

CUT35

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。全ての製品はほぼ同等な特性を示します。
従いまして、以下の結果は実力値とお考え願います。

Test results are typical data. Nevertheless the following results are considered to be actual capability data because all units have nearly the same characteristics.

1. MTBF計算値 Calculated Values of MTBF

(1) 部品ストレス解析法MTBF Parts stress reliability projection MTBF

MODEL : CUT35-522

算出方法 Calculating Method

Telcordiaの部品ストレス解析法(*1)で算出されています。

故障率 λ_{SS} は、それぞれの部品ごとに電気ストレスと動作温度によって決定されます。

Calculated based on parts stress reliability projection of Telcordia (*1).

Individual failure rate λ_{SS} is calculated by the electric stress and temperature rise of the each part.

*1: Telcordia document “Reliability Prediction Procedure for Electronic Equipment”
(Document number SR-332,Issue3)

<算出式>

$$MTBF = \frac{1}{\lambda_{equip}} = \frac{1}{\pi_E \sum_{i=1}^m (N_i \cdot \lambda_{ssi})} \times 10^9 \text{ 時間 (Hours)}$$

$$\lambda_{ssi} = \lambda_{Gi} \cdot \pi_{Qi} \cdot \pi_{Si} \cdot \pi_{Ti}$$

λ_{equip} : 全機器故障率 (FITs) Total equipment failure rate (FITs = Failures in 10^9 hours)

λ_{Gi} : i 番目の部品に対する基礎故障率 Generic failure rate for the ith part

π_{Qi} : i 番目の部品に対する品質ファクタ Quality factor for the ith part

π_{Si} : i 番目の部品に対するストレスファクタ Stress factor for the ith part

π_{Ti} : i 番目の部品に対する温度ファクタ Temperature factor for the ith part

m : 異なる部品の数 Number of different part types

N_i : i 番目の部品の個数 Quantity of ith part type

π_E : 機器の環境ファクタ Equipment environmental factor

MTBF値 MTBF Values

条件 Conditions

- | | |
|--------------------------------|---------------------------------------|
| • 入力電圧 : 230VAC | • 出力電圧、電流 : 5V, ±12V Full load |
| Input voltage | Output voltage & current |
| • 環境ファクタ : GB (Ground, Benign) | • 取付方法 : 標準取付 B |
| Environmental factor | Mounting method : Standard mounting B |

SR-332,Issue3

MTBF(Ta=25°C) ≒ 2,363,657 時間 (Hours)

MTBF(Ta=55°C) ≒ 703,066 時間 (Hours)

(2) 部品点数法MTBF Part count reliability projection MTBF

MODEL : CUT35-522

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.

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

 λ_{equip} : 全機器故障率 (故障数/10⁶時間)Total equipment failure rate (Failure/10⁶Hours) λ_G : i番目の同属部品に対する故障率 (故障数/10⁶時間)Generic failure rate for the ith generic part (Failure/10⁶Hours) 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 ($\pi_Q=1$)Generic quality factor for the ith generic part ($\pi_Q=1$)

MTBF値 MTBF Values

 G_F : 地上固定 (Ground, Fixed)

RCR-9102B

MTBF	≒	220,570	時間 (Hours)
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2. 部品ディレーティング Components Derating

MODEL : CUT35--522

(1) 算出方法 Calculating Method

(a) 測定方法 Measuring method

・取付方法 : 標準取付 : B Mounting method Standard mounting : B	・周囲温度 : 55°C Ambient temperature
・入力電圧 : 100, 230VAC Input voltage	・出力電圧、電流 : 5V, 3A(100%) +12V, 1.2A(100%) -12V, 0.5A(100%) 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

$$\theta_{j-c} = \frac{T_j(\max) - T_c}{P_{ch}(\max)} \quad \theta_{j-a} = \frac{T_j(\max) - T_a}{P_{ch}(\max)} \quad \theta_{j-l} = \frac{T_j(\max) - T_l}{P_{ch}(\max)}$$

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

T_a : ディレーティングの始まる周囲温度 一般に25°C
Ambient Temperature at Start Point of Derating; 25°C in General

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

$P_{ch}(\max)$: 最大チャネル損失
Maximum Channel Dissipation

$T_j(\max)$: 最大接合点(チャネル)温度
($T_{ch}(\max)$) Maximum Junction (channel) Temperature

θ_{j-c} : 接合点(チャネル)からケースまでの熱抵抗
(θ_{ch-c}) Thermal Impedance between Junction (channel) and Case

θ_{j-a} : 接合点から周囲までの熱抵抗
Thermal Impedance between Junction and air

θ_{j-l} : 接合点からリードまでの熱抵抗
Thermal Impedance between Junction and Lead

MODEL : CUT35-522

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

部品番号 Location No.	Vin = 100VAC	Load = 100%	Ta = 55°C
A1 ICE3A2065ELJ INFINEON	Tj (max) = 150 °C Pd= 0.524W Tj= Tc+ ((θj-c) × Pd)= 118.6 °C D.F. = 79.0 %	θj-c = 15.0 °C/W ΔTc=55.7 °C	Tc=110.7 °C
A2 ICE3A2065ELJ INFINEON	Tj (max) = 150 °C Pd= 0.661W Tj= Tc+ ((θj-c) × Pd)= 114.3 °C D.F. = 76.2 %	θj-c = 15.0 °C/W ΔTc=49.4 °C	Tc=104.4 °C
BD101 TT208 LITE-ON	Tch (max) = 150 °C Pch = 0.826 W Tj = Tc + ((θch-c) × Pch) =107.8 °C D.F. =71.9 %	θch-c =7.5 °C/W ΔTc = 46.6 °C	Tc= 101.6°C
D51 RBQ10T65A ROHM	Tj (max) = 150 °C Pd=2.045W Tj= Tc+ ((θj-c) × Pd)= 111.7 °C D.F. = 63.8 %	θj-c = 0.0°C/W ΔTc=56.7 °C	Tc=111.7 °C
D301 STPS8170DEE-TR STMICRO	Tj (max) = 175 °C Pd= 1.088W Tj= Tc+ ((θj-c) × Pd)= 120.8 °C D.F. =80.5 %	θj-c = 4.0 °C/W ΔTc=61.4°C	Tc=116.4 °C
D302 STPS8170DEE-TR STMICRO	Tj (max) = 175 °C Pd= 1.088W Tj= Tc+ ((θj-c) × Pd)= 107.9 °C D.F. =71.9 %	θj-c = 4.0 °C/W ΔTc=48.5°C	Tc=103.5 °C

MODEL : CUT35-522

(2) 部品ダイレーティング表 Component Derating List

部品番号 Location No.	$V_{in} = 230VAC$	Load = 100%	$T_a = 55^{\circ}C$
A1 ICE3A2065ELJ INFINEON	$T_j (max) = 150^{\circ}C$ Pd= 0.524W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 115.9^{\circ}C$ D.F. = 77.2 %	$\theta_{j-c} = 15.0^{\circ}C/W$ $\Delta T_c = 53.0^{\circ}C$	$T_c = 108.0^{\circ}C$
A2 ICE3A2065ELJ INFINEON	$T_j (max) = 150^{\circ}C$ Pd= 0.661W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 112.3^{\circ}C$ D.F. = 74.9 %	$\theta_{j-c} = 15.0^{\circ}C/W$ $\Delta T_c = 47.4^{\circ}C$	$T_c = 102.4^{\circ}C$
BD101 TT208 LITE-ON	$T_{ch} (max) = 150^{\circ}C$ Pch = 0.826 W $T_j = T_c + ((\theta_{ch-c}) \times Pch) = 95.4^{\circ}C$ D.F. = 63.6 %	$\theta_{ch-c} = 7.5^{\circ}C/W$ $\Delta T_c = 34.2^{\circ}C$	$T_c = 89.2^{\circ}C$
D51 RBQ10T65A ROHM	$T_j (max) = 150^{\circ}C$ Pd=2.045W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 112.2^{\circ}C$ D.F. = 64.1 %	$\theta_{j-c} = 0.0^{\circ}C/W$ $\Delta T_c = 57.2^{\circ}C$	$T_c = 112.2^{\circ}C$
D301 STPS8170DEE-TR STMICRO	$T_j (max) = 175^{\circ}C$ Pd= 1.088W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 122.7^{\circ}C$ D.F. = 81.8 %	$\theta_{j-c} = 4.0^{\circ}C/W$ $\Delta T_c = 63.3^{\circ}C$	$T_c = 118.3^{\circ}C$
D302 STPS8170DEE-TR STMICRO	$T_j (max) = 175^{\circ}C$ Pd= 1.088W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 106.2^{\circ}C$ D.F. = 70.8 %	$\theta_{j-c} = 4.0^{\circ}C/W$ $\Delta T_c = 50.5^{\circ}C$	$T_c = 105.5^{\circ}C$

2. 部品ディレーティング Components Derating

MODEL : CUT35--522

(1) 算出方法 Calculating Method

(a) 測定方法 Measuring method

・取付方法 Mounting method	:標準取付 : B Standard mounting : B	・周囲温度 Ambient temperature	:55°C
・入力電圧 Input voltage	:110, 220VDC	・出力電圧、電流 Output voltage & current	: 5V, 3A(100%) +12V, 1.2A(100%) -12V, 0.5A(100%)

(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

$$\theta_{j-c} = \frac{T_j(\max) - T_c}{P_{ch}(\max)} \quad \theta_{j-a} = \frac{T_j(\max) - T_a}{P_{ch}(\max)} \quad \theta_{j-l} = \frac{T_j(\max) - T_l}{P_{ch}(\max)}$$

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

T_a :ディレーティングの始まる周囲温度 一般に25°C
Ambient Temperature at Start Point of Derating; 25°C in General

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

$P_{ch}(\max)$:最大チャネル損失
Maximum Channel Dissipation

$T_j(\max)$:最大接合点(チャネル)温度
($T_{ch}(\max)$) Maximum Junction (channel) Temperature

θ_{j-c} :接合点(チャネル)からケースまでの熱抵抗
(θ_{ch-c}) Thermal Impedance between Junction (channel) and Case

θ_{j-a} :接合点から周囲までの熱抵抗
Thermal Impedance between Junction and air

θ_{j-l} :接合点からリードまでの熱抵抗
Thermal Impedance between Junction and Lead

MODEL : CUT35-522

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

部品番号 Location No.	Vin = 110VDC	Load = 100%	Ta = 55°C
A1 ICE3A2065ELJ INFINEON	Tj (max) = 150 °C Pd= 0.524W Tj= Tc+ ((θj-c) × Pd)= 108.7°C D.F. = 72.4 %	θj-c = 15.0 °C/W ΔTc=50.8 °C	Tc=105.8 °C
A2 ICE3A2065ELJ INFINEON	Tj (max) = 150 °C Pd= 0.661W Tj= Tc+ ((θj-c) × Pd)= 111.4 °C D.F. = 74.3 %	θj-c = 15.0 °C/W ΔTc=46.5 °C	Tc=96.5 °C
BD101 TT208 LITE-ON	Tch (max) = 150 °C Pch = 0.826 W Tj = Tc + ((θch-c) × Pch) =96.5 °C D.F. =64.3 %	θch-c =7.5 °C/W ΔTc = 35.3 °C	Tc= 90.3°C
D51 RBQ10T65A ROHM	Tj (max) = 150 °C Pd=2.045W Tj= Tc+ ((θj-c) × Pd)= 111.5 °C D.F. = 63.7 %	θj-c = 0.0°C/W ΔTc=56.5 °C	Tc=111.5 °C
D301 STPS8170DEE-TR STMICRO	Tj (max) = 175 °C Pd= 1.088W Tj= Tc+ ((θj-c) × Pd)= 121.1 °C D.F. =80.7 %	θj-c = 4.0 °C/W ΔTc=61.7°C	Tc=116.7 °C
D302 STPS8170DEE-TR STMICRO	Tj (max) = 175 °C Pd= 1.088W Tj= Tc+ ((θj-c) × Pd)= 108.4 °C D.F. =72.2 %	θj-c = 4.0 °C/W ΔTc=49.0°C	Tc=104.0°C

MODEL : CUT35-522

(2) 部品ダイレーティング表 Component Derating List

部品番号 Location No.	$V_{in} = 220VDC$	Load = 100%	$T_a = 55^{\circ}C$
A1 ICE3A2065ELJ INFINEON	$T_j(\max) = 150^{\circ}C$ Pd= 0.524W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 117.9^{\circ}C$ D.F. = 78.6 %	$\theta_{j-c} = 15.0^{\circ}C/W$ $\Delta T_c = 55.0^{\circ}C$	$T_c = 110.0^{\circ}C$
A2 ICE3A2065ELJ INFINEON	$T_j(\max) = 150^{\circ}C$ Pd= 0.661W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 114.1^{\circ}C$ D.F. = 76.1%	$\theta_{j-c} = 15.0^{\circ}C/W$ $\Delta T_c = 49.2^{\circ}C$	$T_c = 104.2^{\circ}C$
BD101 TT208 LITE-ON	$T_{ch}(\max) = 150^{\circ}C$ Pch = 0.826 W $T_j = T_c + ((\theta_{ch-c}) \times Pch) = 90.2^{\circ}C$ D.F. = 60.1 %	$\theta_{ch-c} = 7.5^{\circ}C/W$ $\Delta T_c = 29.0^{\circ}C$	$T_c = 84.0^{\circ}C$
D51 RBQ10T65A ROHM	$T_j(\max) = 150^{\circ}C$ Pd=2.045W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 113.2^{\circ}C$ D.F. = 64.7 %	$\theta_{j-c} = 0.0^{\circ}C/W$ $\Delta T_c = 58.2^{\circ}C$	$T_c = 113.2^{\circ}C$
D301 STPS8170DEE-TR STMICRO	$T_j(\max) = 175^{\circ}C$ Pd= 1.088W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 123.4^{\circ}C$ D.F. = 82.2 %	$\theta_{j-c} = 4.0^{\circ}C/W$ $\Delta T_c = 64.0^{\circ}C$	$T_c = 119.0^{\circ}C$
D302 STPS8170DEE-TR STMICRO	$T_j(\max) = 175^{\circ}C$ Pd= 1.088W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 110.4^{\circ}C$ D.F. = 73.6 %	$\theta_{j-c} = 4.0^{\circ}C/W$ $\Delta T_c = 51.0^{\circ}C$	$T_c = 106.0^{\circ}C$

2. 部品ディレーティング Components Derating

MODEL : CUT35--5FF

(1) 算出方法 Calculating Method

(a) 測定方法 Measuring method

・取付方法 Mounting method	:標準取付 : B Standard mounting : B	・周囲温度 Ambient temperature	:55°C
・入力電圧 Input voltage	:100, 230VAC	・出力電圧、電流 Output voltage & current	: 5V, 3A(100%) +15V, 1.0A(100%) -15V, 0.3A(100%)

(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

$$\theta_{j-c} = \frac{T_j(\max) - T_c}{P_{ch}(\max)} \quad \theta_{j-a} = \frac{T_j(\max) - T_a}{P_{ch}(\max)} \quad \theta_{j-l} = \frac{T_j(\max) - T_l}{P_{ch}(\max)}$$

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

T_a :ディレーティングの始まる周囲温度 一般に25°C
Ambient Temperature at Start Point of Derating; 25°C in General

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

$P_{ch}(\max)$:最大チャネル損失
Maximum Channel Dissipation

$T_j(\max)$:最大接合点(チャネル)温度
($T_{ch}(\max)$) Maximum Junction (channel) Temperature

θ_{j-c} :接合点(チャネル)からケースまでの熱抵抗
(θ_{ch-c}) Thermal Impedance between Junction (channel) and Case

θ_{j-a} :接合点から周囲までの熱抵抗
Thermal Impedance between Junction and air

θ_{j-l} :接合点からリードまでの熱抵抗
Thermal Impedance between Junction and Lead

MODEL : CUT35-5FF

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

部品番号 Location No.	Vin = 100VAC	Load = 100%	Ta = 55°C
A1 ICE3A2065ELJ INFINEON	Tj (max) = 150 °C Pd= 0.524W Tj= Tc+ ((θj-c) × Pd)= 116.5 °C D.F. = 77.6 %	θj-c = 15.0 °C/W ΔTc=53.6 °C	Tc=108.6 °C
A2 ICE3A2065ELJ INFINEON	Tj (max) = 150 °C Pd= 0.661W Tj= Tc+ ((θj-c) × Pd)= 112.4 °C D.F. = 74.9 %	θj-c = 15.0 °C/W ΔTc=47.5 °C	Tc=102.5 °C
BD101 TT208 LITE-ON	Tch (max) = 150 °C Pch = 0.826 W Tj = Tc + ((θch-c) × Pch) =117.0 °C D.F. =78.0 %	θch-c =7.5 °C/W ΔTc = 55.8 °C	Tc= 110.8°C
D51 RBQ10T65A ROHM	Tj (max) = 150 °C Pd=2.045W Tj= Tc+ ((θj-c) × Pd)= 108.0 °C D.F. = 61.7 %	θj-c = 0.0°C/W ΔTc=53.0 °C	Tc=108.0 °C
D301 STPS8170DEE-TR STMICRO	Tj (max) = 175 °C Pd= 1.088W Tj= Tc+ ((θj-c) × Pd)= 112.5 °C D.F. =75.0 %	θj-c = 4.0 °C/W ΔTc=53.1°C	Tc=108.1 °C
D302 STPS8170DEE-TR STMICRO	Tj (max) = 175 °C Pd= 1.088W Tj= Tc+ ((θj-c) × Pd)=98.7 °C D.F. =65.8 %	θj-c = 4.0 °C/W ΔTc=39.3°C	Tc=94.3 °C

