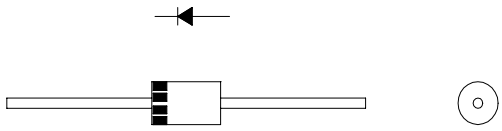
Nihon Inter Electronics Corporation

SBD Type : 31DQ04

OUTLINE DRAWING

FEATURES

* Low Forward Voltage Drop
* Low Power Loss, High Efficiency
* High Surge Capability
* 30volts trough 100volts Types Available



Maximum Ratings

Approx Net Weight:1.18g

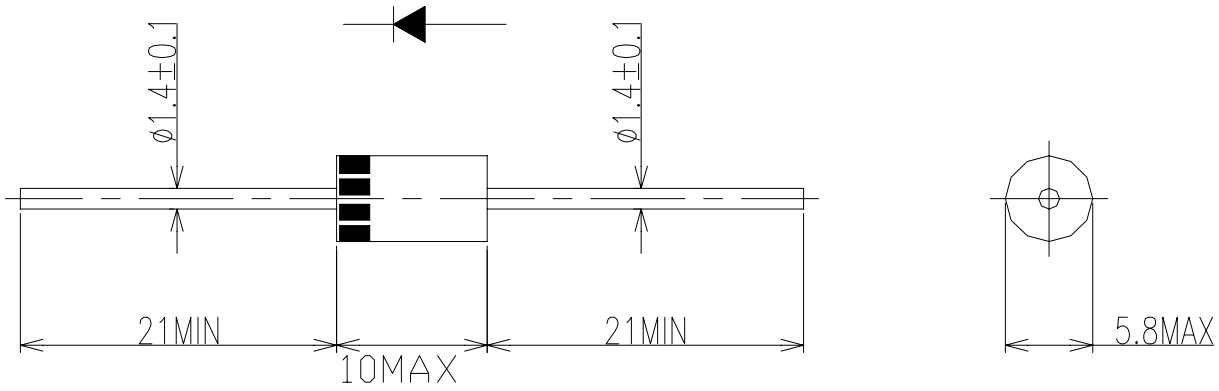
Rating		Symbol	31DQ04			Unit
Repetitive Peak Reverse Voltage		V_{RRM}	40			V
Non-repetitive Peak Reverse Voltage		V_{RSM}	45			V
Average Rectified Output Current	Without Fin or P.C.Board	I_O	1.7	Ta=32℃	Half Sine Wave Resistive Load	A
	With Fin *1		3.0	Ta=53℃		
RMS Forward Current		$I_{F(RMS)}$	4.71			A
Surge Forward Current		I_{FSM}	120	Half Sine Wave,1cycle,Non-repetitive		A
Operating JunctionTemperature Range		Tjw	- 40 to + 150			℃
Storage Temperature Range		Tstg	- 40 to + 150			℃

