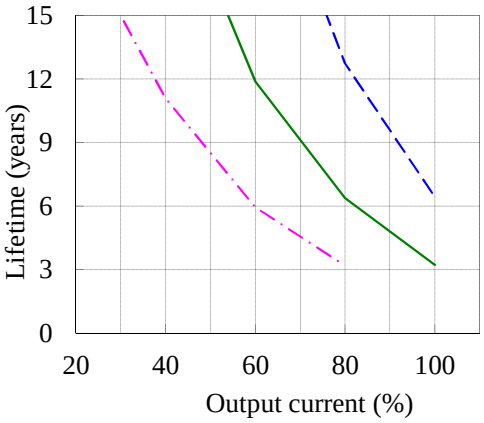


Conditions　Ta　30℃ :
40℃ :
50℃ :

5V

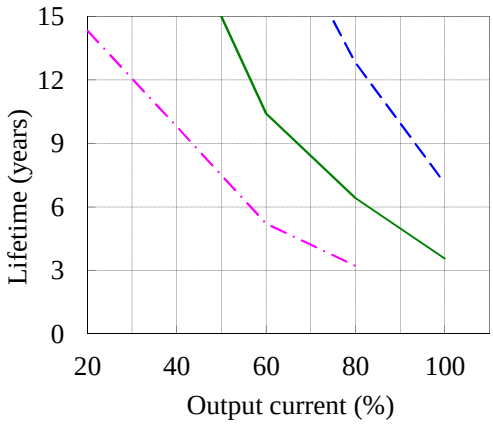
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	11.1
60%	15.0	11.9	5.9
80%	12.7	6.4	3.2
100%	6.4	-	-



Vin=230VAC

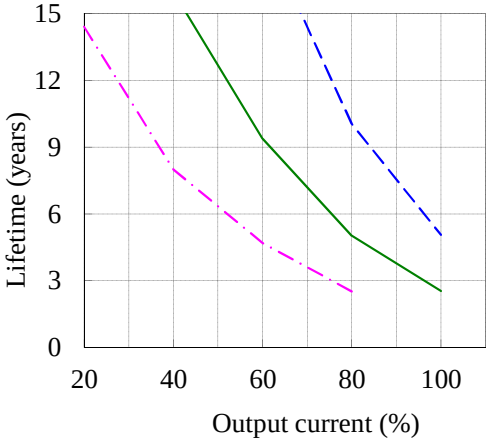
Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	14.3
40%	15.0	15.0	9.8
60%	15.0	10.4	5.2
80%	12.8	6.4	3.2
100%	7.1	-	-



24V

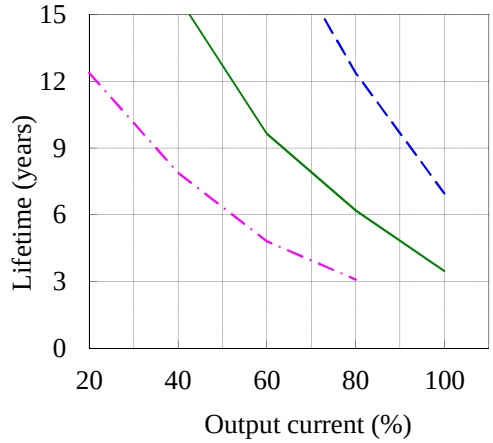
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	14.4
40%	15.0	15.0	8.0
60%	15.0	9.4	4.7
80%	10.0	5.0	2.5
100%	5.1	2.5	-



Vin=230VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	12.4
40%	15.0	15.0	7.9
60%	15.0	9.6	4.8
80%	12.4	6.2	3.1
100%	7.0	3.5	-



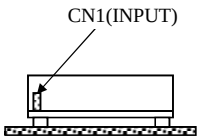
上記推定寿命は、弊社計算方法により算出した値であり、封口ｺﾞﾑの劣化等の影響を含めておりません。
The life time is calulated based on our method and doesn't include the seal rubber degradation effect etc.