MODEL : CUT35-5FF

(2) 部品ダイレーティング表 Component Derating List

部品番号 Location No.	Vin = 230VAC	Load = 100%	Ta = 55°C
A1 ICE3A2065ELJ INFINEON	Tj (max) = 150 °C Pd= 0.524W Tj= Tc+ ((θj-c) × Pd)= 110.4 °C D.F. = 73.6 %	θj-c = 15.0 °C/W ΔTc=47.5 °C	Tc=102.5 °C
A2 ICE3A2065ELJ INFINEON	Tj (max) = 150 °C Pd= 0.661W Tj= Tc+ ((θj-c) × Pd)= 106.6 °C D.F. = 71.1 %	θj-c = 15.0 °C/W ΔTc=41.7 °C	Tc=96.7 °C
BD101 TT208 LITE-ON	Tch (max) = 150 °C Pch = 0.826 W Tj = Tc + ((θch-c) × Pch) =97.3 °C D.F. =64.9 %	θch-c =7.5 °C/W ΔTc = 36.1 °C	Tc= 91.1°C
D51 RBQ10T65A ROHM	Tj (max) = 150 °C Pd=2.045W Tj= Tc+ ((θj-c) × Pd)= 107.7 °C D.F. = 61.5 %	θj-c = 0.0°C/W ΔTc=52.7 °C	Tc=107.7 °C
D301 STPS8170DEE-TR STMICRO	Tj (max) = 175 °C Pd= 1.088W Tj= Tc+ ((θj-c) × Pd)= 114.0 °C D.F. =76.0 %	θj-c = 4.0 °C/W ΔTc=54.6°C	Tc=109.6 °C
D302 STPS8170DEE-TR STMICRO	Tj (max) = 175 °C Pd= 1.088W Tj= Tc+ ((θj-c) × Pd)= 100.5 °C D.F. =67.0 %	θj-c = 4.0 °C/W ΔTc=41.1°C	Tc=96.1 °C

2. 部品ディレーティング Components Derating

MODEL : CUT35--5FF

(1) 算出方法 Calculating Method

(a) 測定方法 Measuring method

・取付方法 Mounting method	:標準取付 : B Standard mounting : B	・周囲温度 Ambient temperature	:55°C
・入力電圧 Input voltage	:110, 220VDC	・出力電圧、電流 Output voltage & current	: 5V, 3A(100%) +12V, 1.2A(100%) -12V, 0.5A(100%)

(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

$$\theta_{j-c} = \frac{T_j(\max) - T_c}{P_{ch}(\max)} \quad \theta_{j-a} = \frac{T_j(\max) - T_a}{P_{ch}(\max)} \quad \theta_{j-l} = \frac{T_j(\max) - T_l}{P_{ch}(\max)}$$

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

T_a :ディレーティングの始まる周囲温度 一般に25°C
Ambient Temperature at Start Point of Derating; 25°C in General

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

$P_{ch}(\max)$:最大チャネル損失
Maximum Channel Dissipation

$T_j(\max)$:最大接合点(チャネル)温度
($T_{ch}(\max)$) Maximum Junction (channel) Temperature

θ_{j-c} :接合点(チャネル)からケースまでの熱抵抗
(θ_{ch-c}) Thermal Impedance between Junction (channel) and Case

θ_{j-a} :接合点から周囲までの熱抵抗
Thermal Impedance between Junction and air

θ_{j-l} :接合点からリードまでの熱抵抗
Thermal Impedance between Junction and Lead

MODEL : CUT35-5FF

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

部品番号 Location No.	$V_{in} = 110VDC$	Load = 100%	$T_a = 55^{\circ}C$
A1 ICE3A2065ELJ INFINEON	$T_j(\max) = 150^{\circ}C$ $P_d = 0.524W$ $T_j = T_c + ((\theta_{j-c}) \times P_d) = 113.6^{\circ}C$ D.F. = 75.7 %	$\theta_{j-c} = 15.0^{\circ}C/W$ $\Delta T_c = 50.7^{\circ}C$	$T_c = 105.7^{\circ}C$
A2 ICE3A2065ELJ INFINEON	$T_j(\max) = 150^{\circ}C$ $P_d = 0.661W$ $T_j = T_c + ((\theta_{j-c}) \times P_d) = 110.9^{\circ}C$ D.F. = 73.9 %	$\theta_{j-c} = 15.0^{\circ}C/W$ $\Delta T_c = 46.0^{\circ}C$	$T_c = 101.0^{\circ}C$
BD101 TT208 LITE-ON	$T_{ch}(\max) = 150^{\circ}C$ $P_{ch} = 0.826W$ $T_j = T_c + ((\theta_{ch-c}) \times P_{ch}) = 113.3^{\circ}C$ D.F. = 75.5 %	$\theta_{ch-c} = 7.5^{\circ}C/W$ $\Delta T_c = 52.1^{\circ}C$	$T_c = 107.1^{\circ}C$
D51 RBQ10T65A ROHM	$T_j(\max) = 150^{\circ}C$ $P_d = 2.045W$ $T_j = T_c + ((\theta_{j-c}) \times P_d) = 106.5^{\circ}C$ D.F. = 60.9 %	$\theta_{j-c} = 0.0^{\circ}C/W$ $\Delta T_c = 51.5^{\circ}C$	$T_c = 106.5^{\circ}C$
D301 STPS8170DEE-TR STMICRO	$T_j(\max) = 175^{\circ}C$ $P_d = 1.088W$ $T_j = T_c + ((\theta_{j-c}) \times P_d) = 111.4^{\circ}C$ D.F. = 74.2 %	$\theta_{j-c} = 4.0^{\circ}C/W$ $\Delta T_c = 52.0^{\circ}C$	$T_c = 107.0^{\circ}C$
D302 STPS8170DEE-TR STMICRO	$T_j(\max) = 175^{\circ}C$ $P_d = 1.088W$ $T_j = T_c + ((\theta_{j-c}) \times P_d) = 97.7^{\circ}C$ D.F. = 65.1 %	$\theta_{j-c} = 4.0^{\circ}C/W$ $\Delta T_c = 38.3^{\circ}C$	$T_c = 93.3^{\circ}C$

MODEL : CUT35-5FF

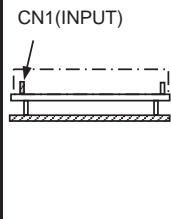
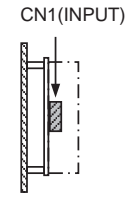
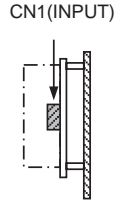
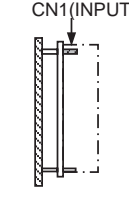
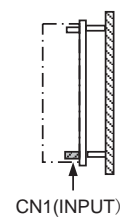
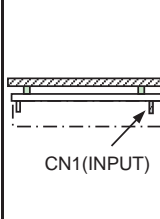
(2) 部品ダイレーティング表 Component Derating List

部品番号 Location No.	$V_{in} = 220VDC$	Load = 100%	$T_a = 55^{\circ}C$
A1 ICE3A2065ELJ INFINEON	$T_j(\max) = 150^{\circ}C$ Pd= 0.524W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 109.8^{\circ}C$ D.F. = 73.2 %	$\theta_{j-c} = 15.0^{\circ}C/W$ $\Delta T_c = 46.9^{\circ}C$	$T_c = 101.9^{\circ}C$
A2 ICE3A2065ELJ INFINEON	$T_j(\max) = 150^{\circ}C$ Pd= 0.661W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 107.6^{\circ}C$ D.F. = 71.7%	$\theta_{j-c} = 15.0^{\circ}C/W$ $\Delta T_c = 42.7^{\circ}C$	$T_c = 97.7^{\circ}C$
BD101 TT208 LITE-ON	$T_{ch}(\max) = 150^{\circ}C$ Pch = 0.826 W $T_j = T_c + ((\theta_{ch-c}) \times Pch) = 95.6^{\circ}C$ D.F. = 63.7 %	$\theta_{ch-c} = 7.5^{\circ}C/W$ $\Delta T_c = 34.4^{\circ}C$	$T_c = 89.4^{\circ}C$
D51 RBQ10T65A ROHM	$T_j(\max) = 150^{\circ}C$ Pd=2.045W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 101.9^{\circ}C$ D.F. = 61.1 %	$\theta_{j-c} = 0.0^{\circ}C/W$ $\Delta T_c = 51.9^{\circ}C$	$T_c = 101.9^{\circ}C$
D301 STPS8170DEE-TR STMICRO	$T_j(\max) = 175^{\circ}C$ Pd= 1.088W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 113.5^{\circ}C$ D.F. = 75.6 %	$\theta_{j-c} = 4.0^{\circ}C/W$ $\Delta T_c = 54.1^{\circ}C$	$T_c = 109.1^{\circ}C$
D302 STPS8170DEE-TR STMICRO	$T_j(\max) = 175^{\circ}C$ Pd= 1.088W $T_j = T_c + ((\theta_{j-c}) \times Pd) = 99.8^{\circ}C$ D.F. = 66.5 %	$\theta_{j-c} = 4.0^{\circ}C/W$ $\Delta T_c = 40.4^{\circ}C$	$T_c = 95.4^{\circ}C$

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

MODEL : CUT35-522

(1) 測定条件 Measuring Conditions

取付方法 Mounting Method (標準取付 : B) (Standard Mounting : B)	Mounting A	Mounting B (STANDARD MOUNTING) CN1(INPUT)	Mounting C	Mounting D	Mounting E	Mounting F
						
入力電圧 V_{in} Input Voltage	100VAC					
出力電圧 V_o Output Voltage	5VDC,+12VDC,-12VDC					
出力電流 I_o Output Current	3A,1.2A,0.5A(100%)					

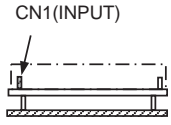
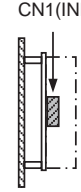
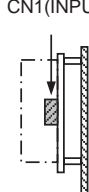
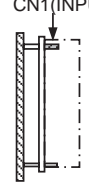
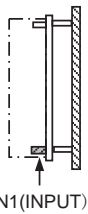
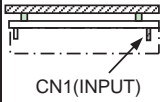
(2) 測定結果 Measuring Results

出力デレーティング Output Derating		ΔT Temperature Rise ($^{\circ}\text{C}$)					
		$I_o=100\%$					
		$T_a=50^{\circ}\text{C}$	$T_a=55^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$
部品番号 Location No.	部品名 Part name	取付方向 Mounting A	取付方向 Mounting B	取付方向 Mounting C	取付方向 Mounting D	取付方向 Mounting E	取付方向 Mounting F
A1	IC	60	56	52	66	57	68
A2	IC	56	49	58	66	57	68
BD101	BRIDGE DIODE	58	47	46	59	46	68
T1 WIRE	TRANSFORMER WIRE	63	58	53	59	58	63
T1 CORE	TRANSFORMER CORE	63	59	55	63	59	65
T2 WIRE	TRANSFORMER WIRE	62	54	63	63	63	66
T2 CORE	TRANSFORMER CORE	64	56	66	67	65	70
D51	S.B.D	53	57	52	56	59	61
D301	DIODE	68	61	68	65	76	79

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

MODEL : CUT35-522

(1) 測定条件 Measuring Conditions

取付方法 Mounting Method (標準取付 : B) (Standard Mounting : B)	Mounting A	Mounting B (STANDARD MOUNTING) CN1(INPUT)	Mounting C	Mounting D	Mounting E	Mounting F
						
入力電圧 V_{in} Input Voltage	230VAC					
出力電圧 V_o Output Voltage	5VDC,+12VDC,-12VDC					
出力電流 I_o Output Current	3A,1.2A,0.5A(100%)					

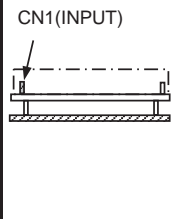
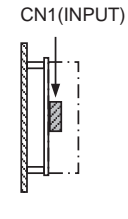
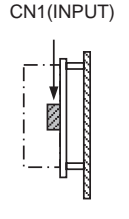
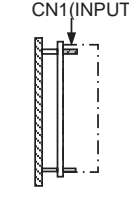
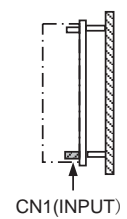
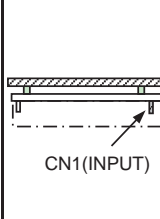
(2) 測定結果 Measuring Results

出力デレーティング Output Derating		ΔT Temperature Rise ($^{\circ}\text{C}$)					
		$I_o=100\%$					
		$T_a=50^{\circ}\text{C}$	$T_a=55^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$
部品番号 Location No.	部品名 Part name	取付方向 Mounting A	取付方向 Mounting B	取付方向 Mounting C	取付方向 Mounting D	取付方向 Mounting E	取付方向 Mounting F
A1	IC	54	53	48	64	51	62
A2	IC	52	47	54	64	52	63
BD101	BRIDGE DIODE	39	34	33	47	33	48
T1 WIRE	TRANSFORMER WIRE	62	58	52	60	55	62
T1 CORE	TRANSFORMER CORE	63	60	55	64	57	65
T2 WIRE	TRANSFORMER WIRE	62	55	63	64	61	66
T2 CORE	TRANSFORMER CORE	63	58	67	69	64	70
D51	S.B.D	54	57	52	56	58	61
D301	DIODE	70	63	70	67	75	80

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

MODEL : CUT35-522

(1) 測定条件 Measuring Conditions

取付方法 Mounting Method (標準取付 : B) (Standard Mounting : B)	Mounting A	Mounting B (STANDARD MOUNTING) CN1(INPUT)	Mounting C	Mounting D	Mounting E	Mounting F
						
入力電圧 V_{in} Input Voltage	110VDC					
出力電圧 V_o Output Voltage	5VDC,+12VDC,-12VDC					
出力電流 I_o Output Current	3A,1.2A,0.5A(100%)					

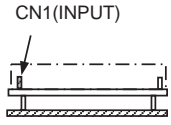
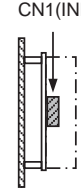
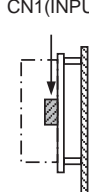
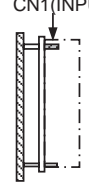
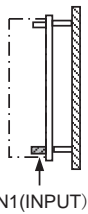
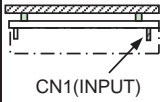
(2) 測定結果 Measuring Results

出力デレーティング Output Derating		ΔT Temperature Rise ($^{\circ}\text{C}$)					
		$I_o=100\%$					
		$T_a=50^{\circ}\text{C}$	$T_a=55^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$
部品番号 Location No.	部品名 Part name	取付方向 Mounting A	取付方向 Mounting B	取付方向 Mounting C	取付方向 Mounting D	取付方向 Mounting E	取付方向 Mounting F
A1	IC	60	51	51	64	54	66
A2	IC	60	47	59	67	57	68
BD101	BRIDGE DIODE	55	35	50	63	50	64
T1 WIRE	TRANSFORMER WIRE	64	58	52	58	57	61
T1 CORE	TRANSFORMER CORE	65	59	54	62	58	64
T2 WIRE	TRANSFORMER WIRE	63	55	62	62	62	65
T2 CORE	TRANSFORMER CORE	63	57	65	66	64	68
D51	S.B.D	54	57	51	55	58	59
D301	DIODE	70	62	68	64	75	77

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

MODEL : CUT35-522

(1) 測定条件 Measuring Conditions

取付方法 Mounting Method (標準取付 : B) (Standard Mounting : B)	Mounting A	Mounting B (STANDARD MOUNTING) CN1(INPUT)	Mounting C	Mounting D	Mounting E	Mounting F
						
入力電圧 V_{in} Input Voltage	220VDC					
出力電圧 V_o Output Voltage	5VDC,+12VDC,-12VDC					
出力電流 I_o Output Current	3A,1.2A,0.5A(100%)					

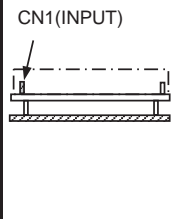
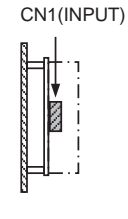
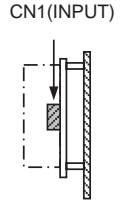
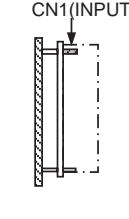
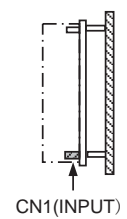
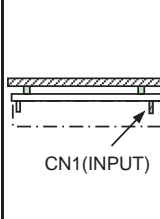
(2) 測定結果 Measuring Results

