

## DIODE(THREE PHASES BRIDGE TYPE)

# DF200AA120/160

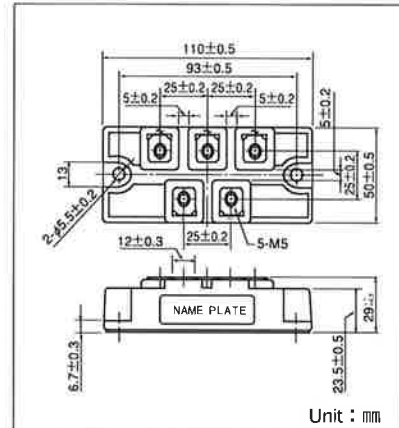
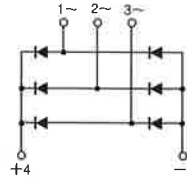
UL:E76102(M)

Power Diode Module **DF200AA** is designed for three phase full wave rectification, which has six diodes connected in a three phase bridge configuration. The mounting base of the module is electrically isolated from semiconductor elements for simple heatsink construction. Output DC current is 200Amp ( $T_c=96^\circ\text{C}$ ) Repetitive peak reverse voltage is up to 1,600V.

- $T_{j\text{Max}}=150^\circ\text{C}$
- Isolated mounting base
- High reliability by unique glass passivation

### (Applications)

AC, DC Motor Drive/AVR/Switching  
-for three phase rectification



### Maximum Ratings

( $T_j=25^\circ\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		Unit
		DF200AA120	DF200AA160	
$V_{RRM}$	Repetitive Peak Reverse Voltage	1200	1600	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	1300	1700	V

Symbol	Item	Conditions	Ratings	Unit	
$I_D$	Output Current (D.C.)	Three Phase full wave. $T_c=96^\circ\text{C}$	200	A	
$I_{FSM}$	Surge Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	1850/2000	A	
$I^2t$	$I^2t$	Value for one cycle of surge current	17000	$\text{A}^2\text{S}$	
$T_j$	Operating Junction Temperature		-40 to +150	$^\circ\text{C}$	
$T_{stg}$	Storage Temperature		-40 to +125	$^\circ\text{C}$	
$V_{iso}$	Isolation Breakdown Voltage (R.M.S.)	A.C. 1 minute	2500	V	
	Mounting Torque	Mounting (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	$\text{N}\cdot\text{m}$ ( $\text{kgf}\cdot\text{cm}$ )
		Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	360	g	