Electrical • Thermal Characteristics

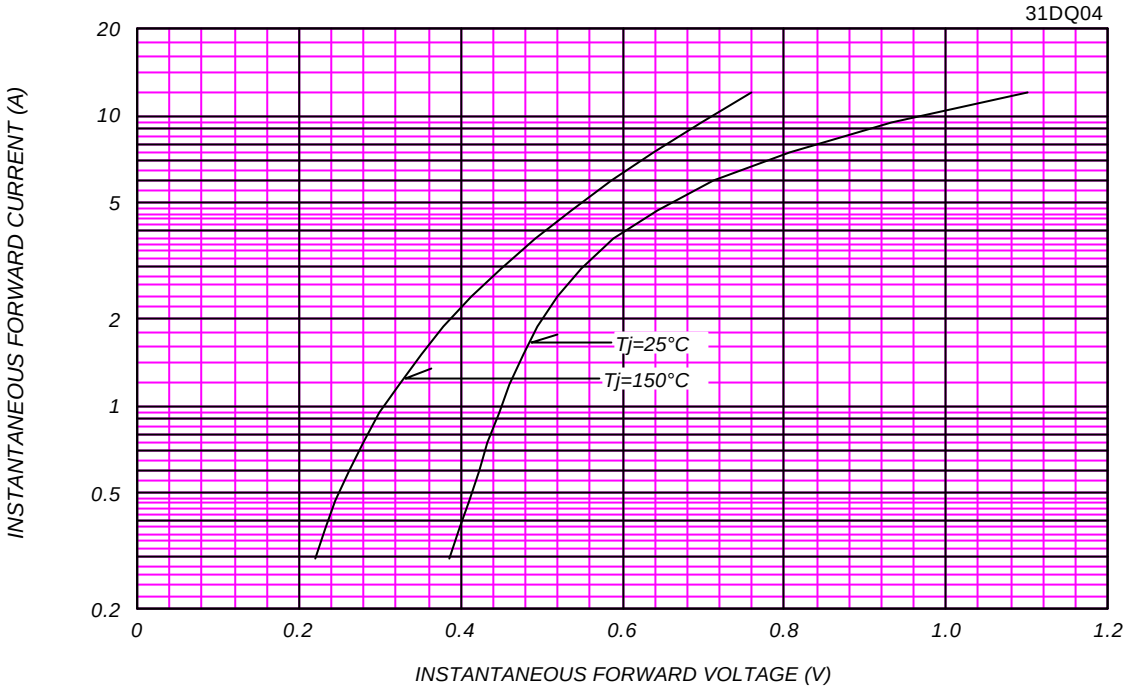
Characteristics	Symbol	Conditions	Min	Typ	Max	Unit
Peak Reverse Current	I_{RM}	Tj= 25℃, V_{RM}= V_{RRM}	-	-	3	mA
Peak Forward Voltage	V_{FM}	Tj= 25℃, I_{FM}= 3 A	-	-	0.55	V
Thermal Resistance(Junction to Ambient)	Rth(j-a)	Without Fin or P.C.Board	-	-	80	℃/W
		With Fin *1			34	

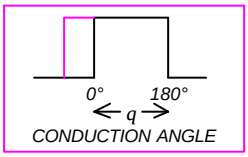
*1 :20x20x1t(mm) Copper plates, L=5mm, Both Sides

31DQ_ OUTLINE DRAWING (Dimensions in mm)