出力デレーティング Output Derating		ΔT Temperature Rise ($^{\circ}\text{C}$)					
		$I_o=100\%$					
		$T_a=50^{\circ}\text{C}$	$T_a=55^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$
部品番号 Location No.	部品名 Part name	取付方向 Mounting A	取付方向 Mounting B	取付方向 Mounting C	取付方向 Mounting D	取付方向 Mounting E	取付方向 Mounting F
A1	IC	55	55	47	60	48	60
A2	IC	54	49	53	62	50	62
BD101	BRIDGE DIODE	39	29	34	47	33	46
T1 WIRE	TRANSFORMER WIRE	63	60	52	58	55	60
T1 CORE	TRANSFORMER CORE	64	62	54	62	56	63
T2 WIRE	TRANSFORMER WIRE	63	57	62	63	61	65
T2 CORE	TRANSFORMER CORE	64	59	65	67	63	68
D51	S.B.D	55	58	51	55	57	59
D301	DIODE	71	64	69	65	74	78

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

MODEL : CUT35-5FF

(1) 測定条件 Measuring Conditions

取付方法 Mounting Method (標準取付 : B) (Standard Mounting : B)	Mounting A	Mounting B (STANDARD MOUNTING) CN1(INPUT)	Mounting C	Mounting D	Mounting E	Mounting F
						
入力電圧 V_{in} Input Voltage	100VAC					
出力電圧 V_o Output Voltage	5VDC,+15VDC,-15VDC					
出力電流 I_o Output Current	3A,1.0A,0.3A(100%)					

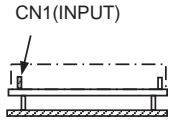
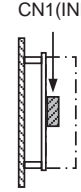
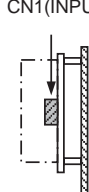
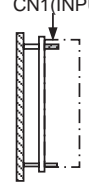
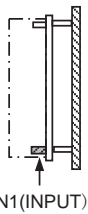
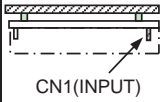
(2) 測定結果 Measuring Results

出力デレーティング Output Derating		ΔT Temperature Rise ($^{\circ}\text{C}$)					
		$I_o=100\%$					
		$T_a=50^{\circ}\text{C}$	$T_a=55^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$
部品番号 Location No.	部品名 Part name	取付方向 Mounting A	取付方向 Mounting B	取付方向 Mounting C	取付方向 Mounting D	取付方向 Mounting E	取付方向 Mounting F
A1	IC	59	54	51	62	57	65
A2	IC	59	48	56	63	58	66
BD101	BRIDGE DIODE	58	56	51	64	54	65
T1 WIRE	TRANSFORMER WIRE	61	54	50	56	58	58
T1 CORE	TRANSFORMER CORE	60	55	52	59	59	60
T2 WIRE	TRANSFORMER WIRE	58	48	57	58	59	60
T2 CORE	TRANSFORMER CORE	58	50	60	61	62	63
D51	S.B.D	52	53	49	52	58	56
D301	DIODE	62	53	60	56	70	70

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

MODEL : CUT35-5FF

(1) 測定条件 Measuring Conditions

取付方法 Mounting Method (標準取付 : B) (Standard Mounting : B)	Mounting A	Mounting B (STANDARD MOUNTING) CN1(INPUT)	Mounting C	Mounting D	Mounting E	Mounting F
						
入力電圧 V_{in} Input Voltage	230VAC					
出力電圧 V_o Output Voltage	5VDC,+15VDC,-15VDC					
出力電流 I_o Output Current	3A,1.0A,0.3A(100%)					

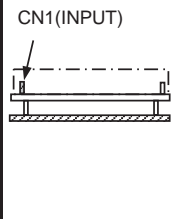
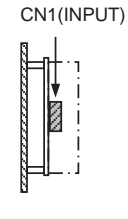
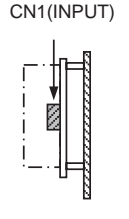
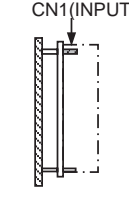
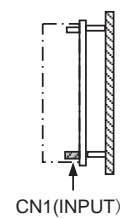
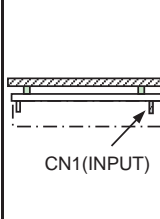
(2) 測定結果 Measuring Results

出力デレーティング Output Derating		ΔT Temperature Rise ($^{\circ}\text{C}$)					
		$I_o=100\%$					
		$T_a=50^{\circ}\text{C}$	$T_a=55^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$
部品番号 Location No.	部品名 Part name	取付方向 Mounting A	取付方向 Mounting B	取付方向 Mounting C	取付方向 Mounting D	取付方向 Mounting E	取付方向 Mounting F
A1	IC	53	48	45	58	49	58
A2	IC	51	42	49	58	49	58
BD101	BRIDGE DIODE	39	36	33	47	36	45
T1 WIRE	TRANSFORMER WIRE	60	53	49	56	55	58
T1 CORE	TRANSFORMER CORE	60	55	52	60	57	61
T2 WIRE	TRANSFORMER WIRE	57	48	57	58	57	59
T2 CORE	TRANSFORMER CORE	58	51	60	62	60	63
D51	S.B.D	52	53	49	52	56	56
D301	DIODE	63	55	62	58	69	71

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

MODEL : CUT35-5FF

(1) 測定条件 Measuring Conditions

取付方法 Mounting Method (標準取付 : B) (Standard Mounting : B)	Mounting A	Mounting B (STANDARD MOUNTING) CN1(INPUT)	Mounting C	Mounting D	Mounting E	Mounting F
						
入力電圧 V_{in} Input Voltage	110VDC					
出力電圧 V_o Output Voltage	5VDC,+15VDC,-15VDC					
出力電流 I_o Output Current	3A,1.0A,0.3A(100%)					

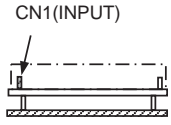
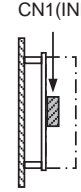
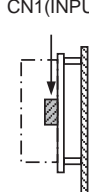
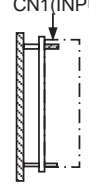
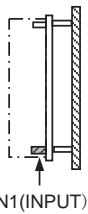
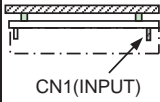
(2) 測定結果 Measuring Results

出力デレーティング Output Derating		ΔT Temperature Rise ($^{\circ}C$)					
		$I_o=100\%$					
		$T_a=50^{\circ}C$	$T_a=55^{\circ}C$	$T_a=50^{\circ}C$	$T_a=45^{\circ}C$	$T_a=50^{\circ}C$	$T_a=45^{\circ}C$
部品番号 Location No.	部品名 Part name	取付方向 Mounting A	取付方向 Mounting B	取付方向 Mounting C	取付方向 Mounting D	取付方向 Mounting E	取付方向 Mounting F
A1	IC	56	51	49	60	53	69
A2	IC	56	46	55	62	54	71
BD101	BRIDGE DIODE	54	52	51	63	51	73
T1 WIRE	TRANSFORMER WIRE	59	53	49	55	55	59
T1 CORE	TRANSFORMER CORE	59	54	51	58	56	61
T2 WIRE	TRANSFORMER WIRE	57	47	57	57	57	60
T2 CORE	TRANSFORMER CORE	56	49	59	60	59	63
D51	S.B.D	51	52	48	52	56	56
D301	DIODE	60	52	60	55	67	70

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

MODEL : CUT35-5FF

(1) 測定条件 Measuring Conditions

取付方法 Mounting Method (標準取付 : B) (Standard Mounting : B)	Mounting A	Mounting B (STANDARD MOUNTING) CN1(INPUT)	Mounting C	Mounting D	Mounting E	Mounting F
						
入力電圧 V_{in} Input Voltage	220VDC					
出力電圧 V_o Output Voltage	5VDC,+15VDC,-15VDC					
出力電流 I_o Output Current	3A,1.0A,0.3A(100%)					

(2) 測定結果 Measuring Results

出力デレーティング Output Derating		ΔT Temperature Rise ($^{\circ}\text{C}$)					
		$I_o=100\%$					
		$T_a=50^{\circ}\text{C}$	$T_a=55^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$	$T_a=50^{\circ}\text{C}$	$T_a=45^{\circ}\text{C}$
部品番号 Location No.	部品名 Part name	取付方向 Mounting A	取付方向 Mounting B	取付方向 Mounting C	取付方向 Mounting D	取付方向 Mounting E	取付方向 Mounting F
A1	IC	52	47	45	57	47	62
A2	IC	52	43	50	59	49	63
BD101	BRIDGE DIODE	37	34	34	47	34	62
T1 WIRE	TRANSFORMER WIRE	59	53	49	56	54	57
T1 CORE	TRANSFORMER CORE	59	54	52	59	55	59
T2 WIRE	TRANSFORMER WIRE	56	48	57	57	56	59
T2 CORE	TRANSFORMER CORE	57	50	60	61	58	61
D51	S.B.D	51	52	49	52	55	55
D301	DIODE	62	54	62	57	67	68

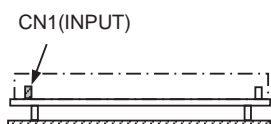
4. 電解コンデンサ推定寿命計算値 Electrolytic Capacitor Lifetime

MODEL : CUT35-522

空冷条件 : 自然空冷

Cooling condition : Convection cooling

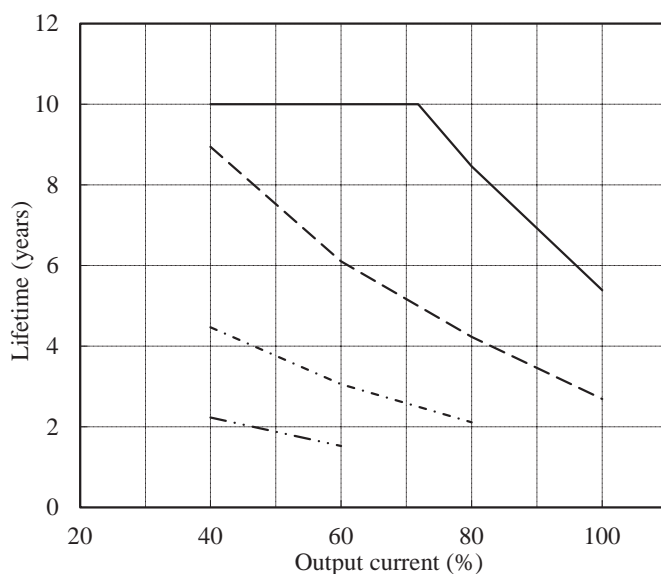
取付方向 A
Mounting A



Conditions Ta 40°C : ———
50°C : - - - -
60°C : - · - · -
70°C : - · · -

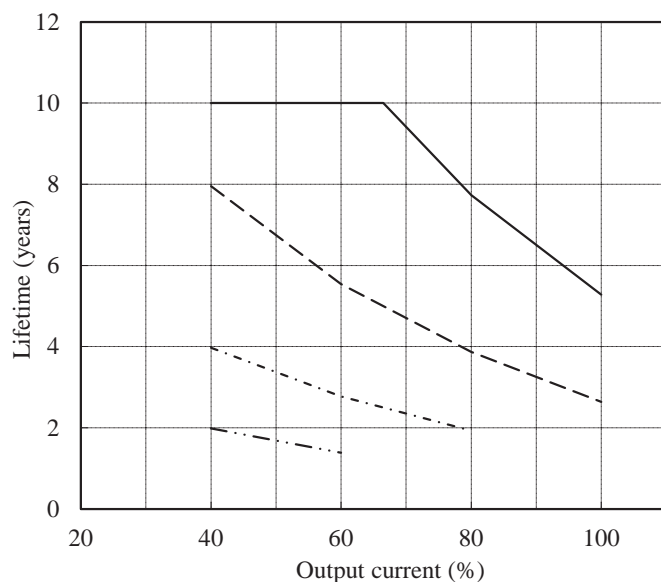
Vin=100VAC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.9	4.5	2.2
60	10.0	6.1	3.1	1.5
80	8.5	4.2	2.1	—
100	5.4	2.7	—	—



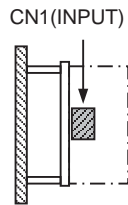
Vin=200VAC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.0	4.0	2.0
60	10.0	5.5	2.8	1.4
80	7.7	3.9	1.9	—
100	5.3	2.6	—	—



MODEL : CUT35-522

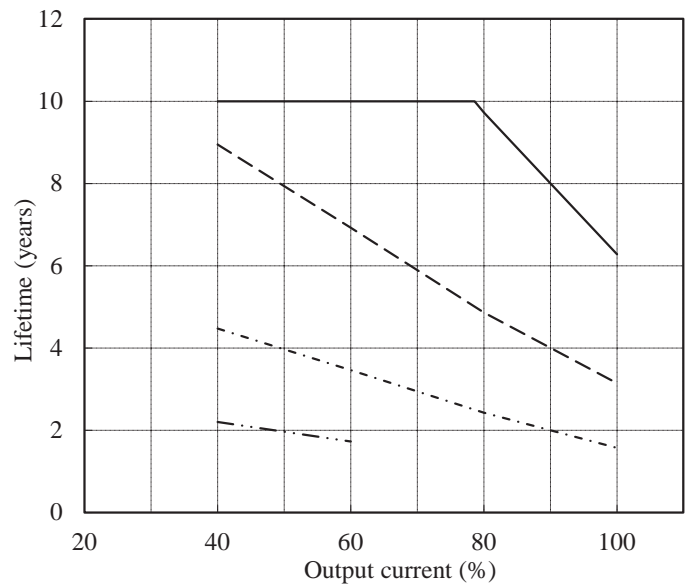
取付方向 B
Mounting B



Vin=100VAC

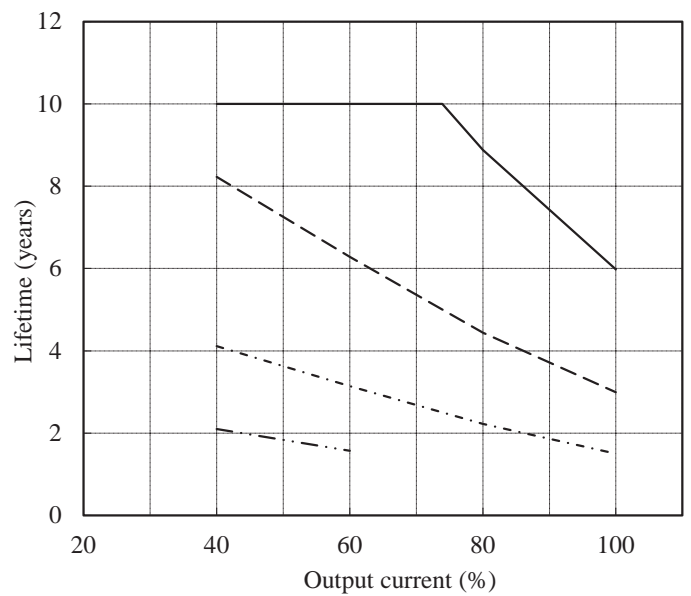
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.9	4.5	2.2
60	10.0	6.9	3.5	1.7
80	9.7	4.9	2.4	—
100	6.3	3.1	1.6	—

Conditions Ta 40°C : ———
50°C : - - -
60°C : ·····
70°C : - · - · -



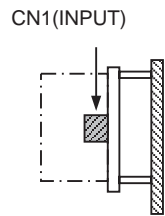
Vin=200VAC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.2	4.1	2.1
60	10.0	6.3	3.1	1.6
80	8.9	4.4	2.2	—
100	6.0	3.0	1.5	—