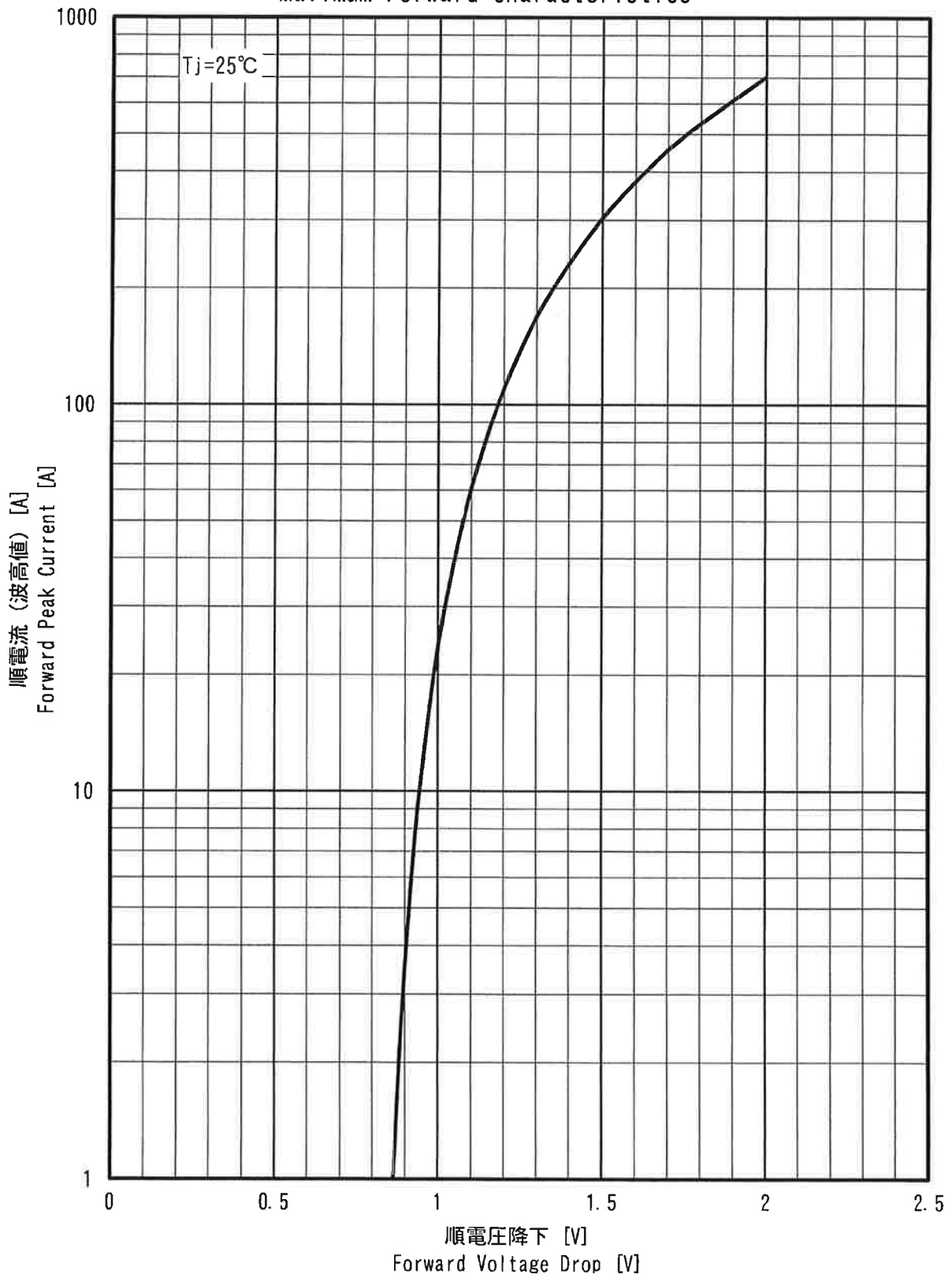
### Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ at $V_{RRM}$	20.0	mA
$V_{FM}$	Forward Voltage Drop, max.	$T_j=25^\circ\text{C}$ , $I_{FM}=200\text{A}$ , Inst. measurement	1.35	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.10	$^\circ\text{C}/\text{W}$