4. 電解コンデンサ推定寿命計算値　Electrolytic Capacitor Lifetime

MODEL : CUS100MB

空冷条件:強制空冷　Cooling condition : Force air cooling

取付方向 A
Mounting A

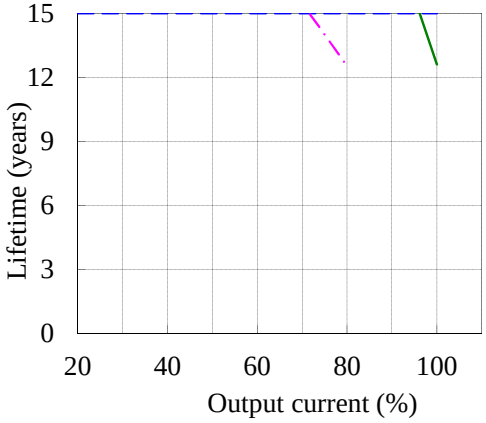


Conditions　Ta　30℃ :
40℃ :
50℃ :

5V

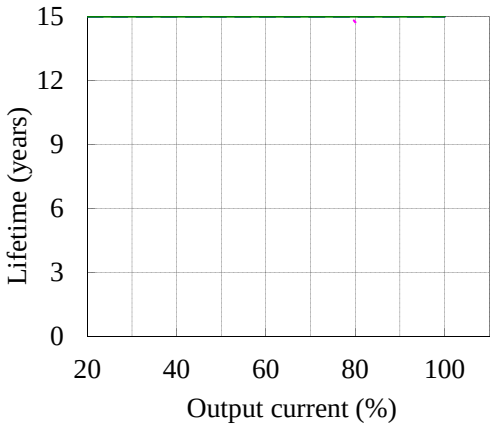
Vin=115VAC

Load \ Ta	Lifetime (years)		
	30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	12.5
100%	15.0	12.6	-



Vin=230VAC

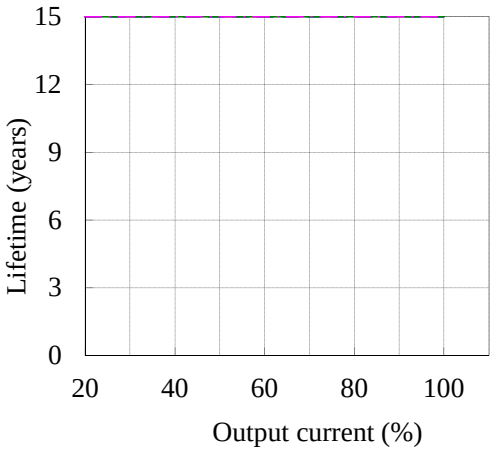
Load \ Ta	Lifetime (years)		
	30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	14.7
100%	15.0	15.0	-



24V

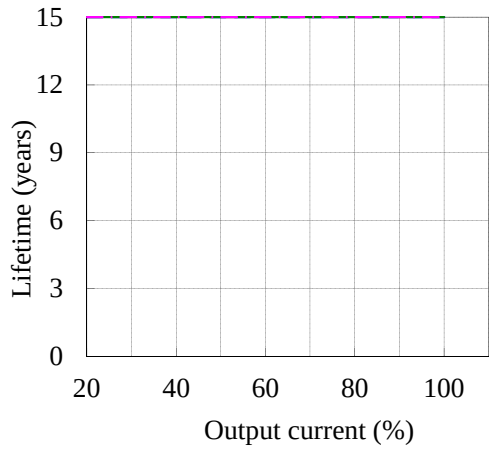
Vin=115VAC

Load \ Ta	Lifetime (years)		
	30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	15.0
100%	15.0	15.0	15.0



Vin=230VAC

Load \ Ta	Lifetime (years)		
	30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	15.0
100%	15.0	15.0	15.0



