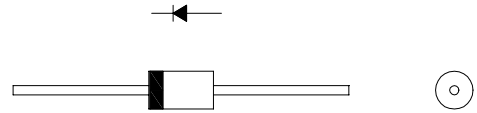


# FRD Type: 31DF4

## FEATURES

- \* Ultra – Fast Recovery
- \* Low Forward Voltage Drop
- \* Low Power Loss, High Efficiency
- \* High Surge Capability
- \* 200 Volts thru 600 Volts Types Available

## OUTLINE DRAWING



## Maximum Ratings

Apporox Net Weight:1.19g

Rating	Symbol	31DF4			Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	400			V
Non-repetitive Peak Reverse Voltage	$V_{RSM}$	440			V
Average Rectified Output Current	$I_o$	1.5	$T_a=29^{\circ}C$ *1	50Hz Half Sine Wave Resistive Load	A
		3.0	$T_a=25^{\circ}C$ *2		
RMS Forward Current	$I_{F(RMS)}$	4.71			A
Surge Forward Current	$I_{FSM}$	60	50Hz Half Sine Wave, 1cycle, Non-repetitive		A
Operating JunctionTemperature Range	$T_{jw}$	- 40 to + 150			$^{\circ}C$
Storage Temperature Range	$T_{stg}$	- 40 to + 150			$^{\circ}C$

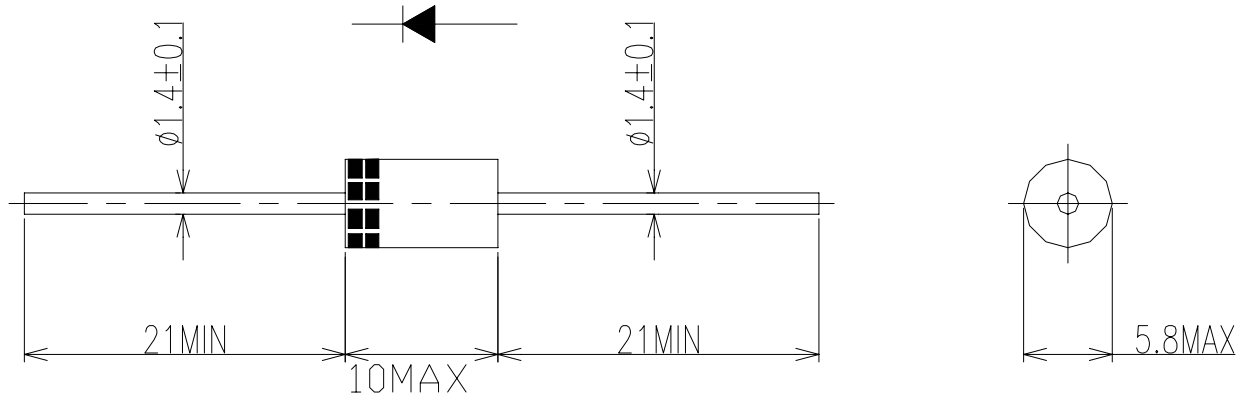
## Electrical/Thermal • Characteristics

Characteristics	Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Current	$I_{RM}$	$T_j = 25^{\circ}C, V_{RM} = V_{RRM}$	-	-	20	$\mu A$
Peak Forward Voltage	$V_{FM}$	$T_j = 25^{\circ}C, I_{FM} = 3 A$	-	-	1.25	V
Reverse Recovery Time	$t_{rr}$	$T_a = 25^{\circ}C, I_{FM} = 3 A -di/dt = 50A/\mu s$			30	ns
Thermal Resistance (Junction to Ambient)	$R_{th(j-a)}$	*1:Without Fin.	-	-	80	$^{\circ}C/W$
		*2:With Fin			34	