# DF200AA

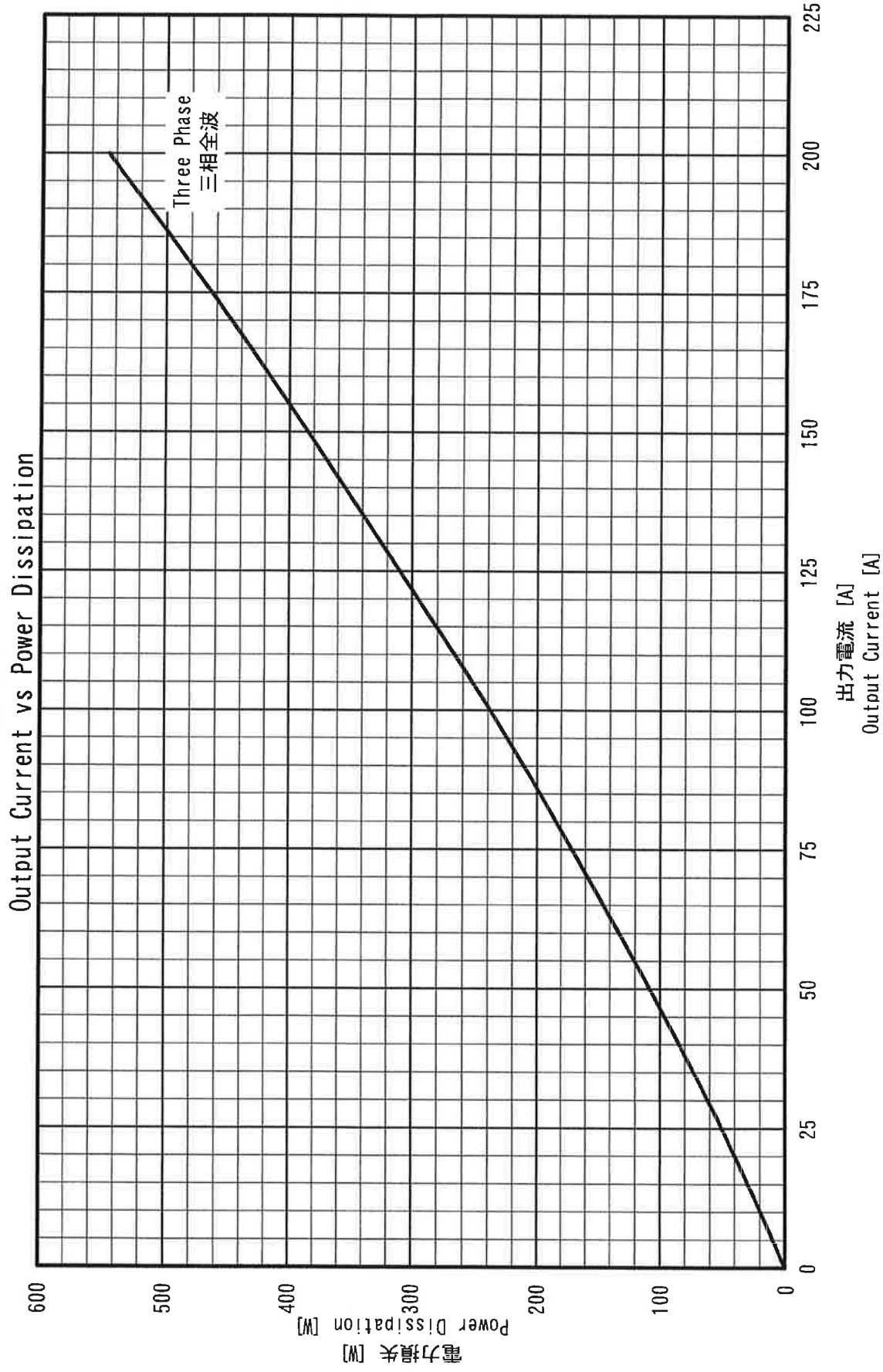
## 最大順特性

### Maximum Forward Characteristics