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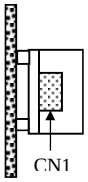
4. 電解コンデンサ推定寿命計算値　Electrolytic Capacitor Lifetime

MODEL : CUS100MB

空冷条件:強制空冷　Cooling condition : Force air cooling

取付方向 B
Mounting B

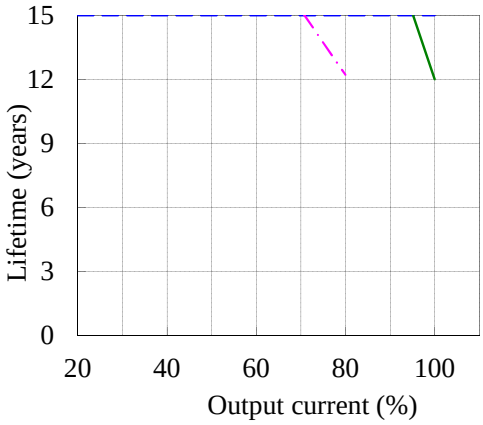


Conditions Ta 30℃ :
40℃ :
50℃ :

5V

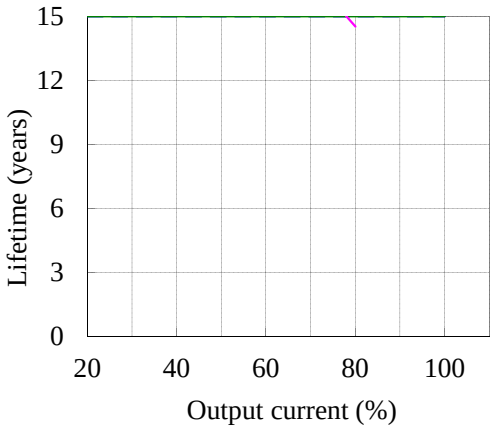
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	12.2
100%	15.0	12.0	-



Vin=230VAC

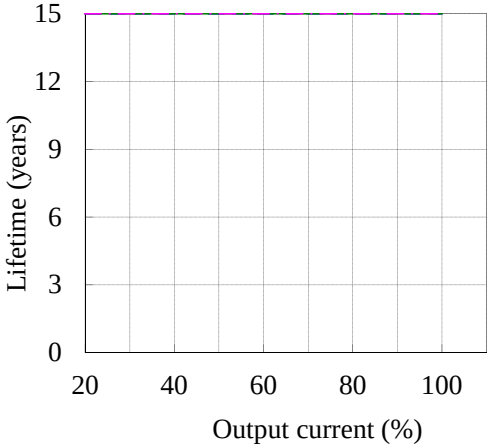
Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	14.5
100%	15.0	15.0	-



24V

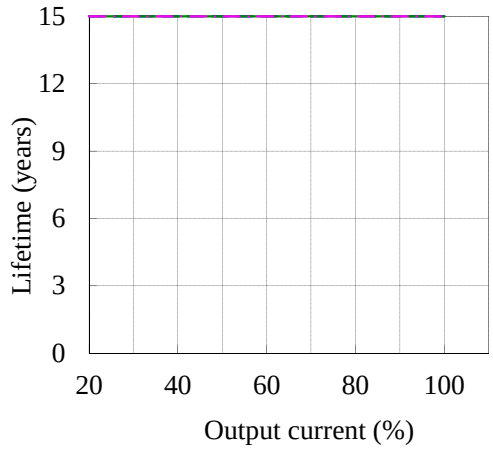
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	15.0
100%	15.0	15.0	15.0



Vin=230VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	15.0
100%	15.0	15.0	15.0



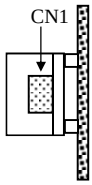
上記推定寿命は、弊社計算方法により算出した値であり、封口ゴムの劣化等の影響を含めておりません。
The life time is calulated based on our method and doesn't include the seal rubber degradation effect etc.

