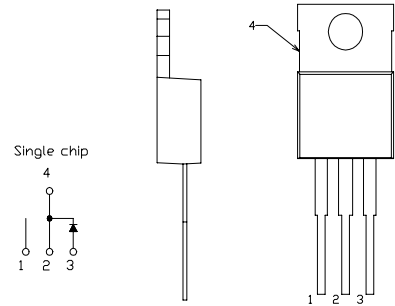


# SBD Type : GSQ05A03LB

OUTLINE DRAWING

**FEATURES**

- \*Similar to TO-220AC Case
- \*Extremely Low Forward Voltage Drop
- \*Low Power Loss,High Efficiency
- \*High Surge Capability
- \*T<sub>j</sub>=150 °C operation


**Maximum Ratings**

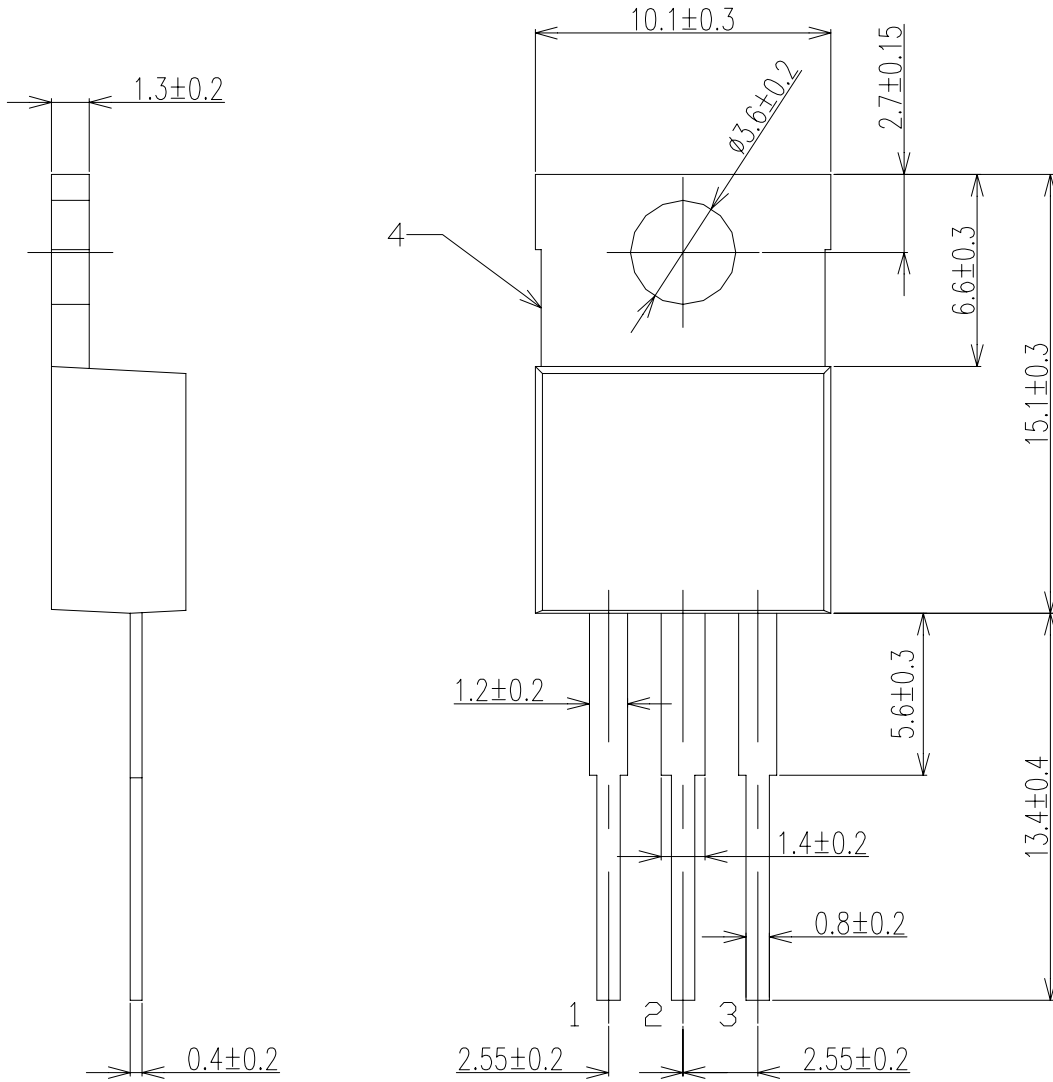
Approx Net Weight: 1.9g

Rating	Symbol	GSQ05A03LB		Unit
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	30		V
Repetitive Peak Surge Reverse Voltage	V <sub>RRSM</sub>	35(pulse width ≤ 1μs duty ≤ 1/50)		V
Average Rectified Output Current	I <sub>O</sub>	5	T <sub>c</sub> =122°C 50 Hz half Sine Wave Resistive Load	A
RMS Forward Current	I <sub>F(RMS)</sub>	7.85		A