# DF200AA

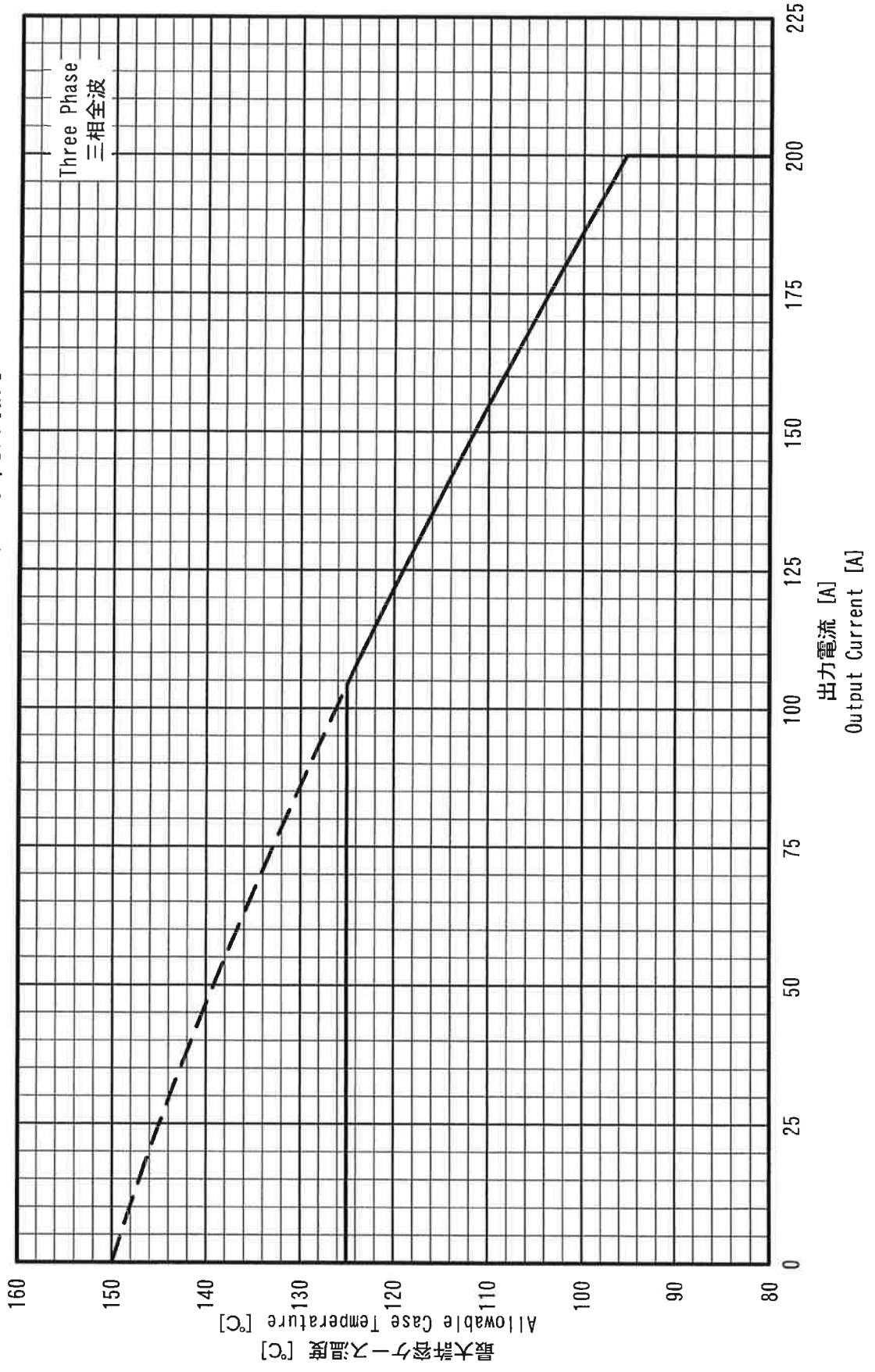
## 最大電力損失特性



# DF200AA

## 出力電流対最大許容ケース温度