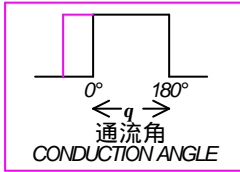
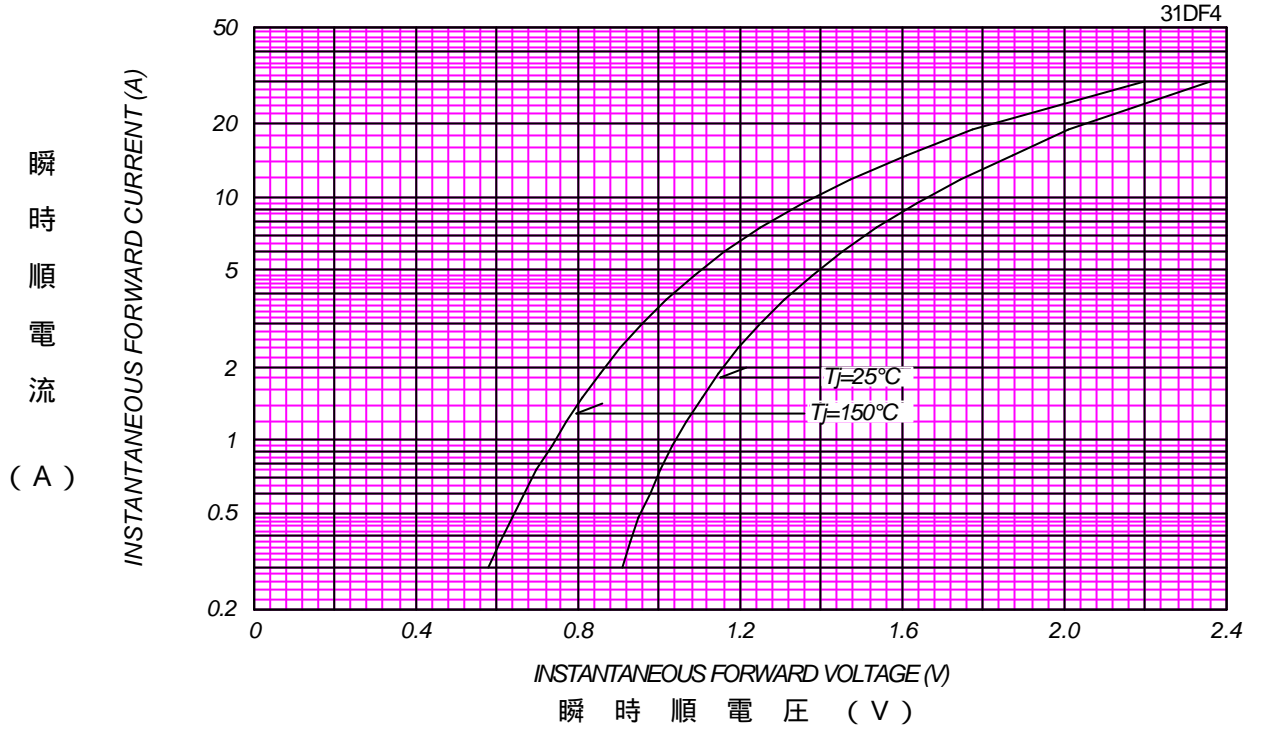
\*1: Without Fin or P.C. Board