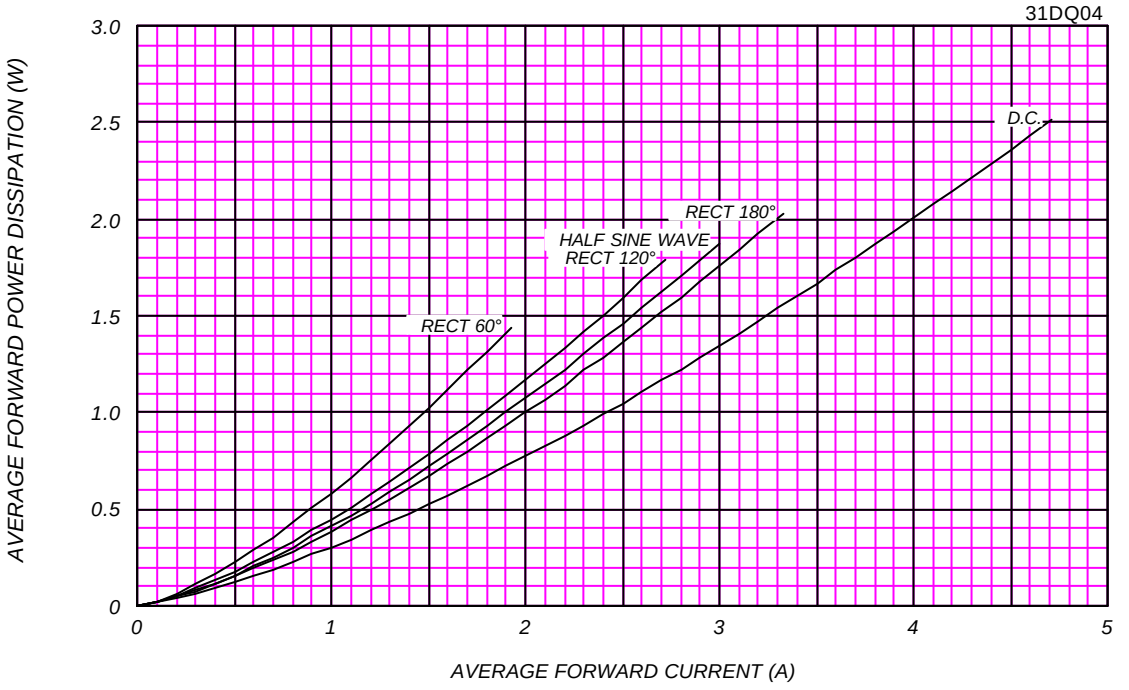


FORWARD CURRENT VS. VOLTAGE



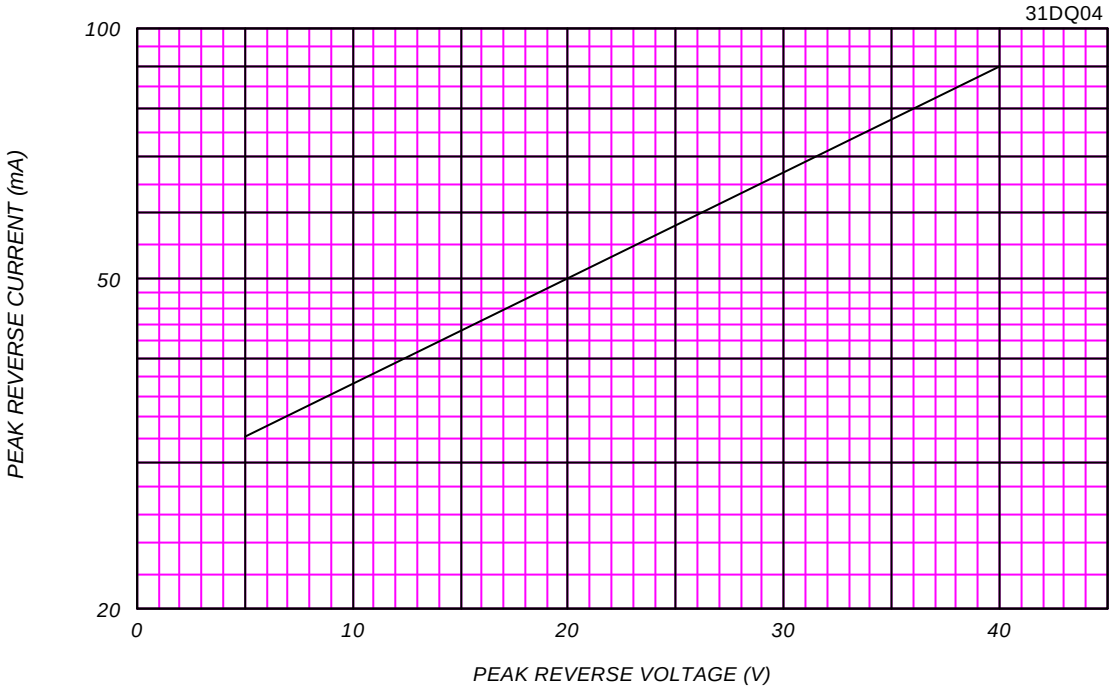


AVERAGE FORWARD POWER DISSIPATION