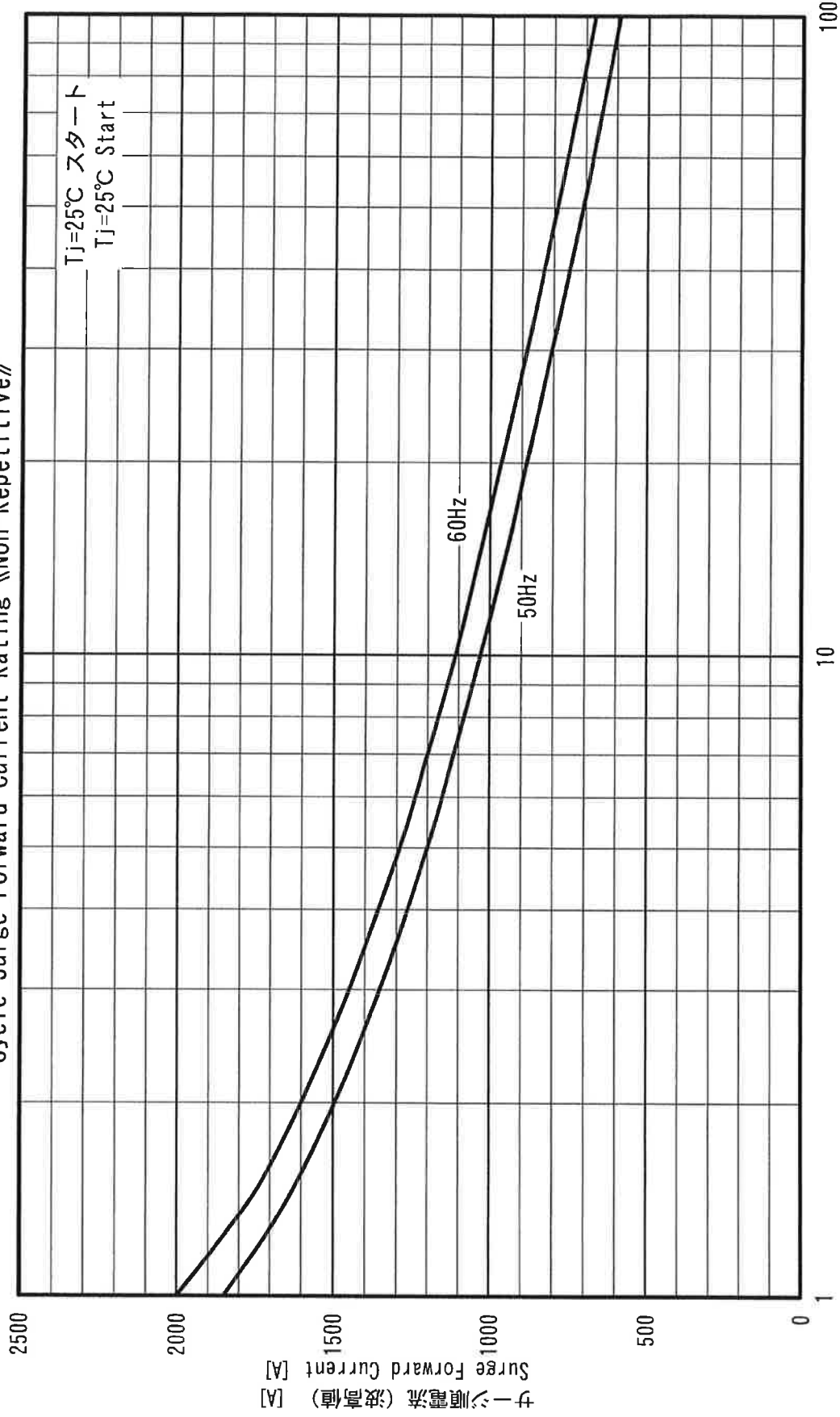
### Output Current vs. Allowable Case Temperature