Surge Forward Current	I <sub>FSM</sub>	120	50Hz Half Sine Wave ,1cycle Non-repetitive	A
Operating JunctionTemperature Range	T <sub>jw</sub>	-40 to +150		°C
Storage Temperature Range	T <sub>stg</sub>	-40 to +150		°C
Mounting torque	F <sub>tor</sub>	recommended torque = 0.5		N•m

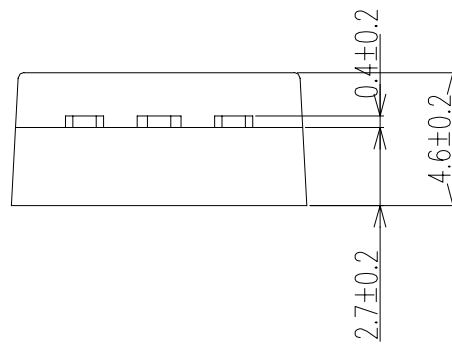
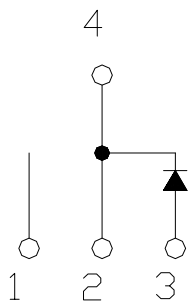
**Electrical • Thermal Characteristics**

Characteristics	Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Current	I <sub>RM</sub>	T <sub>j</sub> = 25°C, V <sub>RM</sub> = V <sub>RRM</sub>	-	-	5	mA
Peak Forward Voltage	V <sub>FM</sub>	T <sub>j</sub> = 25°C, I <sub>FM</sub> = 5 A	-	-	0.47	V
Thermal Resistance	R <sub>th(j-c)</sub>	Junction to Case	-	-	5	°C/W