MODEL : CUT35-522

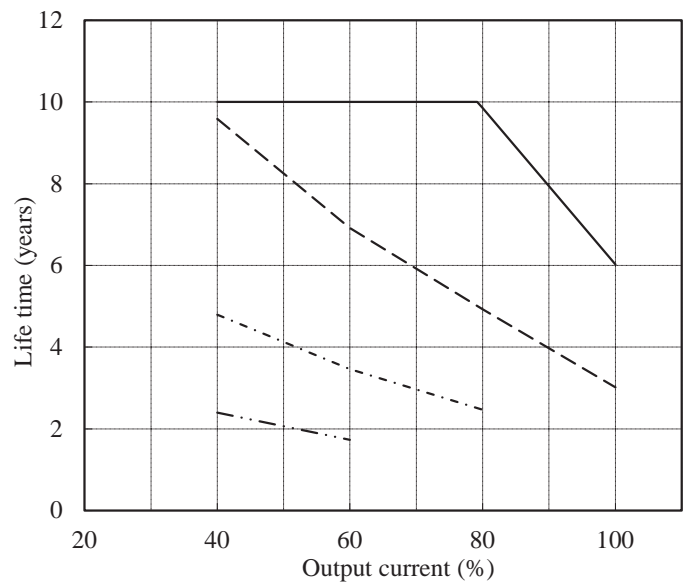
取付方向 C
Mounting C



Vin=100VAC

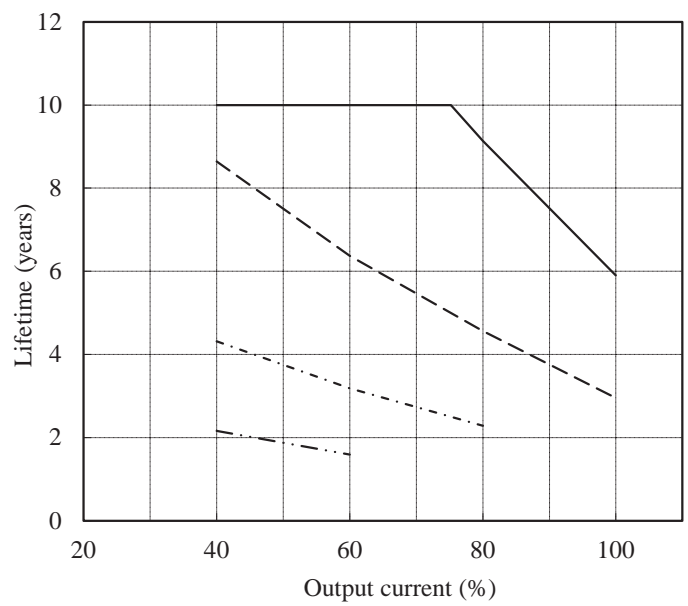
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	9.6	4.8	2.4
60	10.0	6.9	3.5	1.7
80	9.9	4.9	2.5	---
100	6.0	3.0	---	---

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ······
70°C : - · - · -



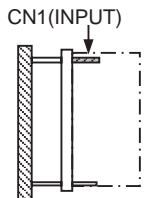
Vin=200VAC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.6	4.3	2.2
60	10.0	6.4	3.2	1.6
80	9.1	4.6	2.3	---
100	5.9	3.0	---	---



MODEL : CUT35-522

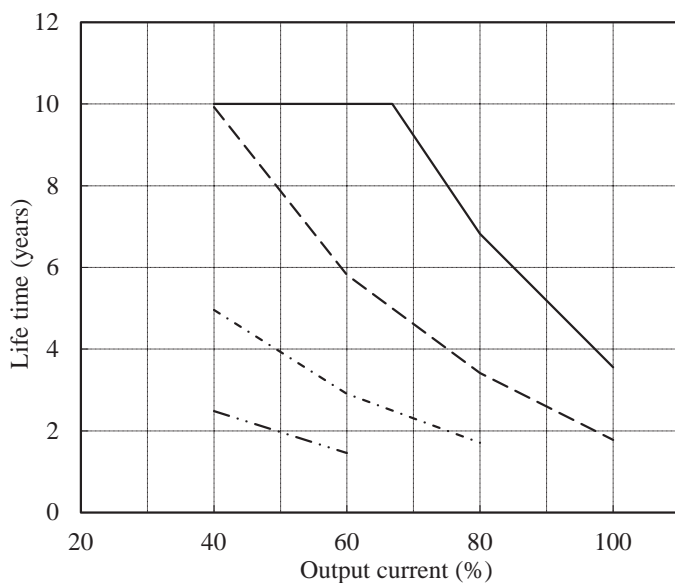
取付方向 D
Mounting D



Vin=100VAC

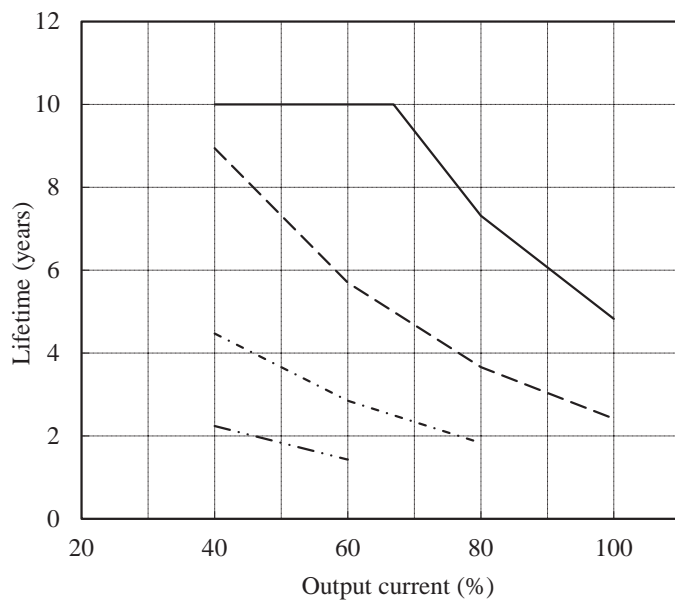
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	9.9	5.0	2.5
60	10.0	5.8	2.9	1.5
80	6.8	3.4	1.7	---
100	3.6	1.8	---	---

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ······
70°C : - · - · -



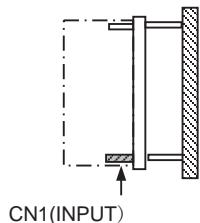
Vin=200VAC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.9	4.5	2.2
60	10.0	5.7	2.9	1.4
80	7.3	3.7	1.8	---
100	4.8	2.4	---	---



MODEL : CUT35-522

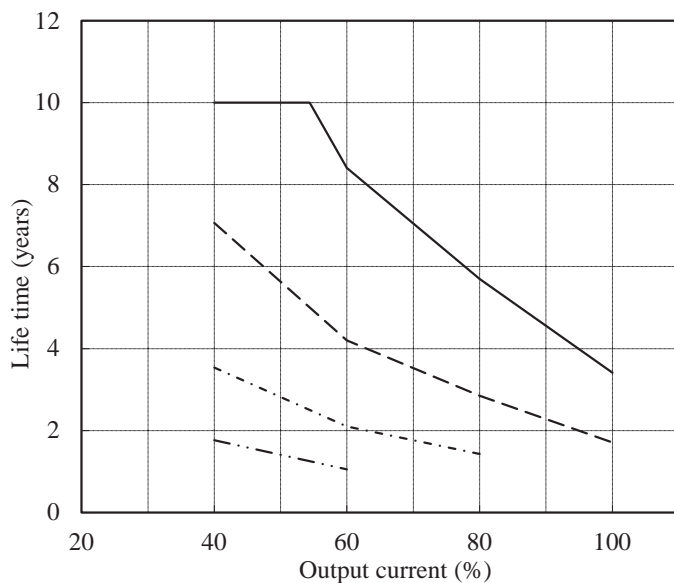
取付方向 E
Mounting E



Vin=100VAC

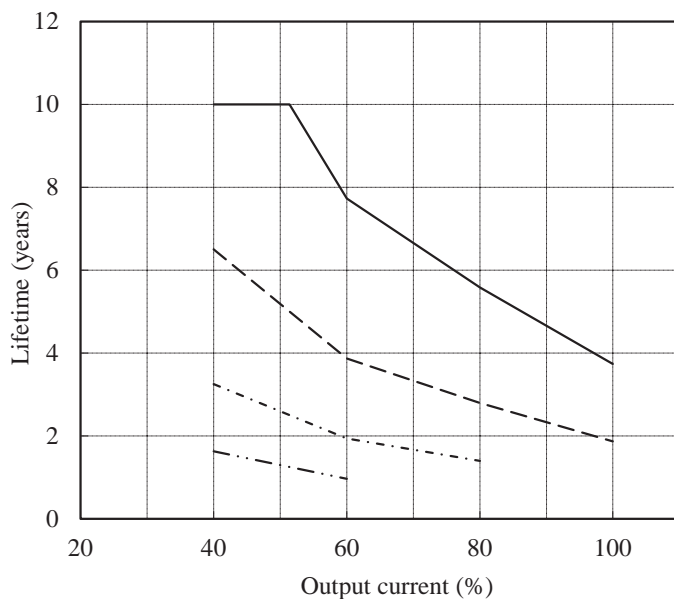
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	7.1	3.5	1.8
60	8.4	4.2	2.1	1.1
80	5.7	2.9	1.4	---
100	3.4	1.7	---	---

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ······
70°C : - · - · -



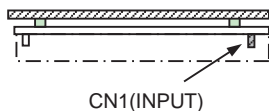
Vin=200VAC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	6.5	3.3	1.6
60	7.7	3.9	1.9	1.0
80	5.6	2.8	1.4	---
100	3.7	1.9	---	---



MODEL : CUT35-522

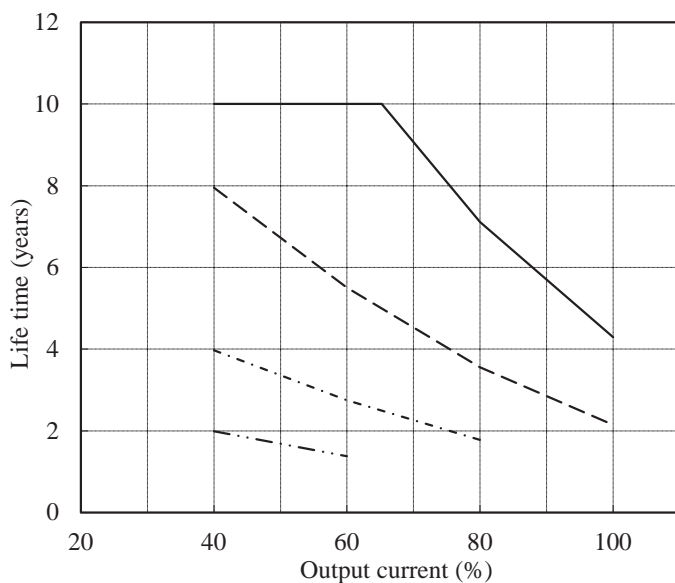
取付方向 F
Mounting F



Conditions Ta 40°C : ——
50°C : - - - -
60°C : ······
70°C : - · - ·

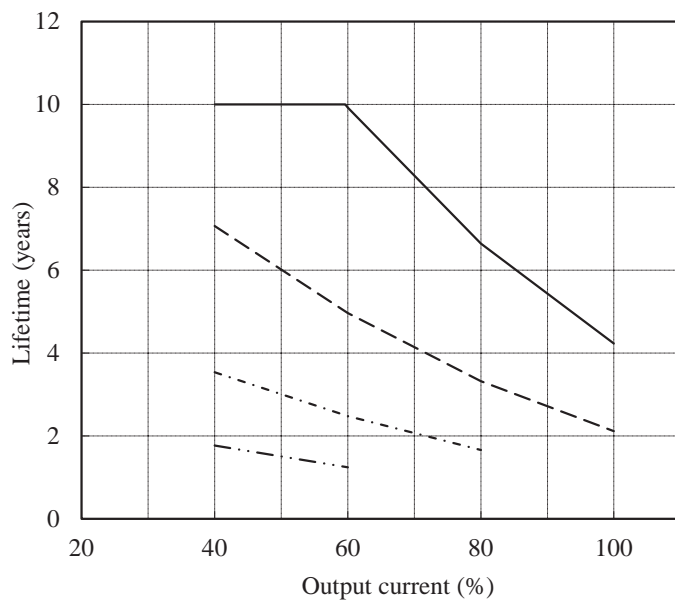
Vin=100VAC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.0	4.0	2.0
60	10.0	5.5	2.8	1.4
80	7.1	3.6	1.8	---
100	4.3	2.1	---	---



Vin=200VAC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	7.1	3.5	1.8
60	9.9	5.0	2.5	1.2
80	6.6	3.3	1.7	---
100	4.2	2.1	---	---



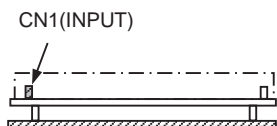
4. 電解コンデンサ推定寿命計算値 Electrolytic Capacitor Lifetime

MODEL : CUT35-522

空冷条件 : 自然空冷

Cooling condition : Convection cooling

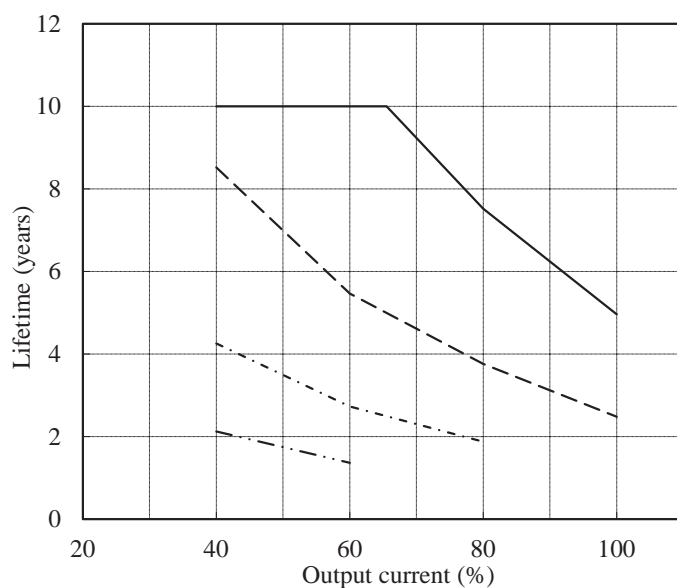
取付方向 A
Mounting A



Vin=110VDC

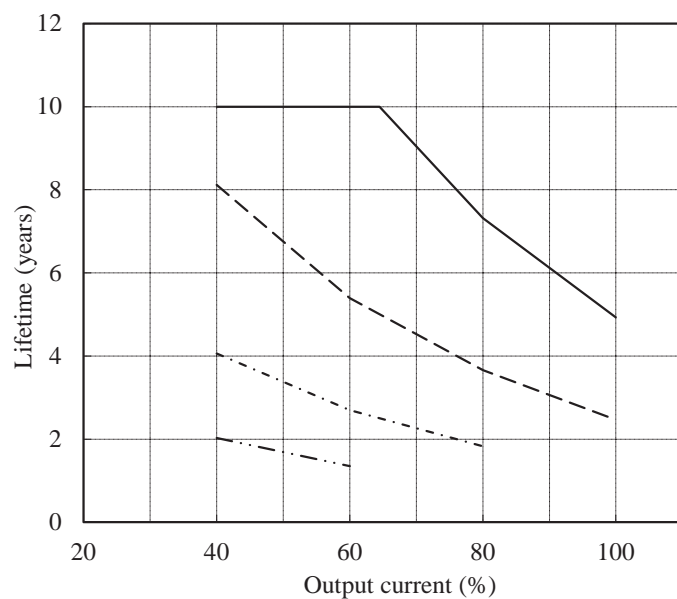
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.5	4.3	2.1
60	10.0	5.5	2.7	1.4
80	7.5	3.8	1.9	---
100	5.0	2.5	---	---

Conditions Ta 40°C : ———
50°C : - - - -
60°C : - · - · -
70°C : · · · · ·



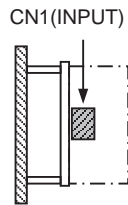
Vin=220VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.1	4.1	2.0
60	10.0	5.4	2.7	1.3
80	7.3	3.7	1.8	---
100	4.9	2.5	---	---



MODEL : CUT35-522

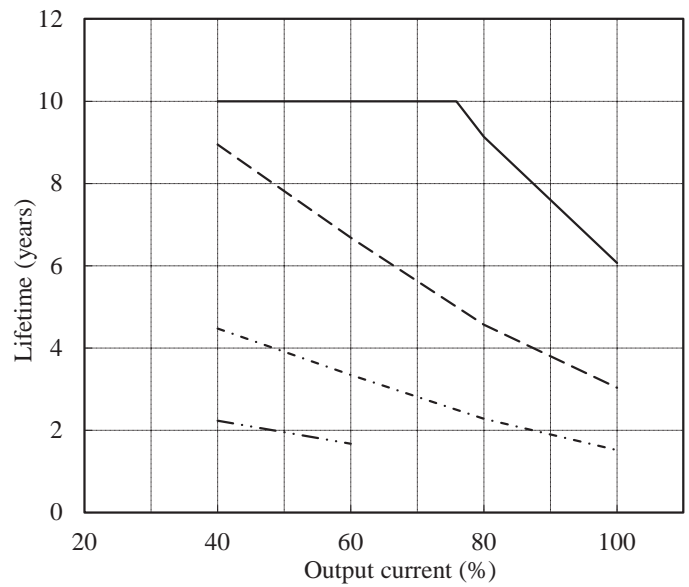
取付方向 B
Mounting B



Vin=110VDC

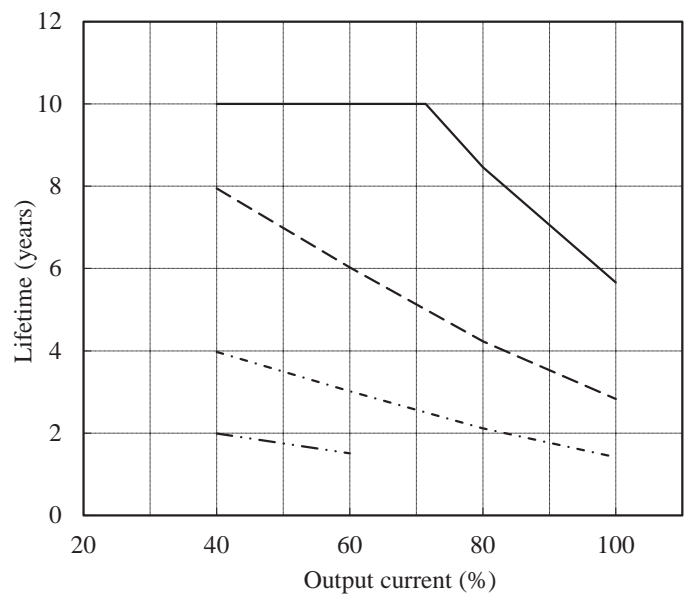
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.9	4.5	2.2
60	10.0	6.7	3.3	1.7
80	9.1	4.6	2.3	—
100	6.1	3.0	1.5	—