4. 電解コンデンサ推定寿命計算値　Electrolytic Capacitor Lifetime

MODEL : CUS100MB

空冷条件:強制空冷　Cooling condition : Force air cooling

取付方向 C
Mounting C

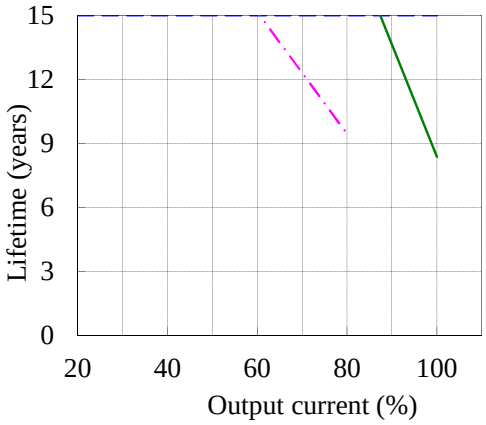


Conditions　Ta　30℃ :
40℃ :
50℃ :

5V

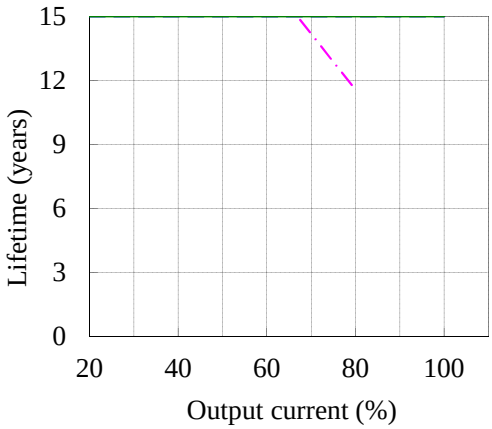
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	9.4
100%	15.0	8.4	-



Vin=230VAC

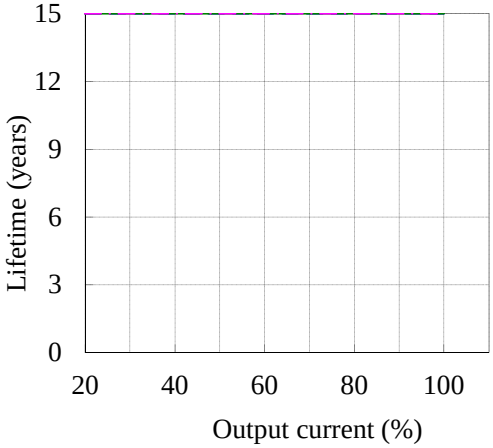
Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	11.6
100%	15.0	15.0	-



24V

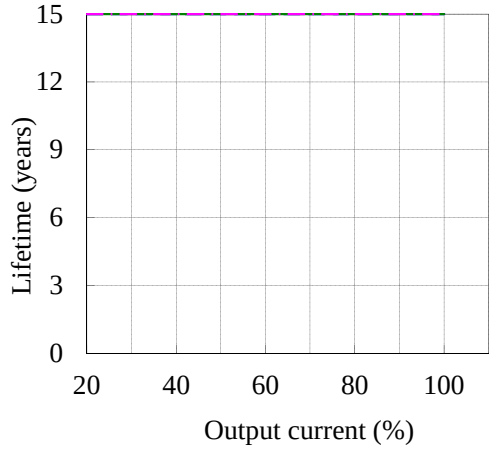
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	15.0
100%	15.0	15.0	15.0



Vin=230VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	15.0
100%	15.0	15.0	15.0



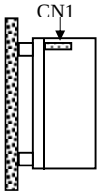
上記推定寿命は、弊社計算方法により算出した値であり、封口ゴムの劣化等の影響を含めておりません。
The life time is calulated based on our method and doesn't include the seal rubber degradation effect etc.