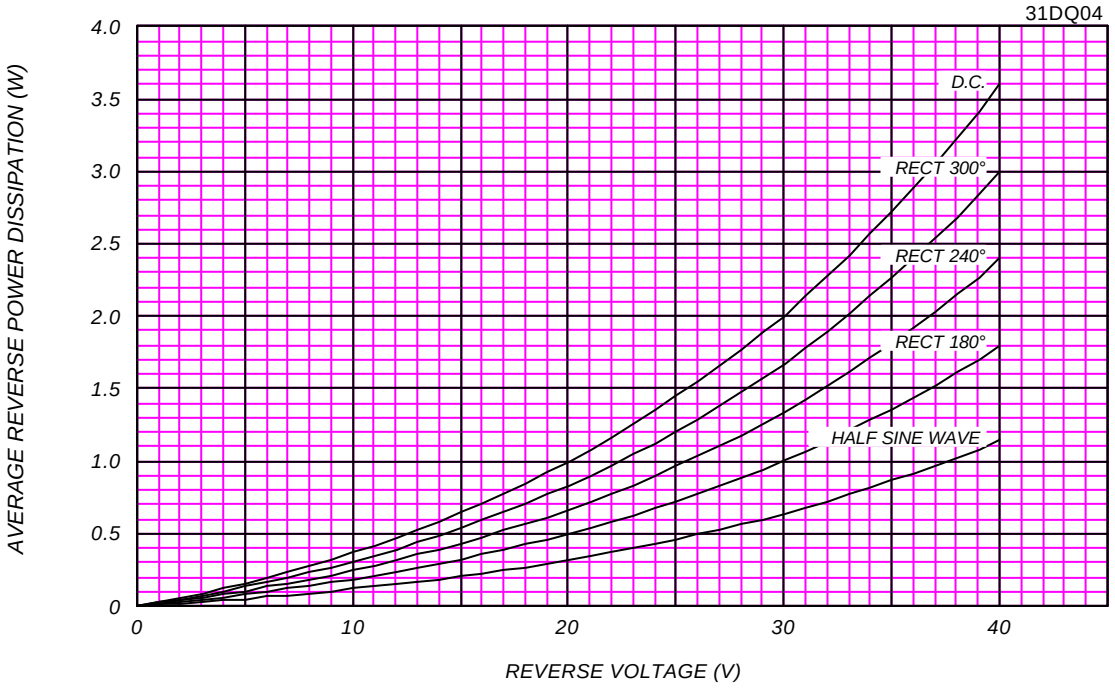


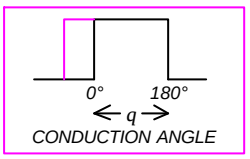
PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