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ······
70°C : - · - · -



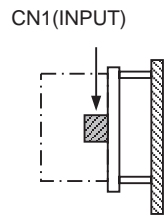
Vin=220VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.0	4.0	2.0
60	10.0	6.0	3.0	1.5
80	8.5	4.2	2.1	—
100	5.7	2.8	1.4	—



MODEL : CUT35-522

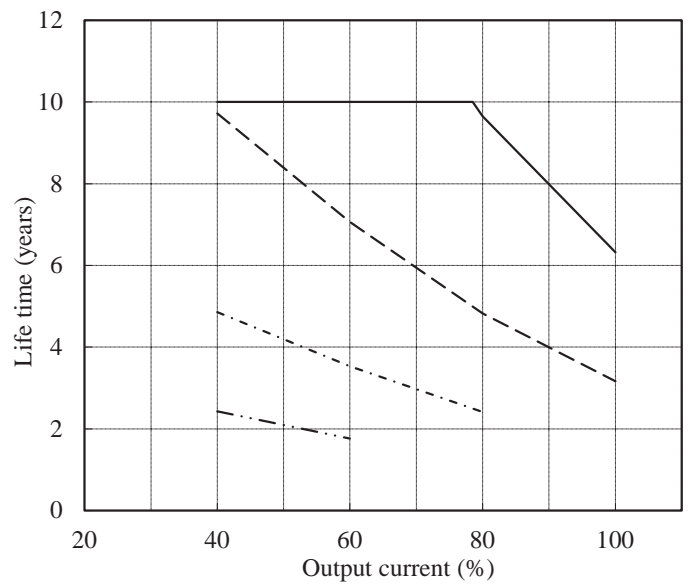
取付方向 C
Mounting C



Vin=110VDC

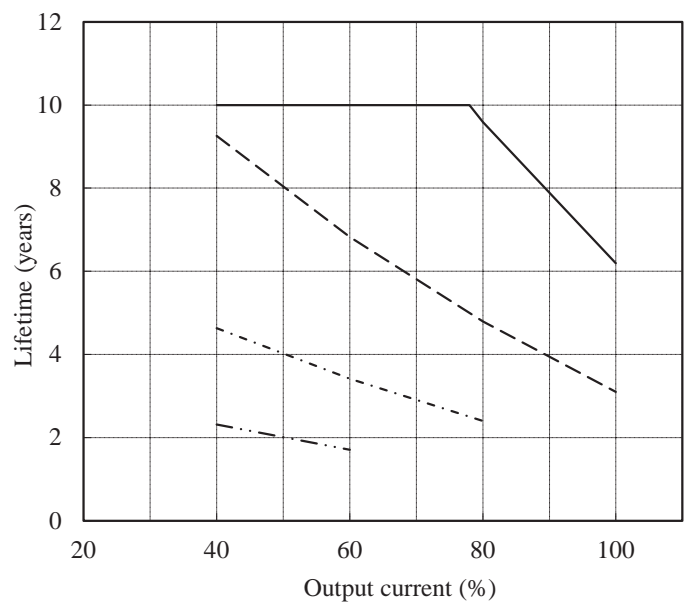
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	9.7	4.9	2.4
60	10.0	7.1	3.5	1.8
80	9.7	4.8	2.4	---
100	6.3	3.2	---	---

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ·····
70°C : - · - ·



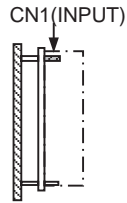
Vin=220VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	9.3	4.6	2.3
60	10.0	6.8	3.4	1.7
80	9.6	4.8	2.4	---
100	6.2	3.1	---	---



MODEL : CUT35-522

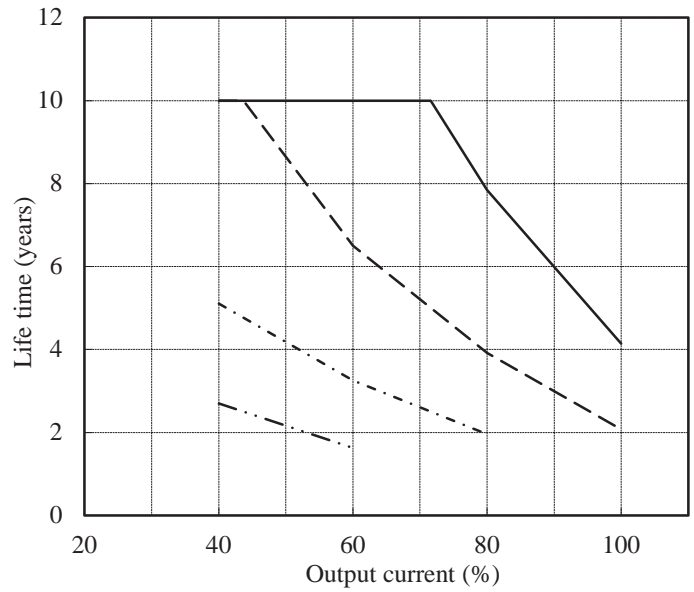
取付方向 D
Mounting D



Vin=110VDC

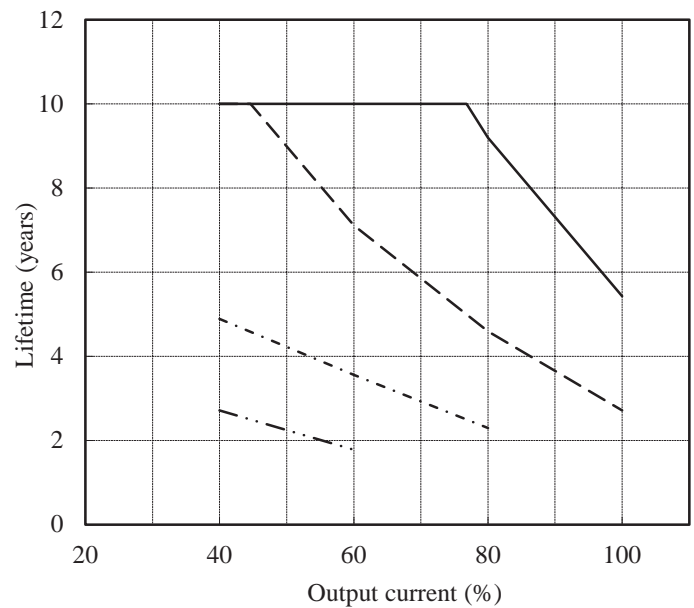
Load (%)	Lifetime (years)			
	Ta=40°C	Ta=50°C	Ta=60°C	Ta=70°C
40	10.0	10.0	5.1	2.7
60	10.0	6.5	3.3	1.6
80	7.8	3.9	2.0	---
100	4.1	2.1	---	---

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ······
70°C : - · - ·



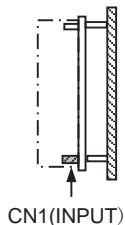
Vin=220VDC

Load (%)	Lifetime (years)			
	Ta=40°C	Ta=50°C	Ta=60°C	Ta=70°C
40	10.0	10.0	4.9	2.7
60	10.0	7.1	3.6	1.8
80	9.2	4.6	2.3	---
100	5.4	2.7	---	---



MODEL : CUT35-522

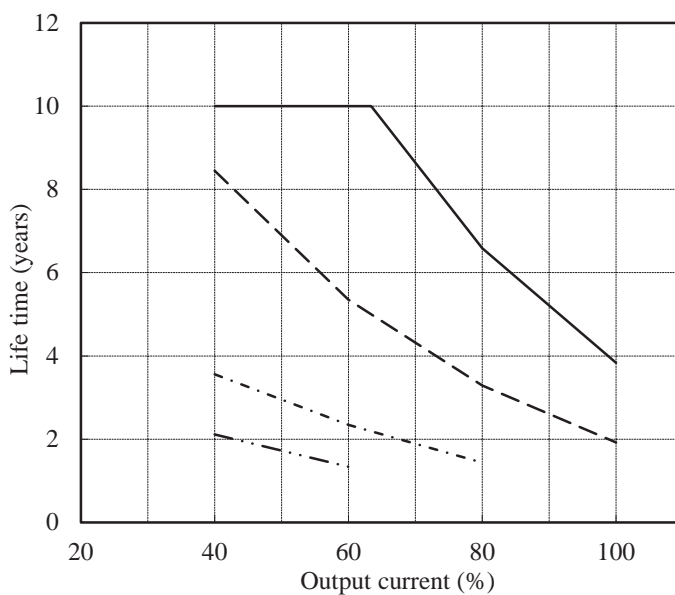
取付方向 E
Mounting E



Vin=110VDC

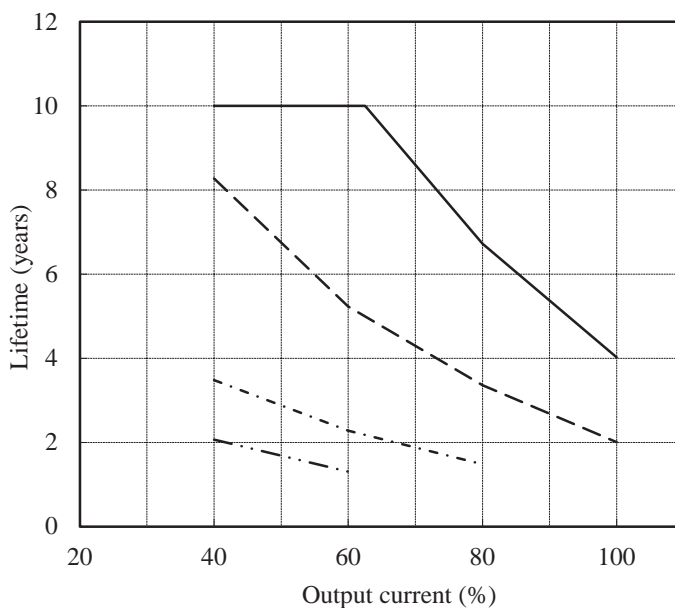
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.5	3.6	2.1
60	10.0	5.3	2.3	1.3
80	6.6	3.3	1.4	—
100	3.8	1.9	—	—

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ······
70°C : - · - · -



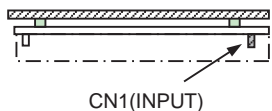
Vin=220VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.3	3.5	2.1
60	10.0	5.2	2.3	1.3
80	6.7	3.4	1.5	—
100	4.0	2.0	—	—



MODEL : CUT35-522

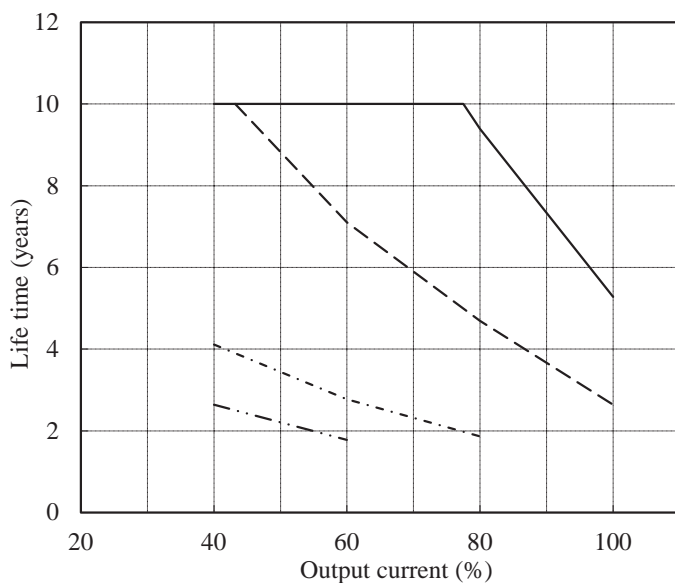
取付方向 F
Mounting F



Conditions Ta 40°C : ———
50°C : - - - -
60°C : ······
70°C : - · - · -

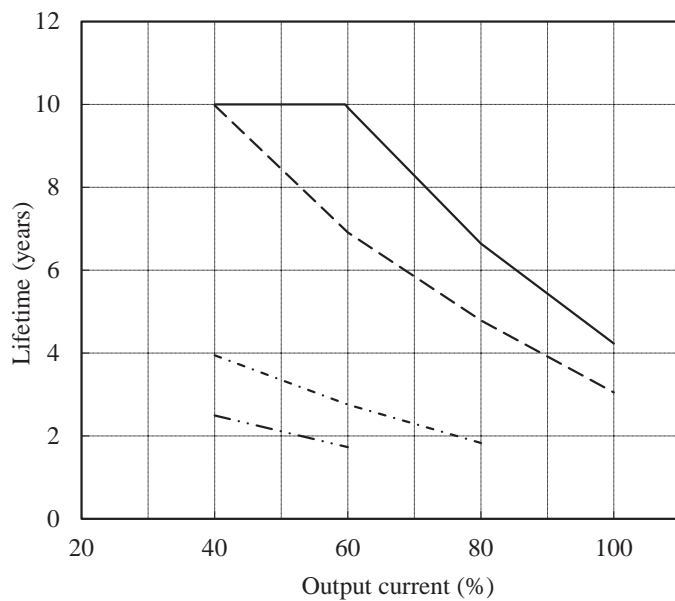
Vin=110VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	10.0	4.1	2.6
60	10.0	7.1	2.8	1.8
80	9.4	4.7	1.9	—
100	5.3	2.6	—	—



Vin=220VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	10.0	3.9	2.5
60	10.0	6.9	2.8	1.7
80	9.6	4.8	1.8	—
100	6.1	3.1	—	—



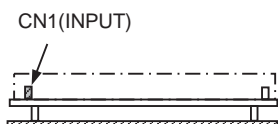
4. 電解コンデンサ推定寿命計算値 Electrolytic Capacitor Lifetime

MODEL : CUT35-5FF

空冷条件 : 自然空冷

Cooling condition : Convection cooling

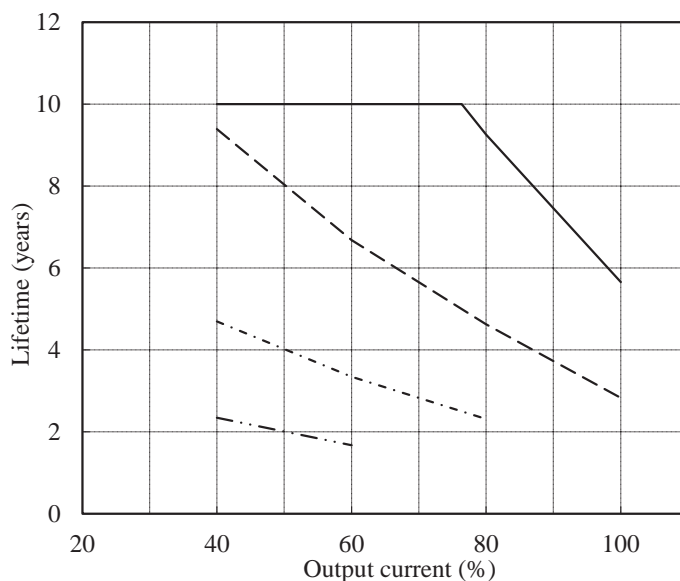
取付方向 A
Mounting A



Conditions Ta 40°C : ———
50°C : - - - -
60°C : - · - · -
70°C : - · - · -

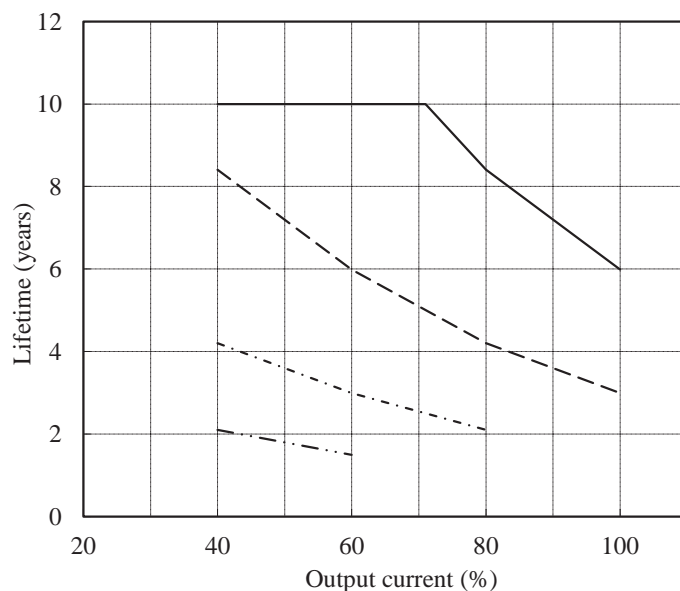
Vin=100VAC

Load (%)	Lifetime (years)			
	Ta=40°C	Ta=50°C	Ta=60°C	Ta=70°C
40	10.0	10.0	4.7	2.3
60	10.0	6.7	3.3	1.7
80	9.3	4.6	2.3	—
100	5.7	2.8	—	—