4. 電解コンデンサ推定寿命計算値　Electrolytic Capacitor Lifetime

MODEL : CUS100MB

空冷条件:強制空冷　Cooling condition : Force air cooling

取付方向 D
Mounting D

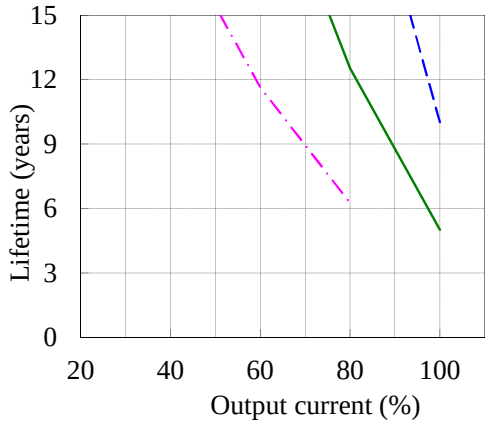


Conditions　Ta　30℃ :
40℃ :
50℃ :

5V

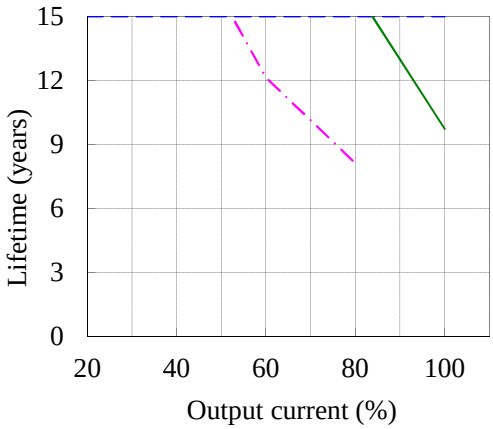
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	11.6
80%	15.0	12.5	6.3
100%	10.0	5.0	-



Vin=230VAC

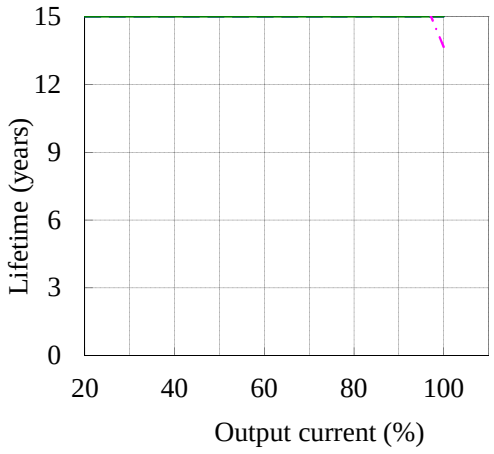
Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	12.1
80%	15.0	15.0	8.1
100%	15.0	9.7	-



24V

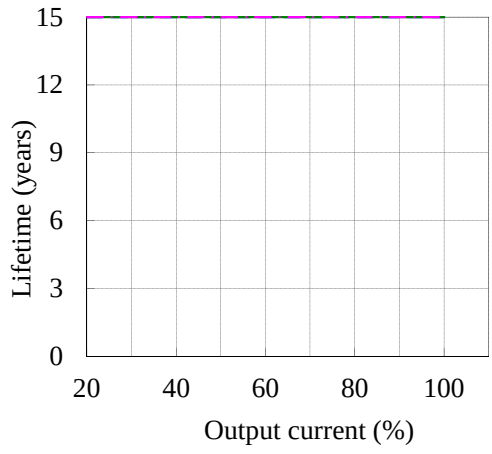
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	15.0
100%	15.0	15.0	13.7



Vin=230VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	15.0
100%	15.0	15.0	15.0



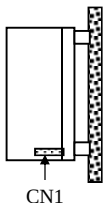
上記推定寿命は、弊社計算方法により算出した値であり、封口ゴムの劣化等の影響を含めておりません。
The life time is calulated based on our method and doesn't include the seal rubber degradation effect etc.