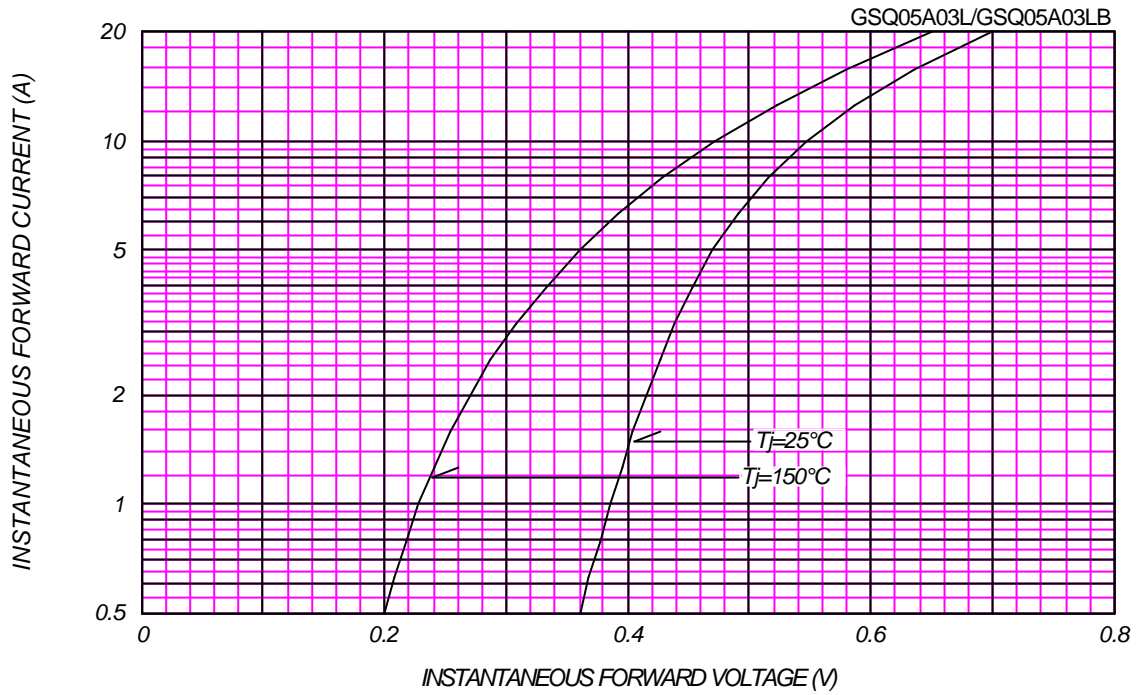
GSQ\_B\_ OUTLINE DRAWING (Dimensions in mm)