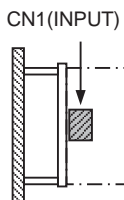
Vin=200VAC

Load (%)	Lifetime (years)			
	Ta=40°C	Ta=50°C	Ta=60°C	Ta=70°C
40	10.0	8.4	4.2	2.1
60	10.0	6.0	3.0	1.5
80	8.4	4.2	2.1	—
100	6.0	3.0	—	—



MODEL : CUT35-5FF

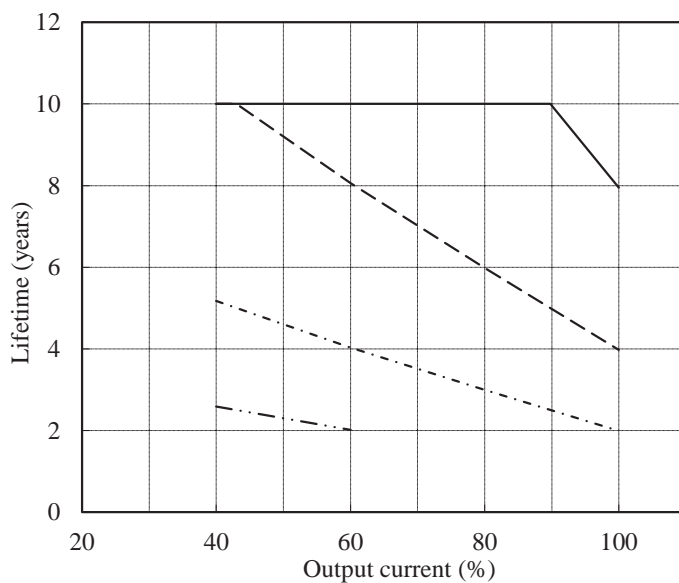
取付方向 B
Mounting B



Vin=100VAC

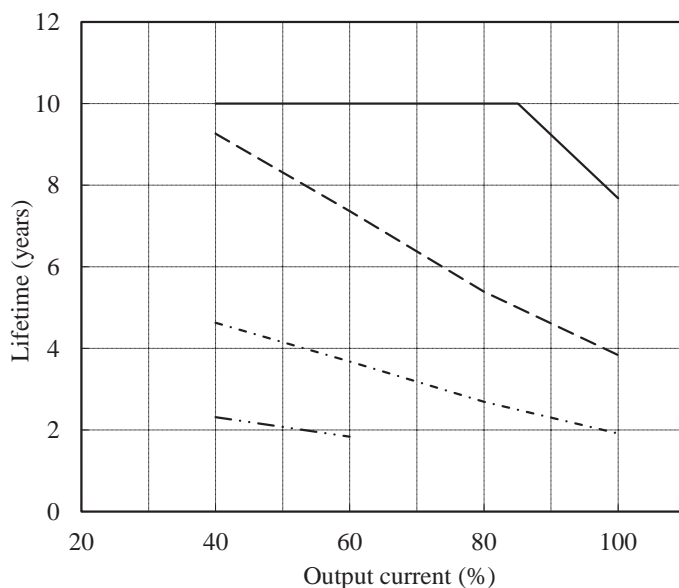
Load (%)	Lifetime (years)			
	Ta=40°C	Ta=50°C	Ta=60°C	Ta=70°C
40	10.0	10.0	5.2	2.6
60	10.0	8.1	4.0	2.0
80	10.0	6.0	3.0	—
100	8.0	4.0	2.0	—

Conditions Ta 40°C : ———
50°C : - - - -
60°C : - · - · -
70°C : - · - · -



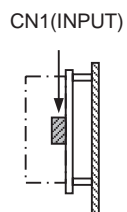
Vin=200VAC

Load (%)	Lifetime (years)			
	Ta=40°C	Ta=50°C	Ta=60°C	Ta=70°C
40	10.0	9.3	4.6	2.3
60	10.0	7.4	3.7	1.8
80	10.0	5.4	2.7	—
100	7.7	3.8	1.9	—



MODEL : CUT35-5FF

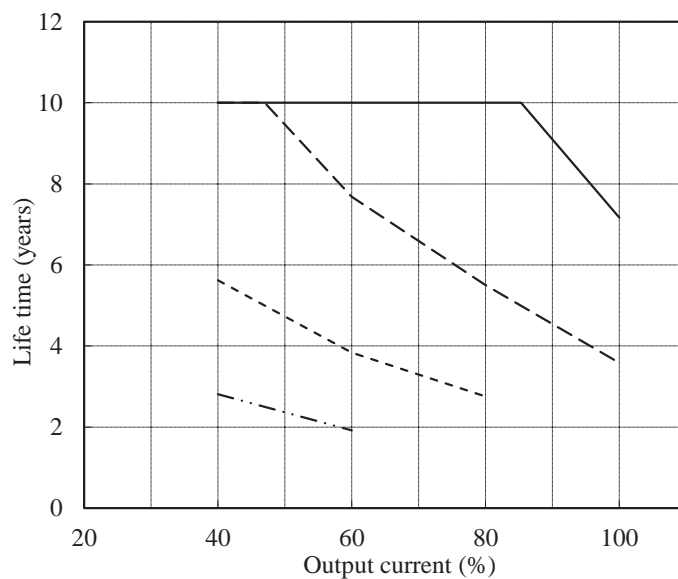
取付方向 C
Mounting C



Vin=100VAC

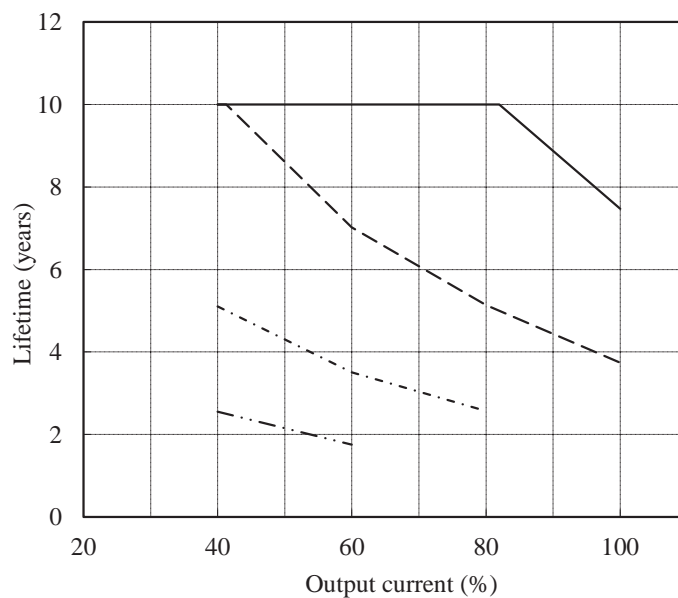
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	10.0	5.6	2.8
60	10.0	7.7	3.8	1.9
80	10.0	5.5	2.8	---
100	7.2	3.6	---	---

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ······
70°C : - · - · -



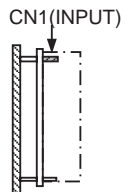
Vin=200VAC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	10.0	5.1	2.6
60	10.0	7.0	3.5	1.8
80	10.0	5.1	2.6	---
100	7.5	3.7	---	---



MODEL : CUT35-5FF

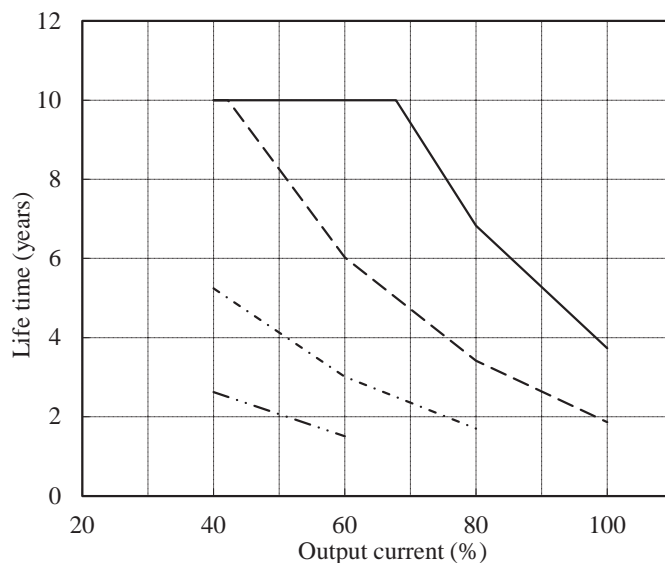
取付方向 D
Mounting D



Vin=100VAC

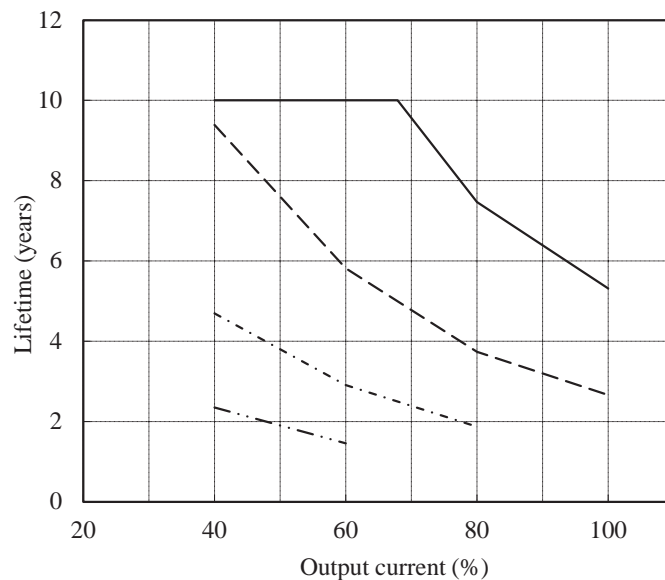
Load (%)	Lifetime (years)			
	Ta=40°C	Ta=50°C	Ta=60°C	Ta=70°C
40	10.0	10.0	5.2	2.6
60	10.0	6.0	3.0	1.5
80	6.8	3.4	1.7	—
100	3.7	1.9	—	—

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ······
70°C : - · - ·



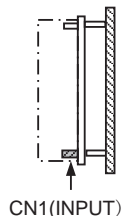
Vin=200VAC

Load (%)	Lifetime (years)			
	Ta=40°C	Ta=50°C	Ta=60°C	Ta=70°C
40	10.0	9.4	4.7	2.3
60	10.0	5.8	2.9	1.5
80	7.5	3.7	1.9	—
100	5.3	2.7	—	—



MODEL : CUT35-5FF

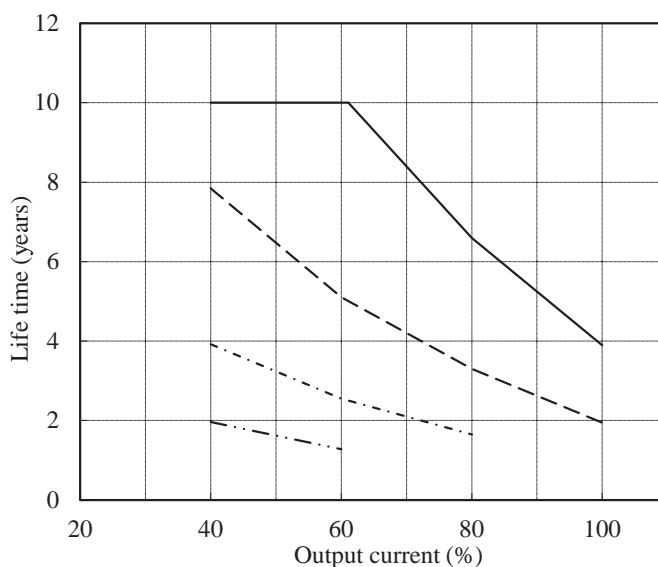
取付方向 E
Mounting E



Vin=100VAC

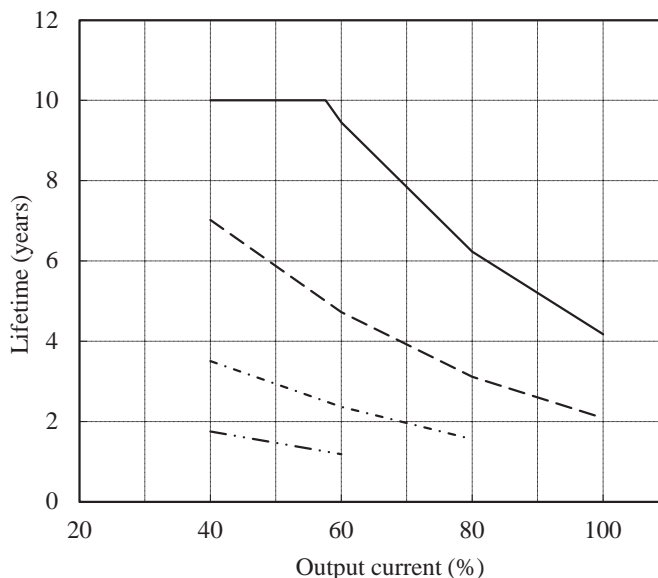
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	7.8	3.9	2.0
60	10.0	5.1	2.6	1.3
80	6.6	3.3	1.6	—
100	3.9	1.9	—	—

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ······
70°C : - · - · -



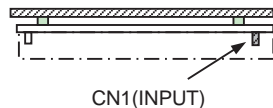
Vin=200VAC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	7.0	3.5	1.8
60	9.5	4.7	2.4	1.2
80	6.2	3.1	1.6	—
100	4.2	2.1	—	—



MODEL : CUT35-5FF

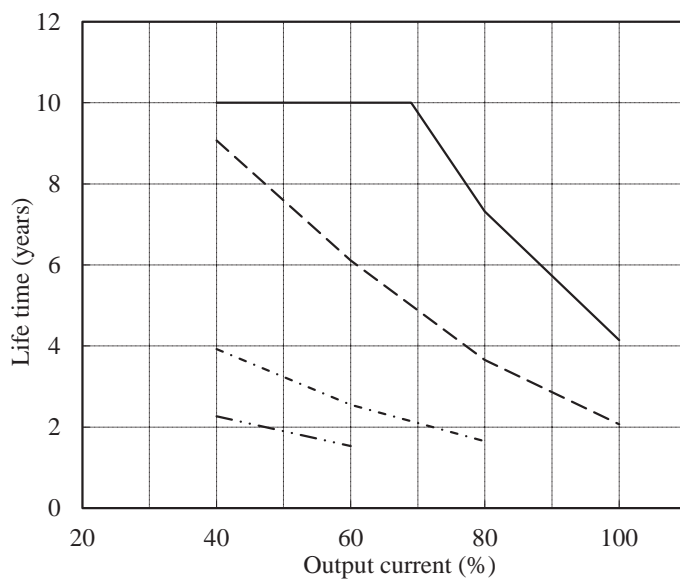
取付方向 F
Mounting F



Conditions Ta 40°C : ——
50°C : - - - -
60°C : · · · · ·
70°C : - · - · -

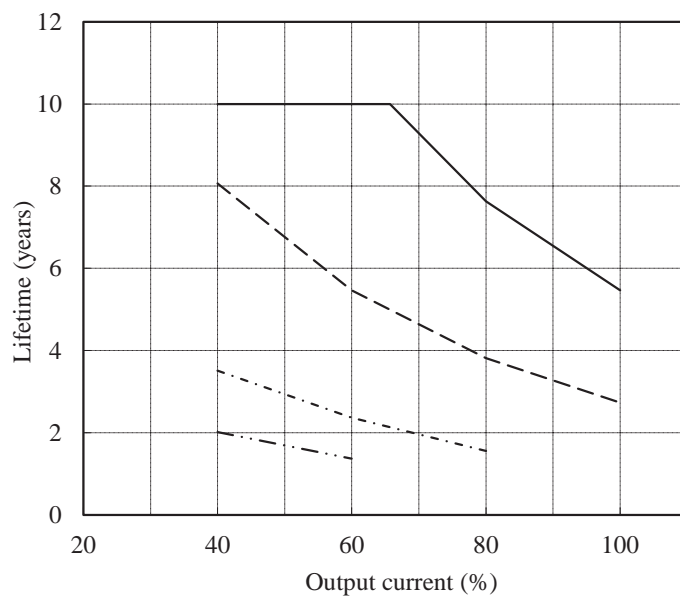
Vin=100VAC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	9.1	3.9	2.3
60	10.0	6.1	2.6	1.5
80	7.3	3.7	1.6	—
100	4.1	2.1	—	—