\*2: With Fin:20x20x1t(mm):Copper plates, L=5mm, Both Sides

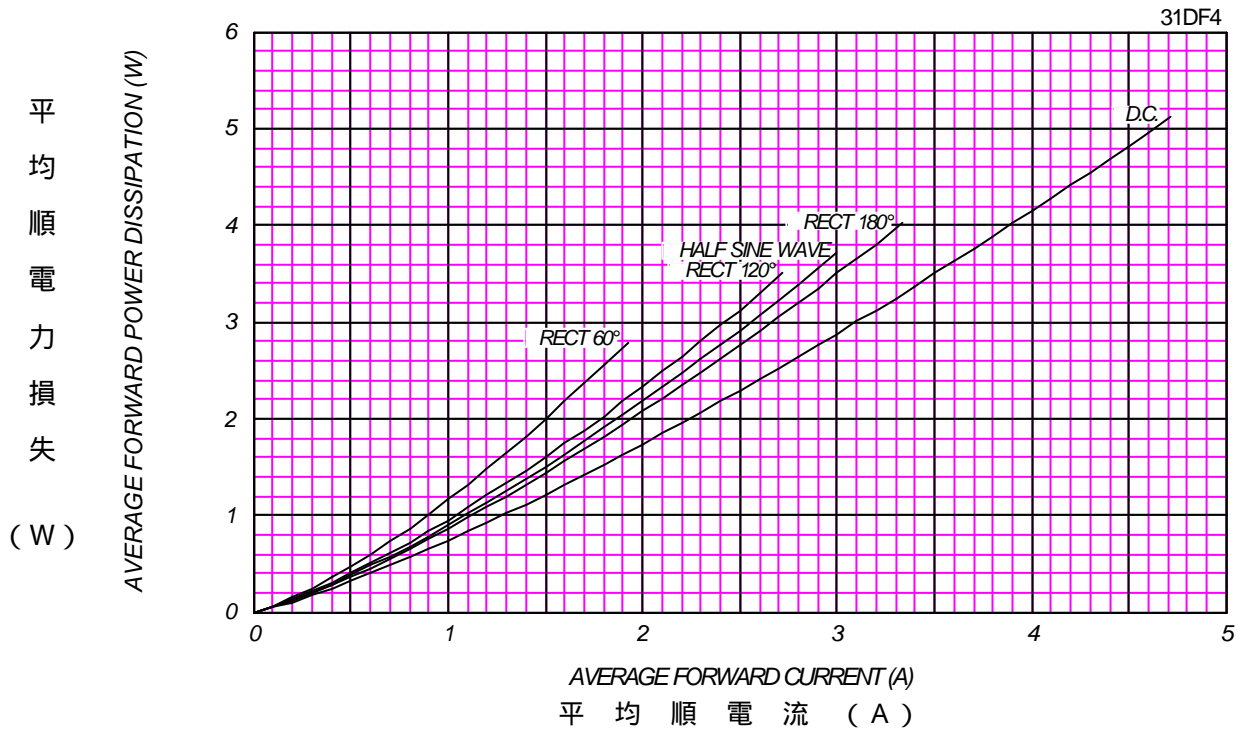
31DF\_ OUTLINE DRAWING (Dimensions in mm)

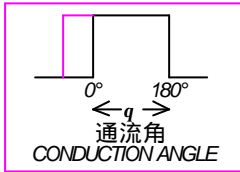


順電壓特性  
FORWARD CURRENT VS. VOLTAGE



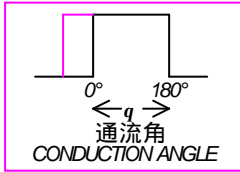
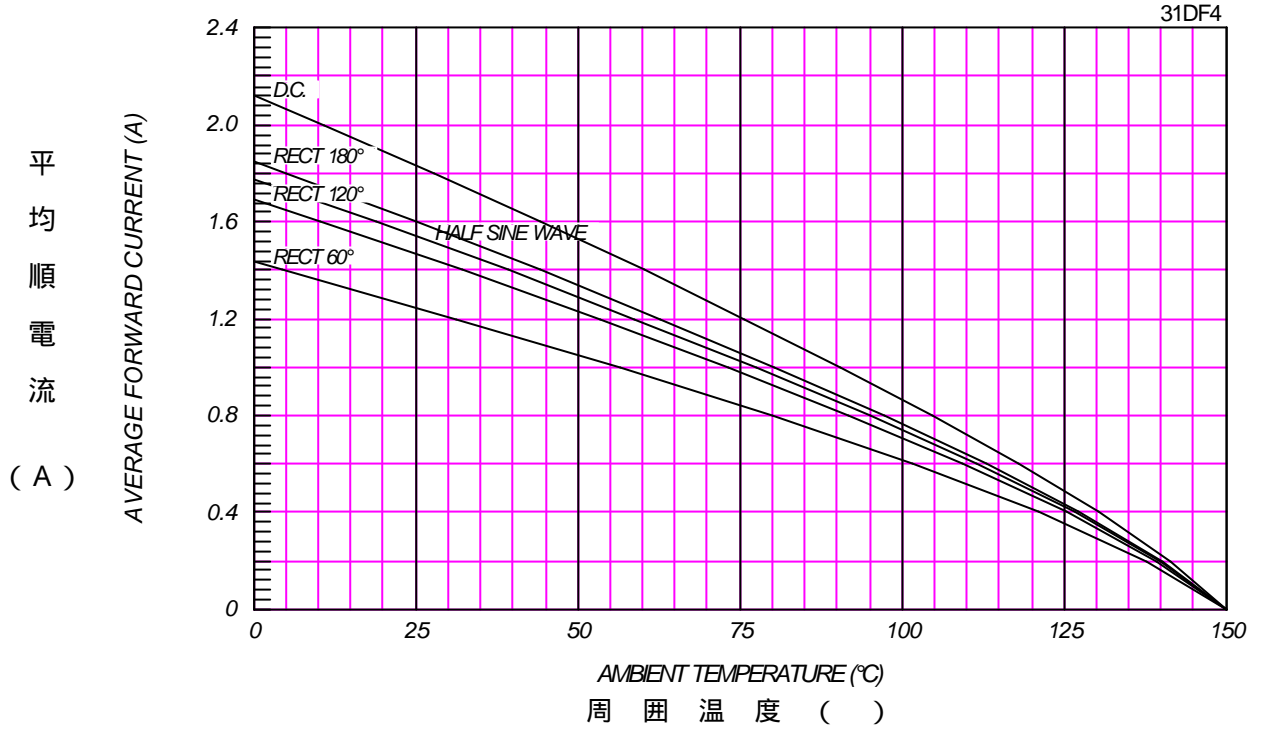
平均順電力損失特性  
AVERAGE FORWARD POWER DISSIPATION