4. 電解コンデンサ推定寿命計算値　Electrolytic Capacitor Lifetime

MODEL : CUS100MB

空冷条件:強制空冷　Cooling condition : Force air cooling

取付方向 E
Mounting E

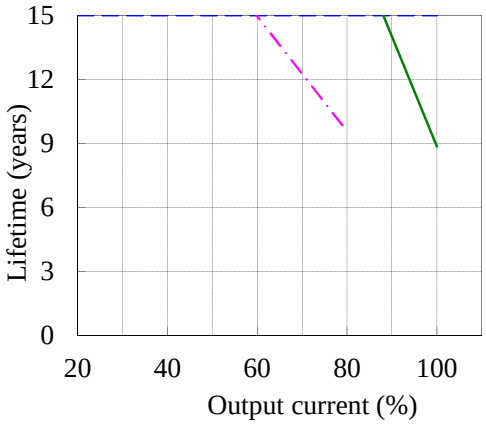


Conditions　Ta　30℃ :
40℃ :
50℃ :

5V

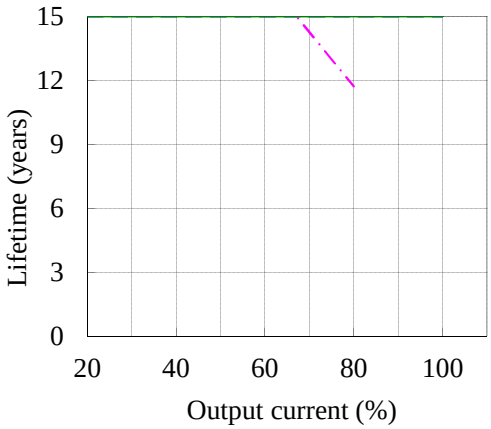
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	14.9
80%	15.0	15.0	9.6
100%	15.0	8.8	-



Vin=230VAC

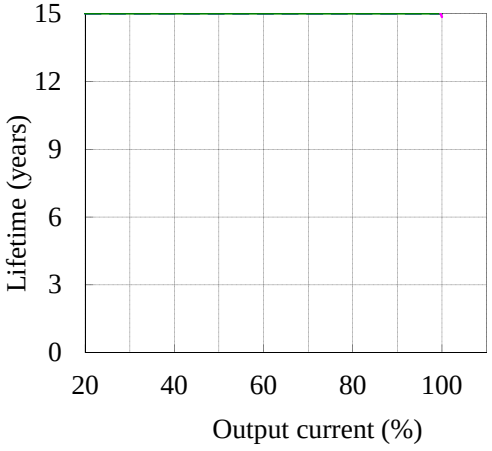
Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	11.7
100%	15.0	15.0	-



24V

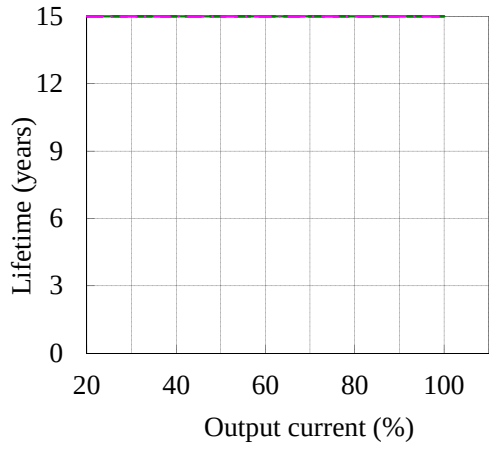
Vin=115VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	15.0
100%	15.0	15.0	14.8



Vin=230VAC

Load \ Ta	Lifetime (years) 30℃	40℃	50℃
20%	15.0	15.0	15.0
40%	15.0	15.0	15.0
60%	15.0	15.0	15.0
80%	15.0	15.0	15.0
100%	15.0	15.0	15.0



上記推定寿命は、弊社計算方法により算出した値であり、封口ゴムの劣化等の影響を含めておりません。
The life time is calulated based on our method and doesn't include the seal rubber degradation effect etc.