Vin=200VAC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.1	3.5	2.0
60	10.0	5.5	2.4	1.4
80	7.6	3.8	1.6	—
100	5.5	2.7	—	—



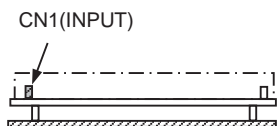
4. 電解コンデンサ推定寿命計算値 Electrolytic Capacitor Lifetime

MODEL : CUT35-5FF

空冷条件 : 自然空冷

Cooling condition : Convection cooling

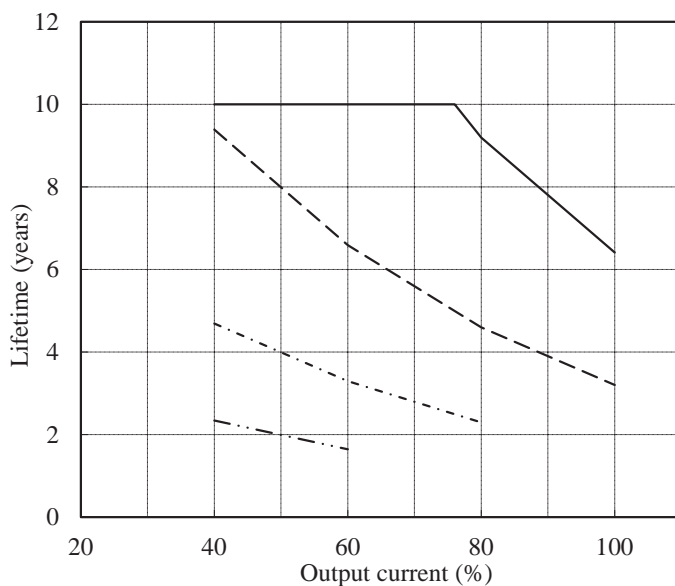
取付方向 A
Mounting A



Vin=110VDC

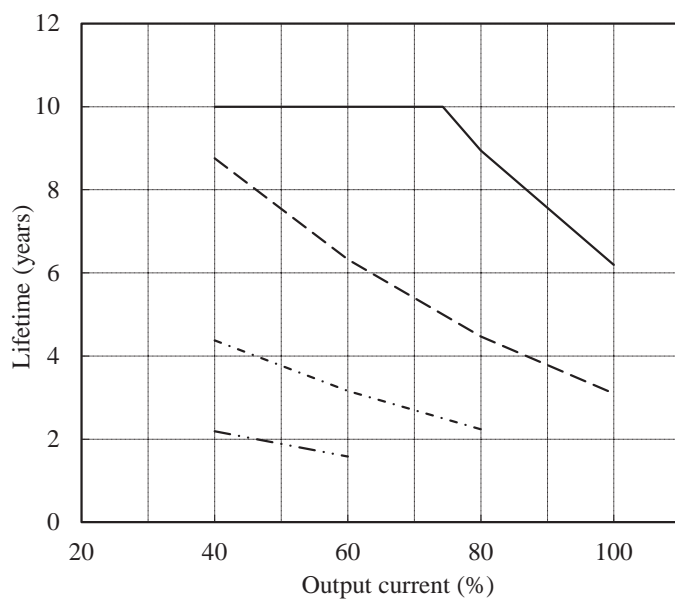
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	9.4	4.7	2.3
60	10.0	6.6	3.3	1.6
80	9.2	4.6	2.3	---
100	6.4	3.2	---	---

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ·····
70°C : - · - ·



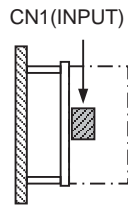
Vin=220VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.8	4.4	2.2
60	10.0	6.3	3.2	1.6
80	8.9	4.5	2.2	---
100	6.2	3.1	---	---



MODEL : CUT35-5FF

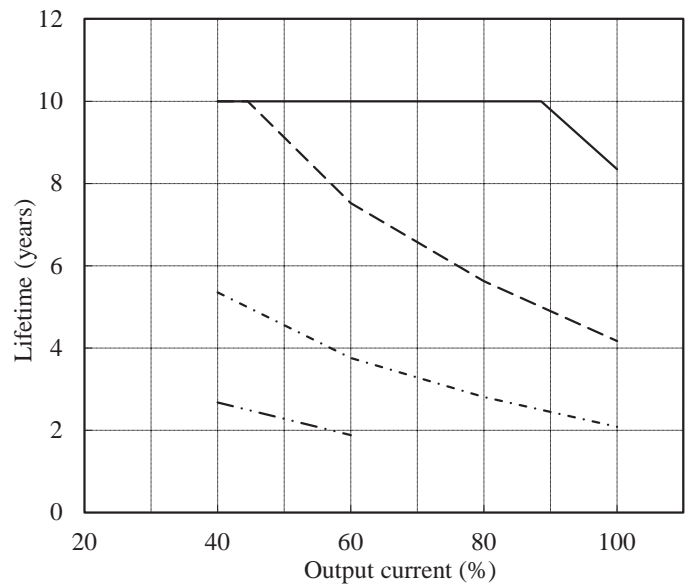
取付方向 B
Mounting B



Vin=110VDC

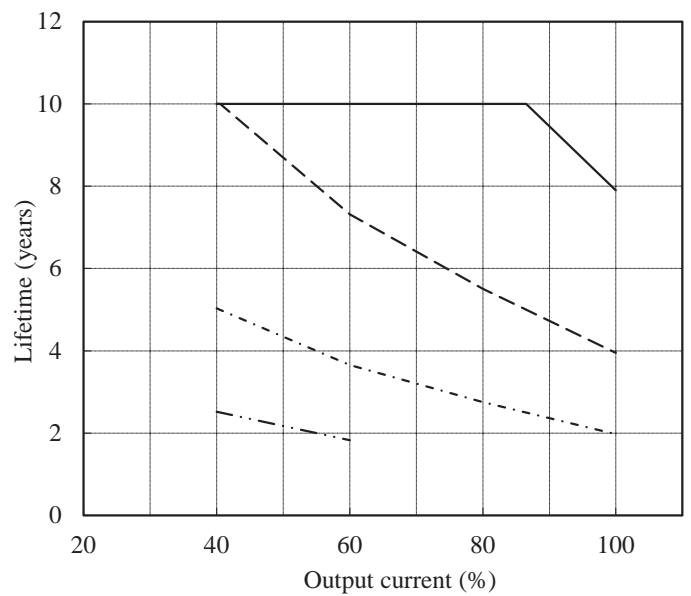
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	10.0	5.4	2.7
60	10.0	7.5	3.8	1.9
80	10.0	5.6	2.8	—
100	8.4	4.2	2.1	—

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ······
70°C : - · - ·



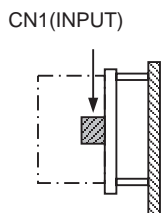
Vin=220VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	10.0	5.0	2.5
60	10.0	7.3	3.7	1.8
80	10.0	5.5	2.8	—
100	7.9	3.9	2.0	—



MODEL : CUT35-5FF

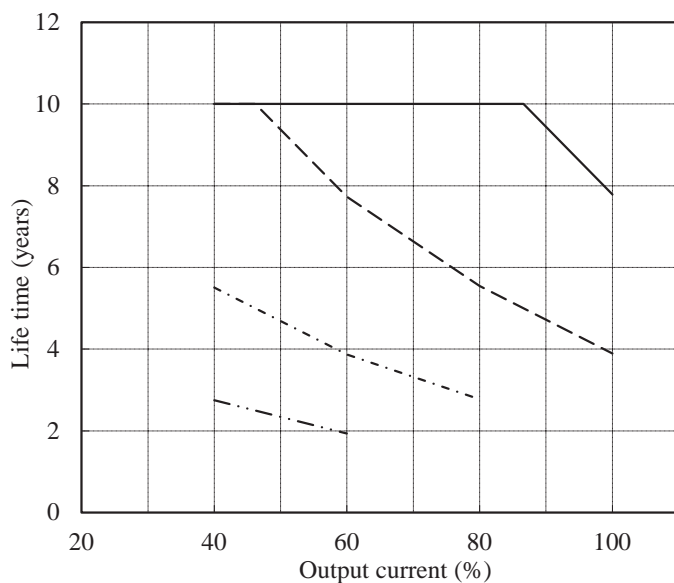
取付方向 C
Mounting C



Vin=110VDC

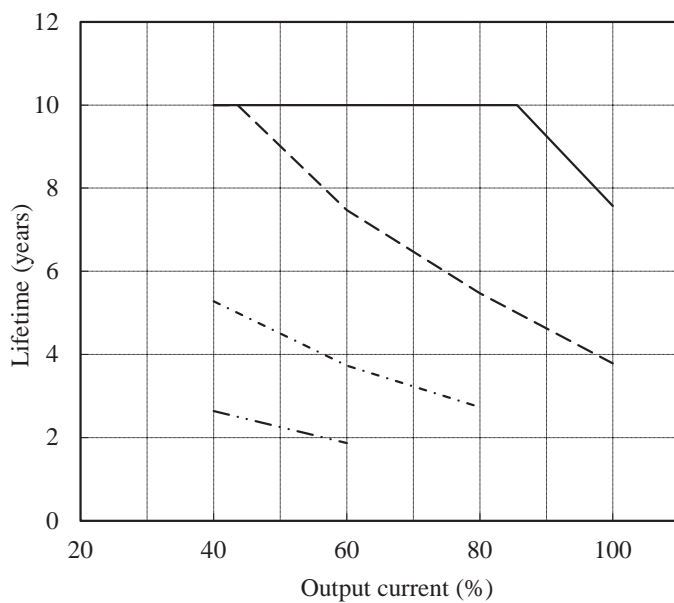
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta = 60°C	Ta= 70°C
40	10.0	10.0	5.5	2.8
60	10.0	7.7	3.9	1.9
80	10.0	5.5	2.8	---
100	7.8	3.9	---	---

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ·····
70°C : - · - ·



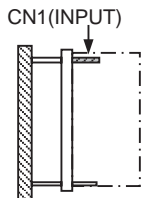
Vin=220VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta = 60°C	Ta= 70°C
40	10.0	10.0	5.3	2.6
60	10.0	7.5	3.7	1.9
80	10.0	5.5	2.7	---
100	7.6	3.8	---	---



MODEL : CUT35-5FF

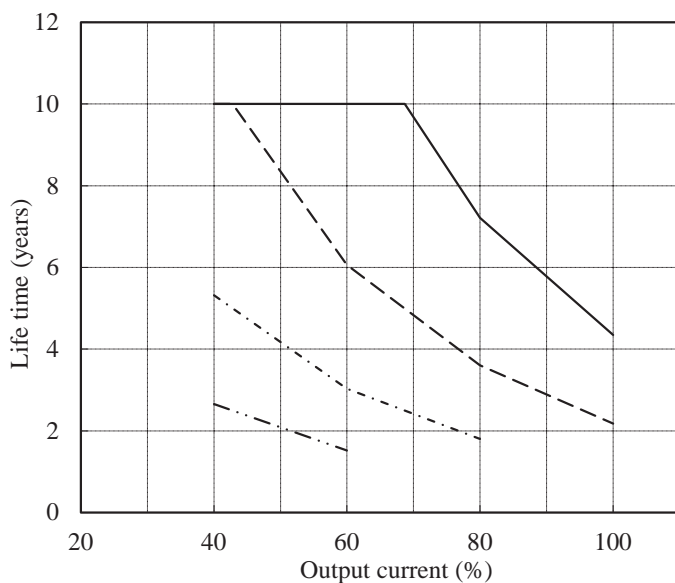
取付方向 D
Mounting D



Vin=110VDC

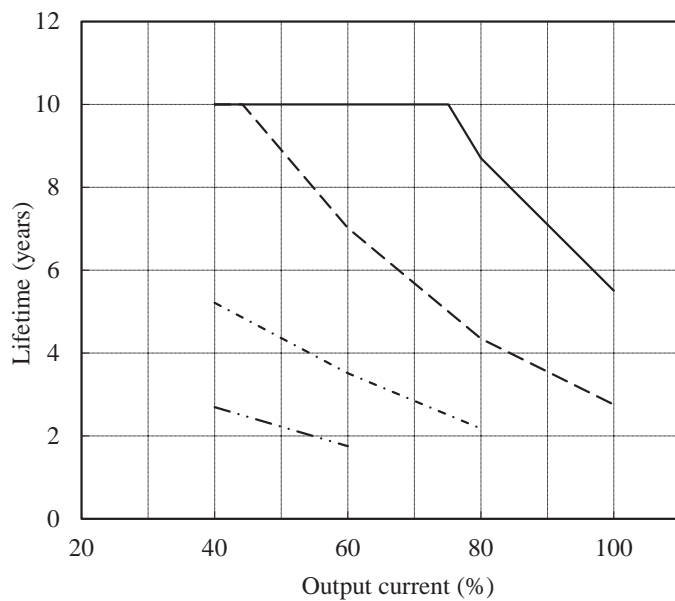
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta = 60°C	Ta= 70°C
40	10.0	10.0	5.3	2.7
60	10.0	6.1	3.0	1.5
80	7.2	3.6	1.8	---
100	4.3	2.2	---	---

Conditions Ta 40°C : ———
50°C : - - - -
60°C : ·····
70°C : - · - · -



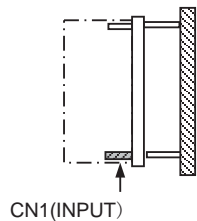
Vin=220VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta = 60°C	Ta= 70°C
40	10.0	10.0	5.2	2.7
60	10.0	7.0	3.5	1.8
80	8.7	4.3	2.2	---
100	5.5	2.8	---	---



MODEL : CUT35-5FF

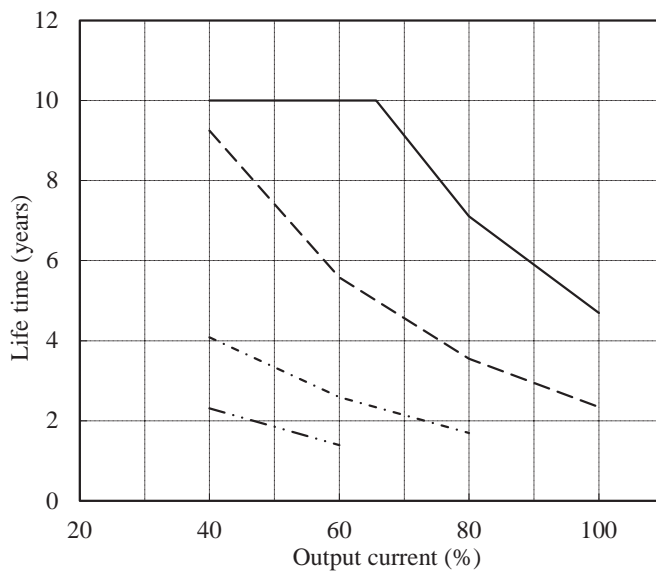
取付方向 E
Mounting E



Vin=110VDC

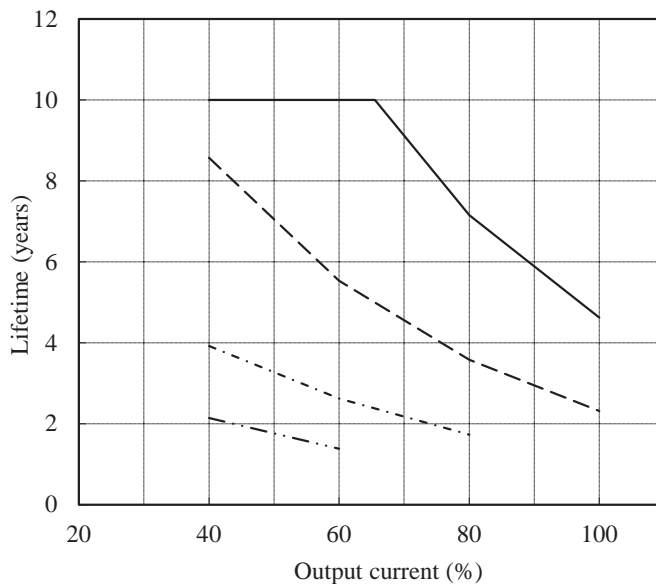
Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	9.2	4.1	2.3
60	10.0	5.6	2.6	1.4
80	7.1	3.6	1.7	—
100	4.7	2.3	—	—

Conditions Ta 40°C : ———
50°C : - - - -
60°C : - · - · -
70°C : - · - · -



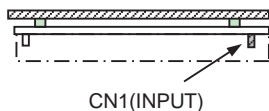
Vin=220VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta= 60°C	Ta= 70°C
40	10.0	8.6	3.9	2.1
60	10.0	5.5	2.6	1.4
80	7.2	3.6	1.7	—
100	4.6	2.3	—	—