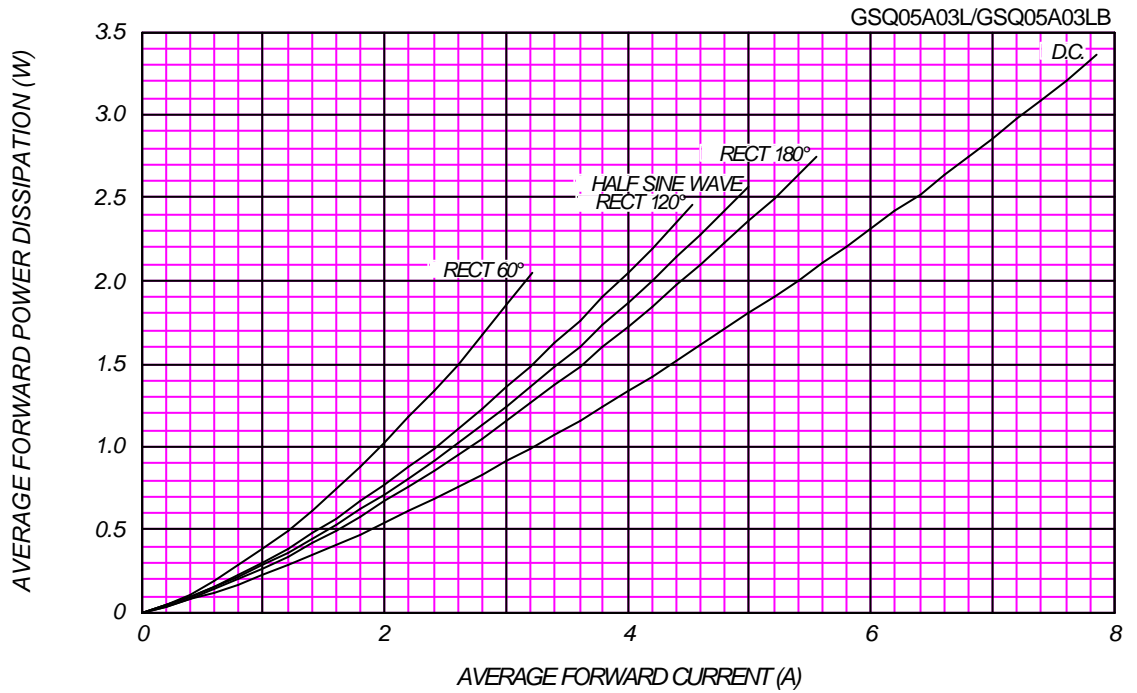
Single chip



FORWARD CURRENT VS. VOLTAGE



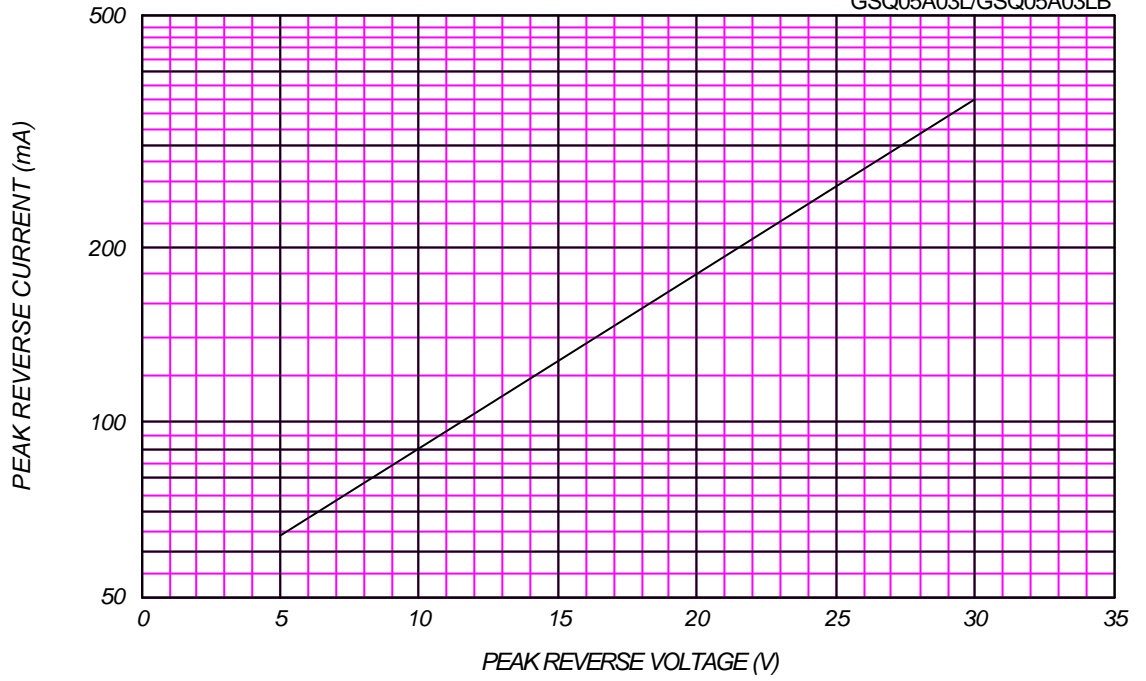
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