# DF200AA

## サージ電流耐量《非くり返し》

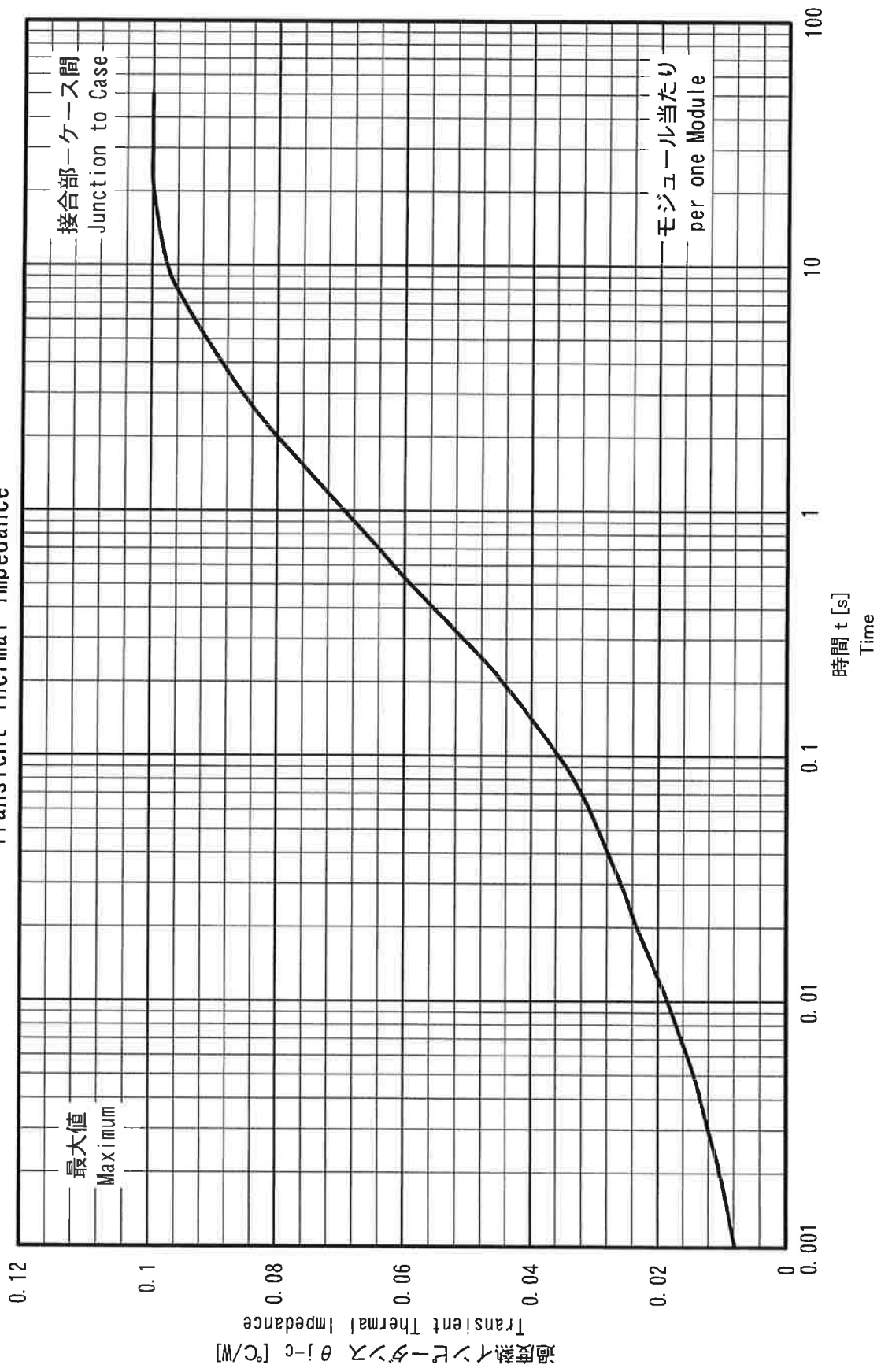
### Cycle Surge Forward Current Rating 《Non-Repetitive》



通電時間 [サイクル数]