MODEL : CUT35-5FF

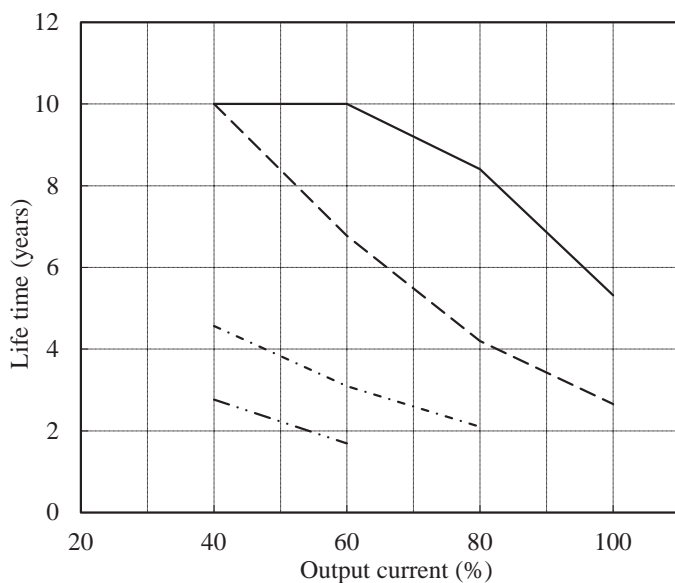
取付方向 F
Mounting F



Conditions Ta 40°C : ———
50°C : - - - -
60°C : ······
70°C : - · - ·

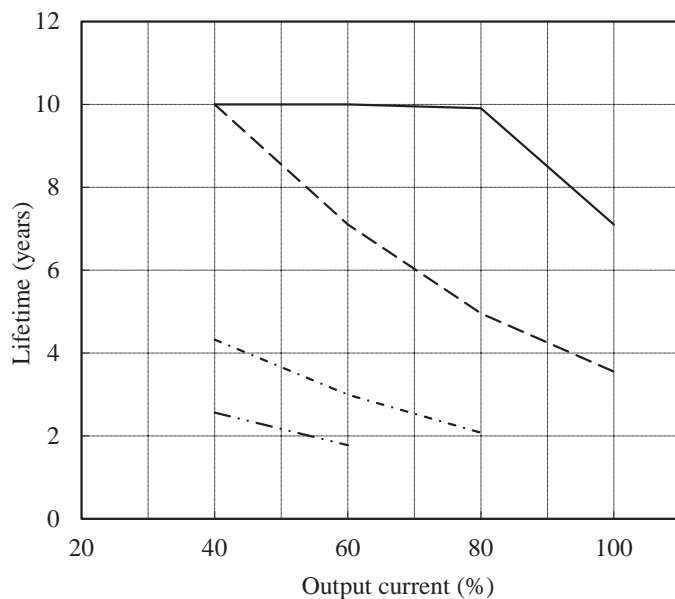
Vin=110VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta = 60°C	Ta= 70°C
40	10.0	10.0	4.6	2.8
60	10.0	6.8	3.1	1.7
80	8.4	4.2	2.1	—
100	5.3	2.7	—	—



Vin=220VDC

Load (%)	Lifetime (years)			
	Ta= 40°C	Ta= 50°C	Ta = 60°C	Ta= 70°C
40	10.0	10.0	4.3	2.6
60	10.0	7.1	3.0	1.8
80	9.9	5.0	2.1	—
100	7.1	3.6	—	—



5. アブノーマル試験 Abnormal Test

MODEL :CUT35-522

(1) 試験条件 Test Conditions

Input : 200VAC Output : 5V/8A; +12V/2.5A; -12V/0.5A Ta : 25°C

(2) 試験結果 Test Results

(Da : Damaged)

No.	Test position		Test mode		Test result											記事 Note	
	部品No. Location No.	試験端子 Test point	ショート Short	オープン Open	a 発火 Fire	b 発煙 Smoke	c 破裂 Burst	d 異臭 Smell	e 赤熱 Red hot	f 破損 Damaged	g ヒューズ断 Fuse blown	h OVP	I OCP	j 出力断 No output	k 変化なし No change		l その他 Others
1	A1	1~2	○											○			
2		2~3	○												○		
3		3~4	○								○	○			○		
4		5~6	○								○	○			○		
5		6~7	○												○		
6		7~8	○												○		
7		4~1	○								○	○			○		
8		4~2	○								○	○			○		
9		5~7	○								○	○			○		
10		5~8	○									○			○		
11		1			○											○	
12		2			○										○		All channels no output
13		3&6			○										○		All channels no output
14		4&5			○										○		
15		7			○										○		
16		8			○										○		
17	A2	1~2	○											○			
18		2~3	○												○		
19		3~4	○								○	○			○		Da : Z107 (short)
20		5~6	○								○	○			○		Da : Z107 (short)
21		6~7	○												○		
22		7~8	○												○		
23		4~1	○								○	○			○		Da : A2, Z105 (short)
24		4~2	○								○	○			○		Da : A2, Z106 (short)
25		5~7	○								○	○			○		Da : Z108 (short)
26		5~8	○									○			○		
27		1			○											○	
28		2			○										○		All channels no output
29		3&6			○										○		All channels no output
30		4&5			○										○		
31		7			○										○		
32		8			○										○		
33	A201	A~K	○											○			
34		A~R	○									○			○		
35		K~R	○													○	Output valtage drop
36		A		○									○		○		
37		K		○									○		○		
38		R		○									○		○		
39	A301	A~K	○											○			
40		A~R	○									○			○		
41		K~R	○												○		
42		A		○									○		○		
43		K		○									○		○		
44		R		○									○		○		
45	BD101	DC~DC	○							○	○			○			Da : BD101
46		AC~AC	○								○			○			
47		AC(2 or 3)		○										○			
48		DC(1 or 4)		○										○			
49	D51		○											○			
50				○						○				○			Da : R111

5. アブノーマル試験 Abnormal Test

MODEL :CUT35-522

(1) 試験条件 Test Conditions

Input : 200VAC Output : 5V/8A; +12V/2.5A; -12V/0.5A Ta : 25°C

(2) 試験結果 Test Results

(Da : Damaged)

No.	Test position		Test mode		Test result											記事 Note	
	部品No. Location No.	試験端子 Test point	ショート Short	オープン Open	a 発火 Fire	b 発煙 Smoke	c 破裂 Burst	d 異臭 Smell	e 赤熱 Red hot	f 破損 Damaged	g ヒューズ断 Fuse blown	h OVP	I OCP	j 出力断 No output	k 変化なし No change		l その他 Others
51	D301		○														
52				○													
53	D302		○														
54				○													
55	PC101	1~2	○														All channels no output
56		3~4	○														All channels no output
57		1 or 2		○													All channels no output
58		3 or 4		○													All channels no output
59	PC102	1~2	○												○		
60		3~4	○												○		All channels no output
61		1 or 2		○												○	
62		3 or 4		○												○	
63	PC103	1~2	○												○		All channels no output
64		3~4	○												○		
65		1 or 2		○											○		All channels no output
66		3 or 4		○											○		All channels no output
67	PC104	1~2	○												○		
68		3~4	○												○		All channels no output
69		1 or 2		○												○	
70		3 or 4		○												○	
71	T1	2~3	○												○		
72		5~6	○												○		
73		6~7	○							○	○				○		
74		7~8	○												○		
75		2		○						○					○		Da : R111
76		3		○						○					○		Da : R111
77		5		○											○		
78		6		○											○		
79		7		○											○		Output hiccups
80		8		○											○		
81	T2	1~2	○												○		
82		2~3	○												○		
83		3~4	○												○		
84		5~6	○												○		
85		6~7	○								○				○		
86		7~8	○												○		
87		1		○											○		All channels no output
88		2		○											○		All channels no output
89		3		○											○		All channels no output
90		4		○											○		All channels no output
91		5		○											○		
92		6		○											○		
93		7		○											○		
94		8		○											○		

5. アブノーマル試験 Abnormal Test

MODEL :CUT35-5FF

(1) 試験条件 Test Conditions

Input : 200VAC Output : 5V/3A; +15V/1.0A; -15V/0.3A Ta : 25°C

(2) 試験結果 Test Results

(Da : Damaged)

No.	Test position		Test mode		Test result											記事 Note		
	部品No. Location No.	試験端子 Test point	ショート Short	オープン Open	a 発火 Fire	b 発煙 Smoke	c 破裂 Burst	d 異臭 Smell	e 赤熱 Red hot	f 破損 Damaged	g ヒューズ断 Fuse blown	h OVP	I OCP	j 出力断 No output	k 変化なし No change		l その他 Others	
1	A1	1 ~ 2	○											○				
2		2 ~ 3	○												○			
3		3 ~ 4	○								○	○			○			Da : Z103
4		5 ~ 6	○								○	○			○			Da : Z103
5		6 ~ 7	○												○			
6		7 ~ 8	○												○			
7		4 ~ 1	○								○	○			○			Da : A1 ,Z101 (short)
8		4 ~ 2	○								○	○			○			Da : Z102 (short)
9		5 ~ 7	○								○	○			○			Da : Z104 (short)
10		5 ~ 8	○									○			○			
11		1			○											○		
12		2			○										○			All channels no output
13		3&6			○										○			All channels no output
14		4&5			○										○			
15		7			○										○			
16		8			○										○			
17	A2	1 ~ 2	○											○				
18		2 ~ 3	○												○			
19		3 ~ 4	○								○	○			○			Da : Z107,R115,R116,R117,A2,Z108
20		5 ~ 6	○								○	○			○			Da : Z107,R115,R116,R117,A2,Z108
21		6 ~ 7	○												○			
22		7 ~ 8	○												○			
23		4 ~ 1	○								○	○			○			Da : A2, Z105 (short)
24		4 ~ 2	○								○	○			○			Da : A2, Z106 (short)
25		5 ~ 7	○								○	○			○			Da : Z108 (short)
26		5 ~ 8	○									○			○			
27		1			○											○		
28		2			○										○			All channels no output
29		3&6			○										○			All channels no output
30		4&5			○										○			
31		7			○										○			
32		8			○										○			
33	A201	A ~ K	○											○				
34		A ~ R	○									○			○			
35		K ~ R	○													○		Output valtage drop
36		A		○								○			○			
37		K		○								○			○			
38		R		○								○			○			
39	A301	A ~ K	○											○				
40		A ~ R	○									○			○			
41		K ~ R	○												○			
42		A		○								○			○			
43		K		○								○			○			
44		R		○								○			○			
45	BD101	DC~DC	○							○	○			○			Da : BD101	
46		AC~AC	○								○			○				
47		AC(2 or 3)		○										○				
48		DC(1 or 4)		○										○				
49	D51		○											○				
50				○										○				

5. アブノーマル試験 Abnormal Test

MODEL :CUT35-5FF

(1) 試験条件 Test Conditions

Input : 200VAC Output : 5V/3A; +15V/1.0A; -15V/0.3A Ta : 25°C

(2) 試験結果 Test Results

(Da : Damaged)

No.	Test position		Test mode		Test result											記事 Note		
	部品No. Location No.	試験端子 Test point	ショート Short	オープン Open	a 発火 Fire	b 発煙 Smoke	c 破裂 Burst	d 異臭 Smell	e 赤熱 Red hot	f 破損 Damaged	g ヒューズ断 Fuse blown	h OVP	I OCP	j 出力断 No output	k 変化なし No change		l その他 Others	
51	D301		○															
52				○														
53	D302		○															
54				○														
55	PC101	1~2	○															All channels no output
56		3~4	○															All channels no output
57		1 or 2		○														All channels no output
58		3 or 4		○														All channels no output
59	PC102	1~2	○												○			
60		3~4	○												○			All channels no output
61		1 or 2		○												○		
62		3 or 4		○												○		
63	PC103	1~2	○															All channels no output
64		3~4	○															
65		1 or 2		○														All channels no output
66		3 or 4		○														All channels no output
67	PC104	1~2	○												○			
68		3~4	○												○			All channels no output
69		1 or 2		○												○		
70		3 or 4		○												○		
71	T1	2~3	○												○			
72		5~6	○												○			
73		6~7	○								○				○			
74		7~8	○												○			
75		2		○												○		
76		3		○												○		
77		5		○												○		
78		6		○												○		
79	7		○												○		Output hiccups	
80		8		○											○			
81	T2	1~2	○												○			
82		2~3	○												○			
83		3~4	○												○			
84		5~6	○												○			
85		6~7	○								○				○			
86		7~8	○												○			
87		1		○												○		All channels no output
88		2		○												○		All channels no output
89		3		○												○		All channels no output
90		4		○												○		All channels no output
91		5		○												○		
92		6		○												○		
93	7		○												○			
94	8		○												○			

6. 振動試験 Vibration Test

MODEL : CUT35

(1) 振動試験種類 Vibration Test Class

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

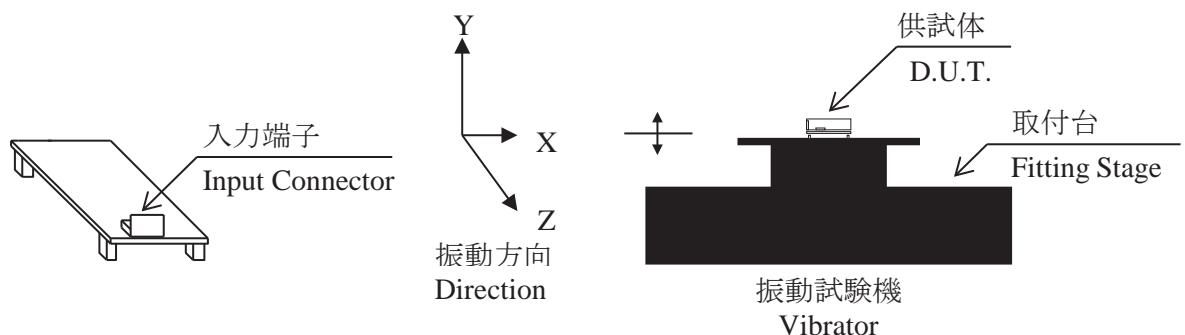
(2) 使用振動試験装置 Equipment Used

・制御部	: DP550	・加振部	: V870
Controller	DP CORP USA	Vibrator	LDS CORP. UK

(3) 試験条件 Test Conditions

・周波数範囲	: 10~55Hz	・振動方向	: X, Y, Z
Sweep frequency		Direction	
・掃引時間	: 1.0分間	・試験時間	: 各方向共 1時間
Sweep time	1.0min	Sweep count	1 hour each
・加速度	: 一定 19.6m/s ² (2G)		
Acceleration	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.試験後の特性は初期値から変動していない事
Characteristic to be within regulation specification after the test.

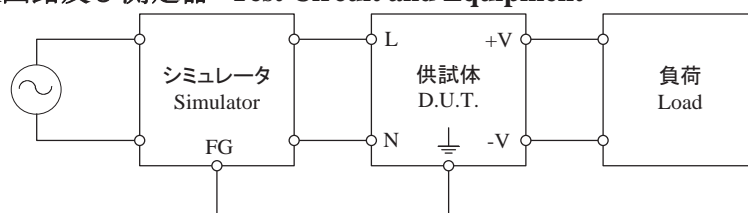
(6) 試験結果 Test Results

合格 OK

7. ノイズシミュレート試験 Noise Simulate Test

MODEL : CUT35

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



シミュレータ : INS-400L (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, 100%	・極性 Polarity	: +, -
・周囲温度 Ambient temperature	: 25°C	・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.破壊しない事
Not to be broken
- 2.出力がダウンしない事
Not to be shut down output
- 3.その他異常のない事
No other out of orders

(4) 試験結果 Test Results

合格 OK

8. 熱衝撃試験 Thermal Shock Test

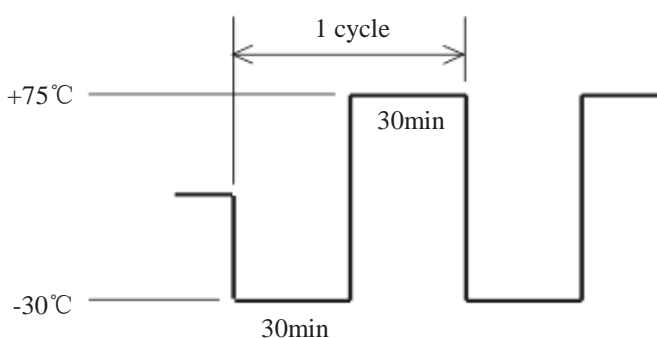
MODEL : CUT35

(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 : -30°C ⇔ 75°C +75°C
Ambient Temperature
- ・試験時間 : 図参照
Test Time Refer to Dwg.
- ・試験サイクル : 100 サイクル
Test Cycle 100 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。100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. 100 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

1. 破壊しない事
Not to be broken
2. 試験後の特性は初期値から変動していない事
Characteristic to be within regulation specification after the test.

(5) 試験結果 Test Results

合格 OK