5. アブノーマル試験 Abnormal Test

MODEL : CUS100MB-5

(1) 試験条件 Test Conditions

Input : 265VAC Output : 5V, 16A Ta : 25℃

(2) 試験結果 Test Results

(Da : Damaged)

No.	Test position		Test mode		Test result												
					a	b	c	d	e	f	g	h	I	j	k	l	
	部品No. Location No.	試験端子 Test point	ショート Short	オープン Open	発火 Fire	発煙 Smoke	破裂 Burst	異臭 Smell	赤熱 Red hot	破損 Damaged	ヒューズ断 Fuse blown	OVP	OCP	出力断 No output	変化なし No change	その他 Others	記事 Note
1	Q1	D-S	○							○	○			○			Da: F1A, F1B, Z101
2		D-G	○							○	○			○			Da: F1A, F1B, Q1, Z101, A101
3		G-S	○											○			
4		D		○										○			
5		S		○										○			
6		G		○						○	○			○			Da: F1A, F1B, Q1, Z101, D1
7	C5		○							○	○			○			Da: F1A, F1B
8				○										○			
9	C51A		○										○				
10				○												○	Output ripple increase
11	D1	AC-AC	○							○	○			○			Da: F1A, F1B
12		DC-DC	○							○	○			○			Da: F1A, F1B
13		AC-DC	○							○	○			○			Da: F1A, F1B
14		AC		○										○			
15		DC		○										○			
16	D51A	A-K	○											○			
17		A		○						○				○			Da: D51B
18		K		○						○				○			Da: D51B
19	D101		○													○	Output hiccup
20				○											○		
21	T1	1-6	○											○			
22		4-5	○											○			
23		8,9-11,12	○											○			
24		1		○										○			
25		4		○												○	Output hiccup
26		8,9		○										○			
27	L51		○													○	Output ripple increase
28				○						○	○			○			Da: F1A, F1B, Q1, Z101, A101

6. 振動試験 Vibration Test

MODEL： CUS100MB-5

(1) 振動試験種類 Vibration Test Class

掃引振動数耐久試験 Frequency variable endurance test

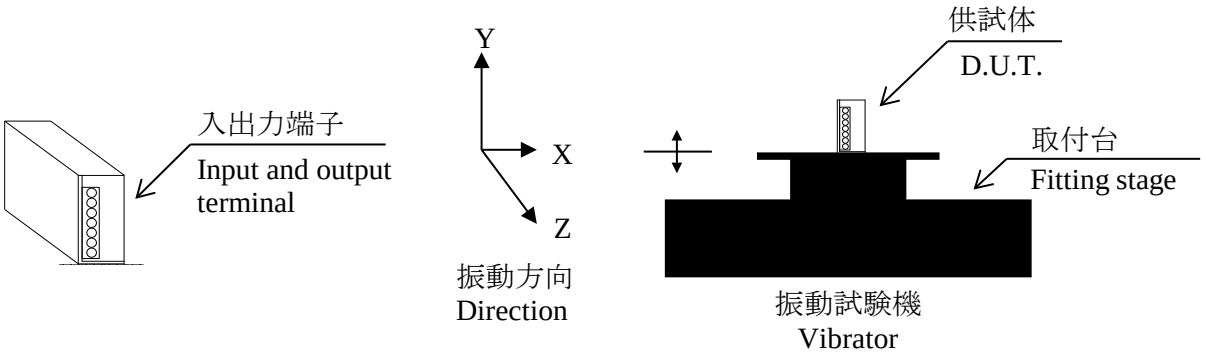
(2) 使用振動試験装置 Equipment Used

Unholtz Dickie Corp. SAI30-R16C

(3) 試験条件 Test Conditions

・周波数範囲 Sweep frequency	: 10～500Hz	・振動方向 Direction	: X, Y, Z
・掃引時間 Sweep time	: 1.0分間 1.0min	・試験時間 Sweep count	: 各方向共 1時間 1 hour each
・加速度 Acceleration	: 一定 19.6m/s^2 (2G) Constant		

(4) 試験方法 Test Method



(5) 判定条件 Acceptable Conditions

1. 破壊しない事
   Not to be broken.
2. 試験後の出力に異常がない事
   No abnormal output after test.