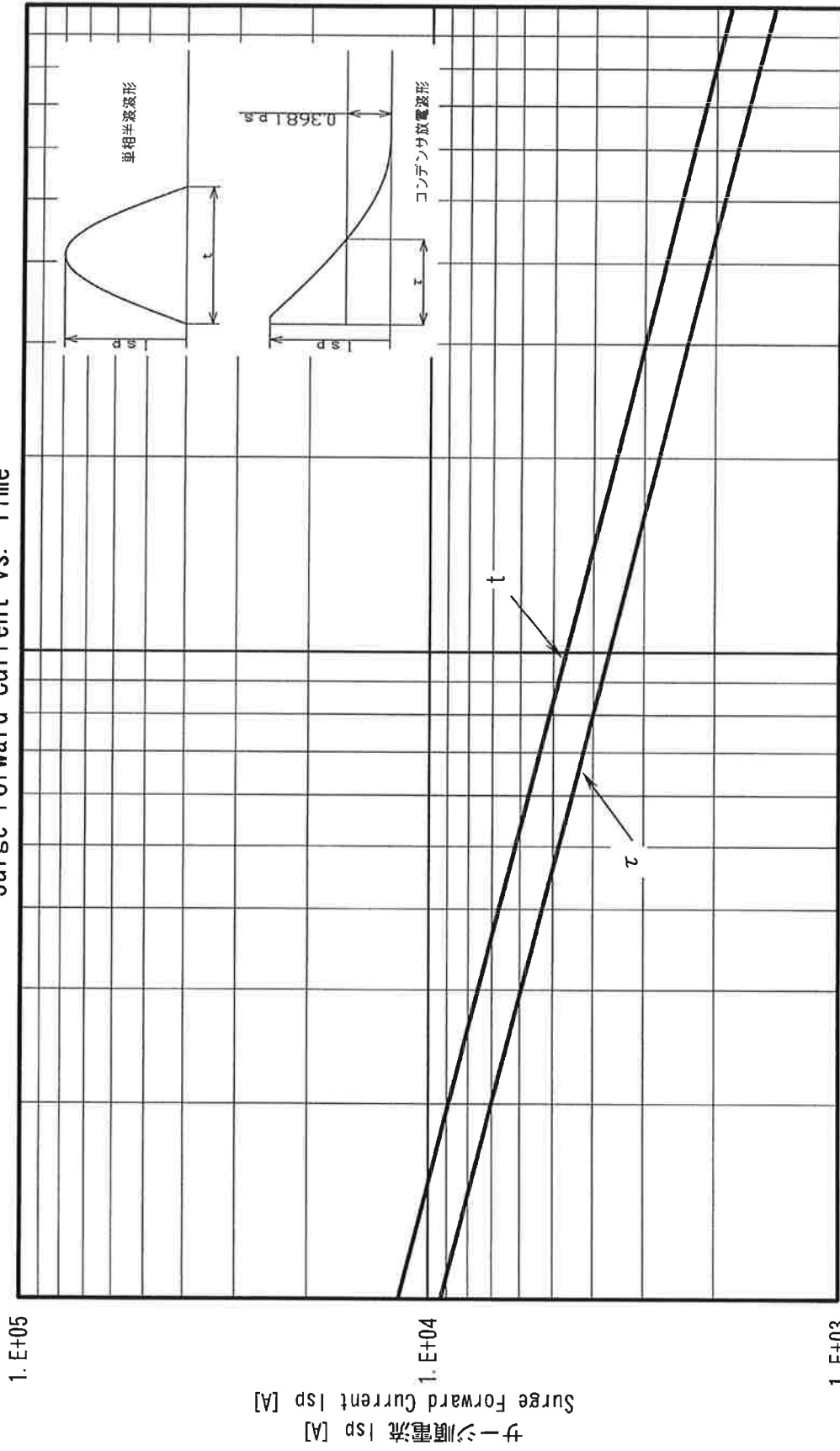
Time [Cycles]

DF200AA  
 過度熱インピーダンス特性  
 Transient Thermal Impedance



DF200AA160  
サージ順電流対時間

Surge Forward Current vs. Time



1. E+03  
1. E+02

1. E+03  
時間 [ $\mu$ s]  
Time [ $\mu$ s]

1. E+04