Tj= 150 °C



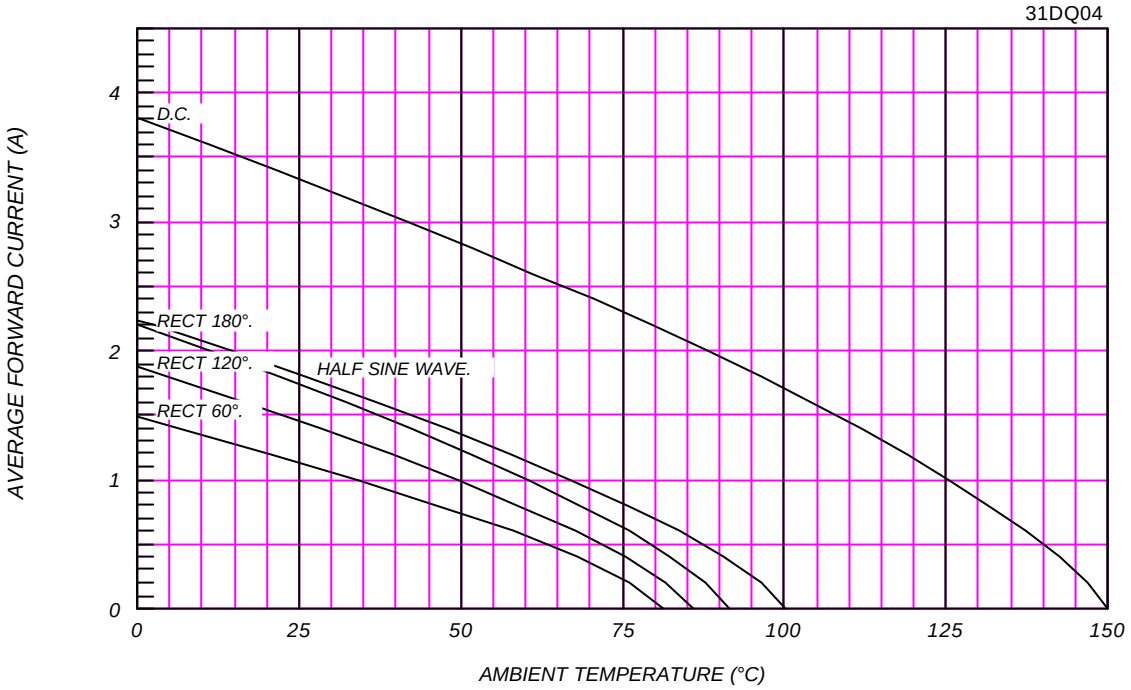
AVERAGE REVERSE POWER DISSIPATION

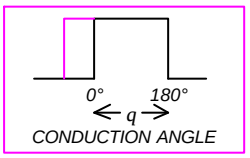




AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

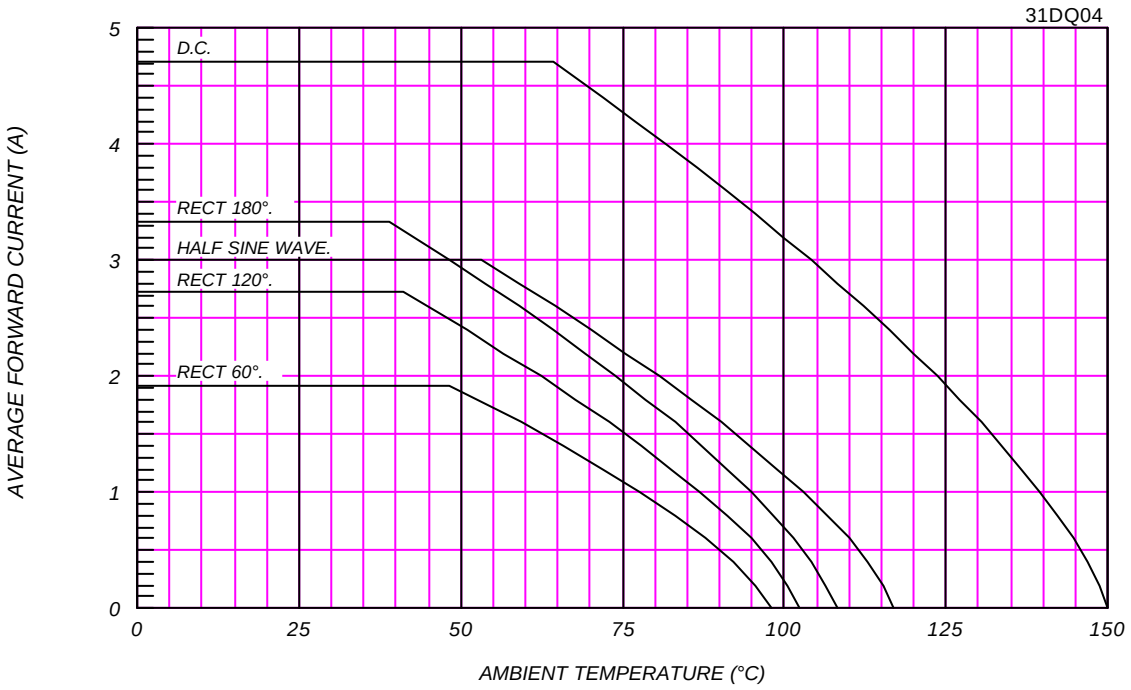
Without Fin or P.C. Board, V_{RM}=40V

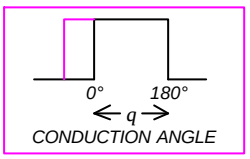




AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

