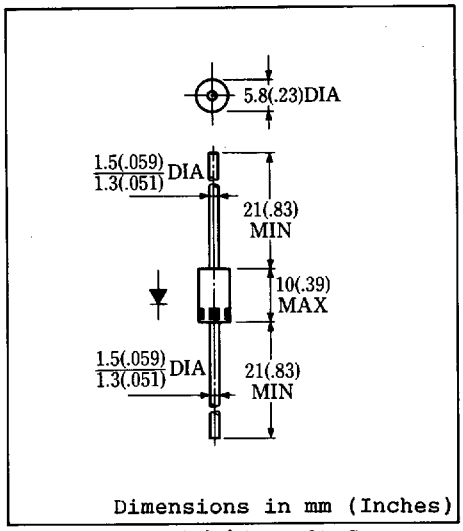
FEATURES

- Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- High Surge Capability
- 30 Volts through 100 Volts Types Available



Dimensions in mm (Inches)

Approx. Net Weight : 1.21 Grams

MAXIMUM RATINGS

Voltage Rating	TYPE / Symbol	◆31DQ03	31DQ04	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	30	40	V
Non-Repetitive Peak Reverse Voltage	V_{RSM}	35	45	V

Electrical Rating	Symbol	Condition			Rating	Unit
Average Rectified Output Current (resistive load)	I_O	Cooling Fin mounted*	180° rectangular wave conduction	T_a = 35°C	3.3	A
			180° sinusoidal wave conduction	T_a = 48°C	3.0	
		Without Fin, PCB.		T_a = 24°C	1.7	
RMS Forward Current	$I_{F(RMS)}$				4.7	A
Peak One-cycle Forward Surge Current	I_{FSM}	50Hz half sine wave, non-repetitive			120	A
Operating Junction Temperature Range	T_{jw}				-40 to 125	°C
Storage Temperature Range	T_{stg}				-40 to 125	°C

ELECTRICAL & THERMAL CHARACTERISTICS

Characteristics	Symbol	Test Condition	Max.	Unit
Peak Forward Voltage	V_{FM}	I_{FM} = 3A T_j = 25°C	0.55	V
Peak Reverse Current	I_{RM}	V_{RM} = V_{RRM} T_j = 25°C	3.0	mA
Thermal Resistance, junction to ambient	$R_{th(j-a)}$	Cooling Fin mounted*	34	°C/W
		Without Fin or P.C. Board	80	

* 20x20x1t(mm) copper plate, double side cooled.
◆ For spare parts only

FIG.1-FORWARD VOLTAGE VS. FORWARD CURRENT

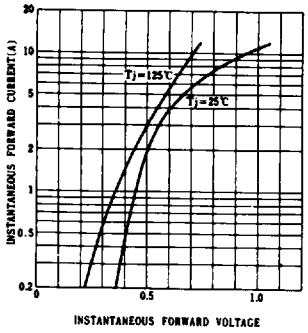


FIG.2-AVERAGE FORWARD POWER DISSIPATION

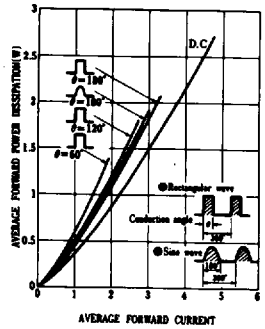


FIG.3-PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

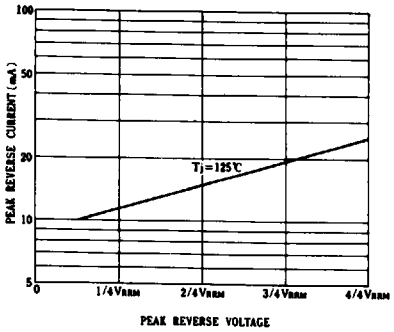


FIG.4-AVERAGE REVERSE POWER DISSIPATION

(31DQ04 IS FOR 75% RATED REVERSE POWER DISSIPATION)

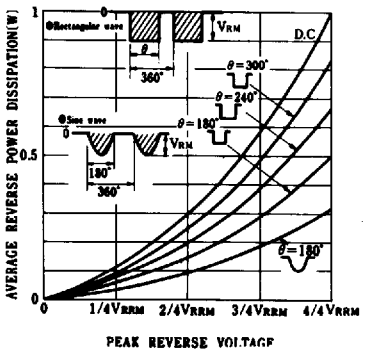


FIG.5-AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

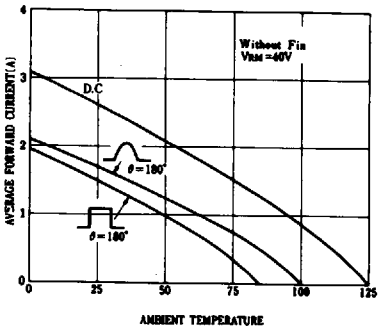


FIG.6-AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

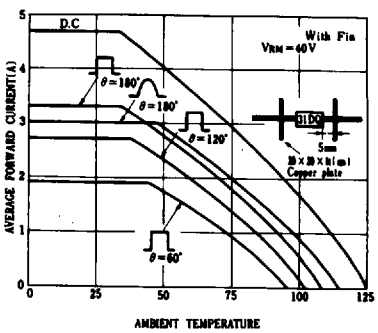


FIG.7-SURGE CURRENT RATINGS

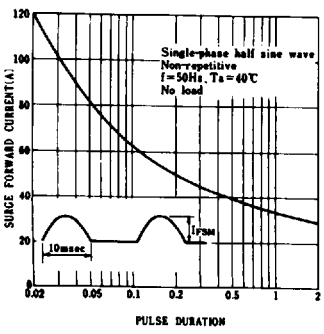


FIG.8-JUNCTION CAPACITANCE VS. REVERSE VOLTAGE