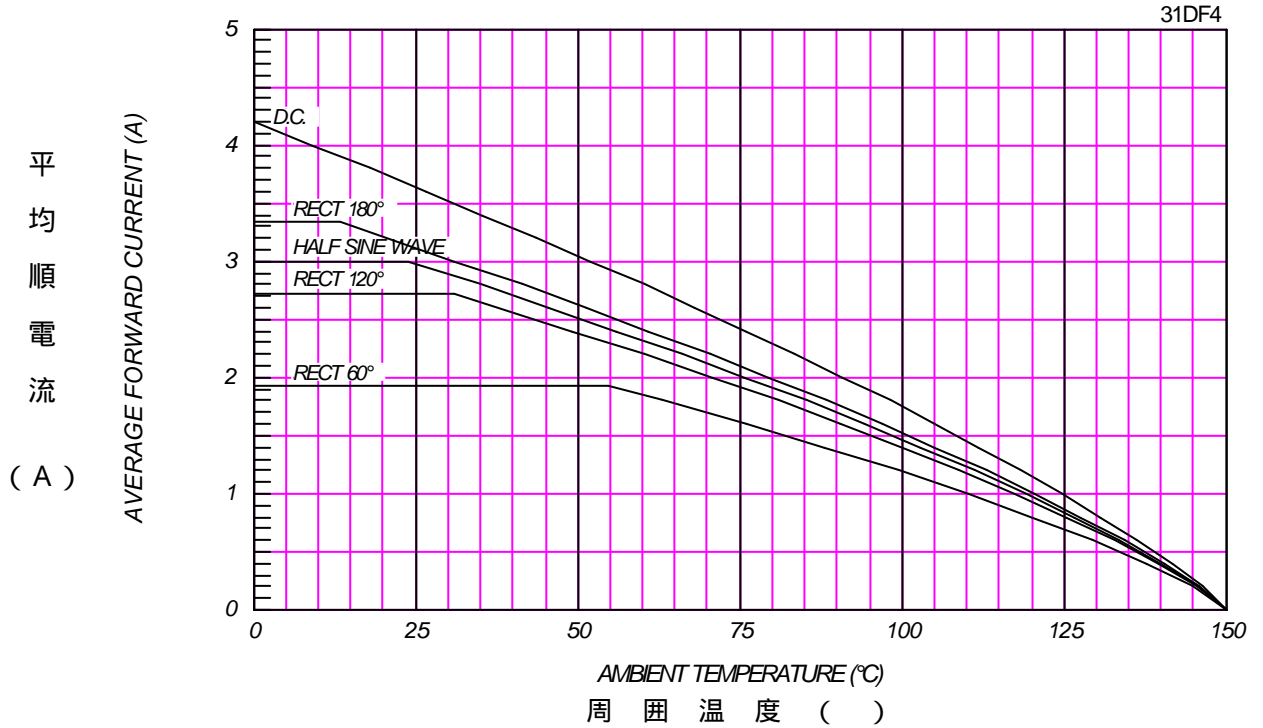
平均順電流 - 周圍溫度定格  
AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

Without Fin or P.C.Board



平均順電流 - 周圍溫度定格  
AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

With Cu Fin(20x20x1t,L=5mm,Both Sides)



サージ順電流定格  
SURGE CURRENT RATINGS

f=50Hz, Half Sine Wave, Non-Repetitive, No Load

31DF4

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