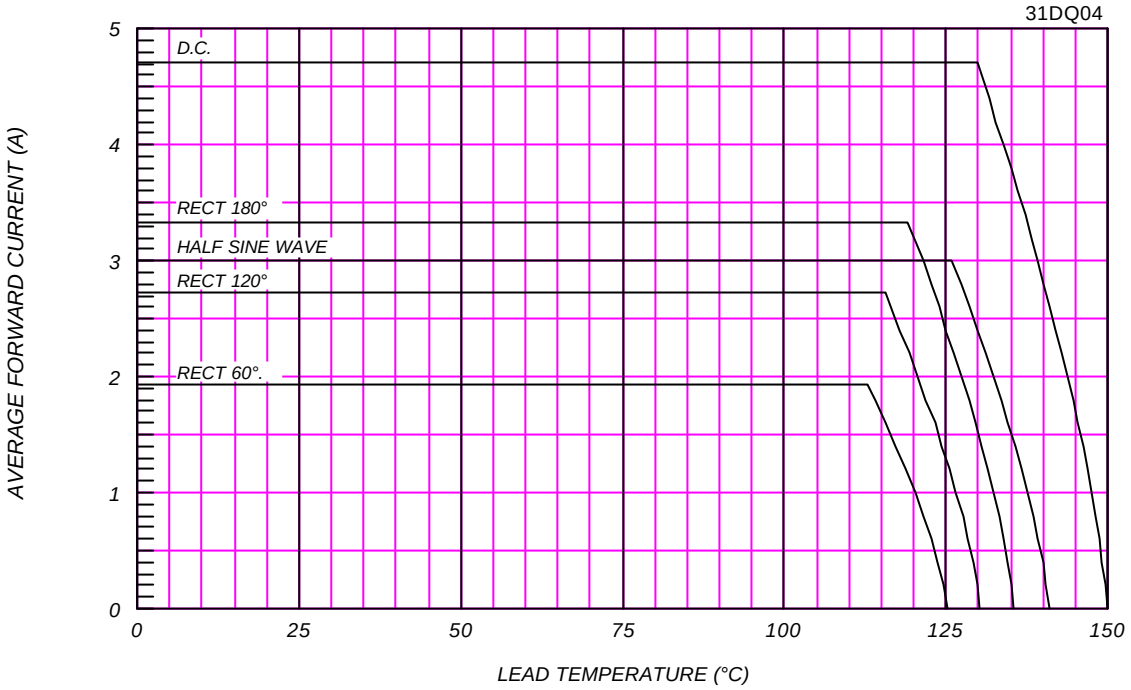
With Cu Fin (20×20×1t, L=5mm, Both Sides), V_{RM}=40V





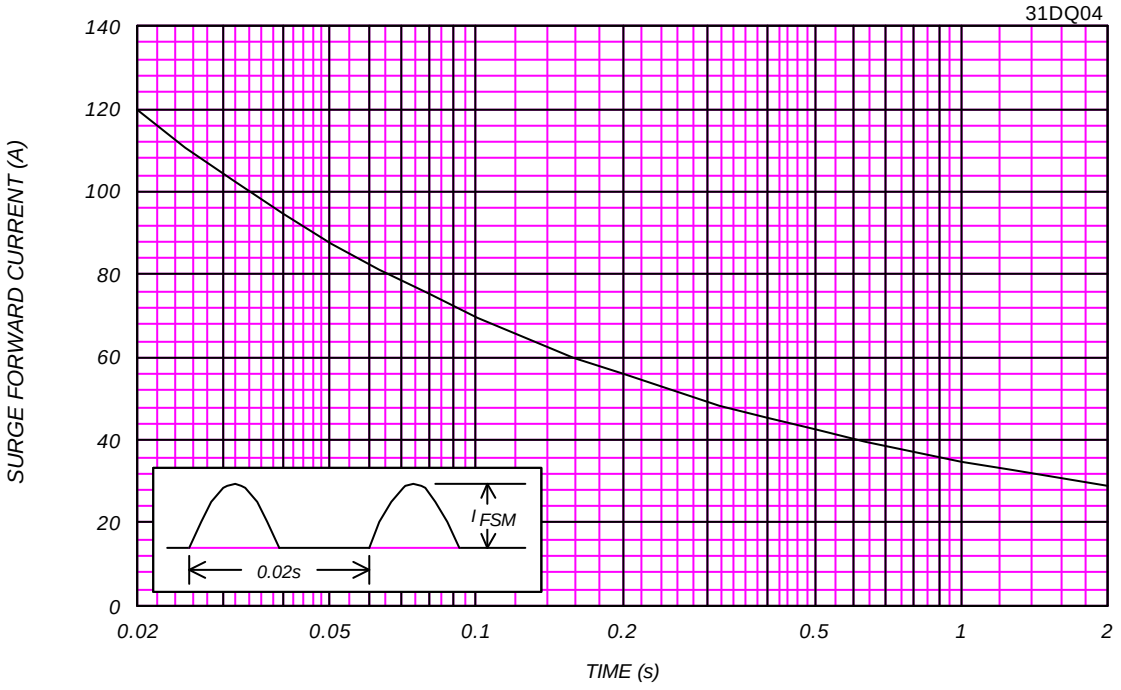
AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE

V_{RM}=40 V



SURGE CURRENT RATINGS

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



JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

Tj= 25° C, Vm = 20mV$_{RMS}$, f= 100kHz, Typical Value