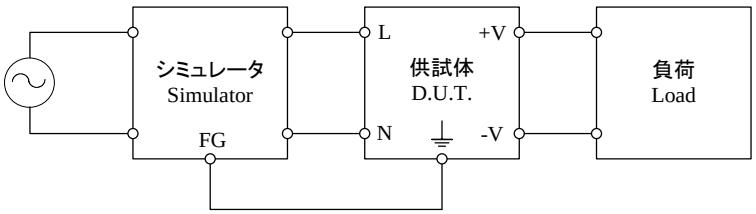
(6) 試験結果 Test Results

合格 OK

7. ノイズシミュレート試験 Noise Simulate Test

MODEL： CUS100MB-5

(1) 試験回路及び測定器 Test Circuit and Equipment



シミュレータ：INS-4320(A) （ノイズ研究所）
Simulator (Noise Laboratory Co.,LTD)

(2) 試験条件 Test Conditions

・入力電圧 Input voltage	: 100, 230VAC	・ノイズ電圧 Noise level	: 0～2kV
・出力電圧 Output Voltage	: 定格 Rated	・位相 Phase	: 0～360 deg
・出力電流 Output current	: 0%, Full Load	・極性 Polarity	: ＋,－
・周囲温度 Ambient temperature	: 25℃	・印加モード Mode	: コモン、ノーマル Common, Normal
・パルス幅 Pulse width	: 50～1000ns	・トリガ選択 Trigger select	: Line

(3) 判定条件 Acceptable Conditions

1. 試験中、5%を超える出力電圧の変動のない事
   The regulation of output voltage must not exceed 5% of initial value during test.
2. 試験後の出力電圧は初期値から変動していない事
   The output voltage must be within the regulation of specification after the test.
3. 発煙・発火のない事
   Smoke and fire are not allowed.

(4) 試験結果 Test Results

合格 OK

8. 熱衝撃試験 Thermal Shock Test

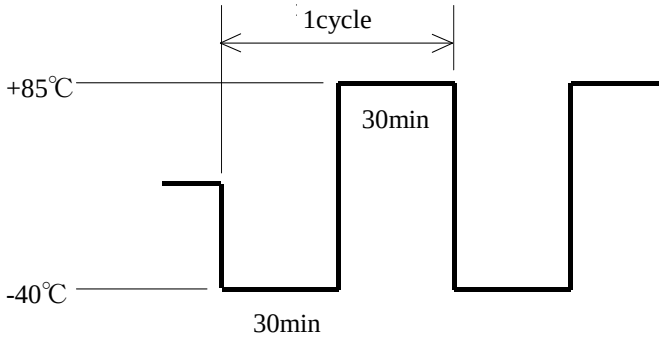
MODEL： CUS100MB-5

(1) 使用計測器 Equipment Used

TSA-101S-W : ESPEC

(2) 試験条件 Test Conditions

・電源周囲温度 : -40℃ ⇔ 85℃
Ambient Temperature
・試験時間 : 図参照
Test Time Refer to Dwg.
・試験サイクル : 200 サイクル
Test Cycle 200 Cycles
・非動作
Not Operating



(3) 試験方法 Test Method

初期測定の後、供試品を試験槽に入れ、上記サイクルで試験を行う。200サイクル後に、供試品を常温常湿下に1時間放置し、出力に異常がない事を確認する。

Before testing, check if there is no abnormal output, then put the D.U.T. in testing chamber, and test it according to the above cycle. 200 cycles later, leave it for 1 hour at the room temperature , then check if there is no abnormal output.

(4) 判定条件 Acceptable Conditions

試験後の出力に異常がない事
No abnormal output after test.

(5) 試験結果 Test Results

合格 OK