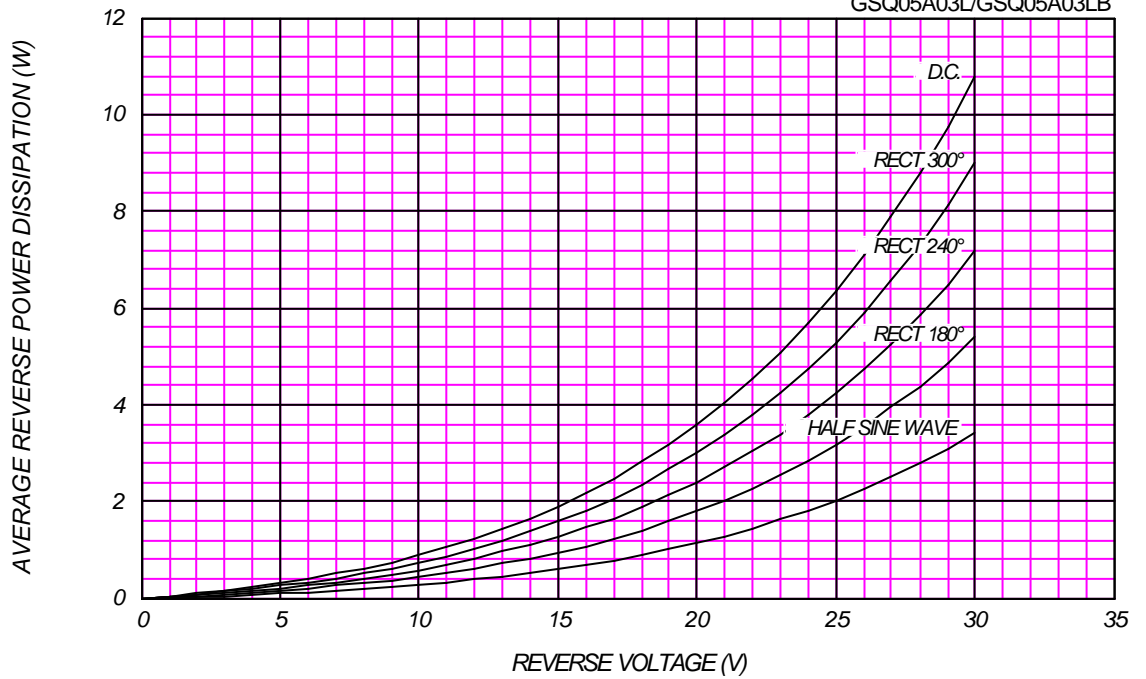
$T_j = 150\text{ }^\circ\text{C}$

GSQ05A03L/GSQ05A03LB



AVERAGE REVERSE POWER DISSIPATION

GSQ05A03L/GSQ05A03LB

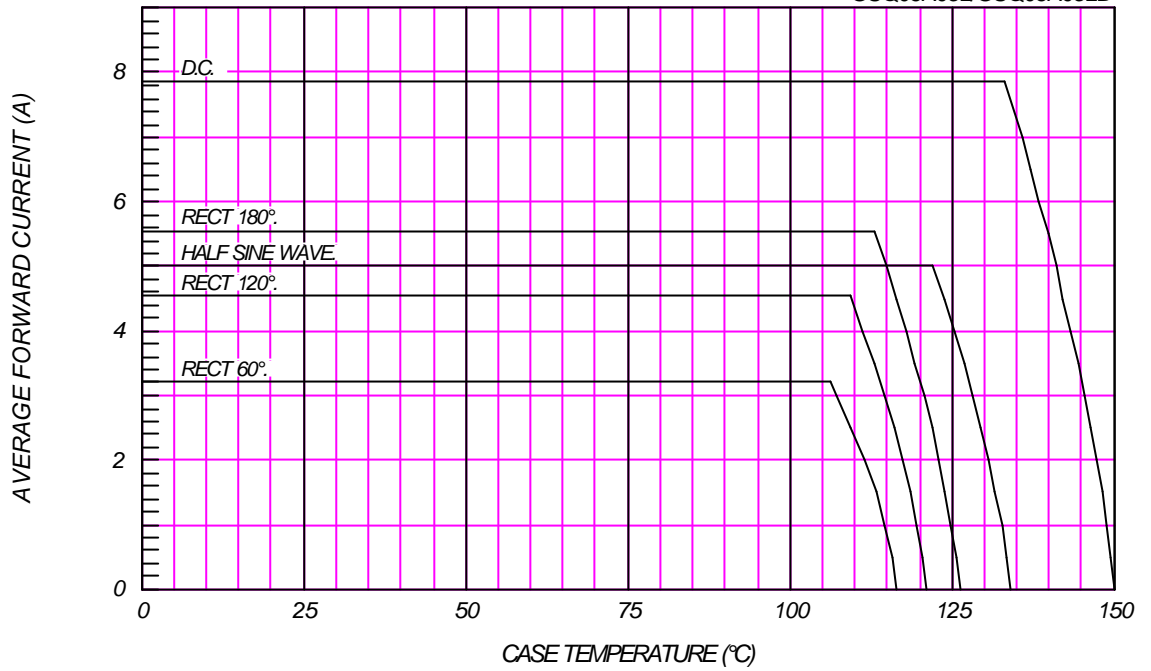




### AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

$V_{RM}=30V$

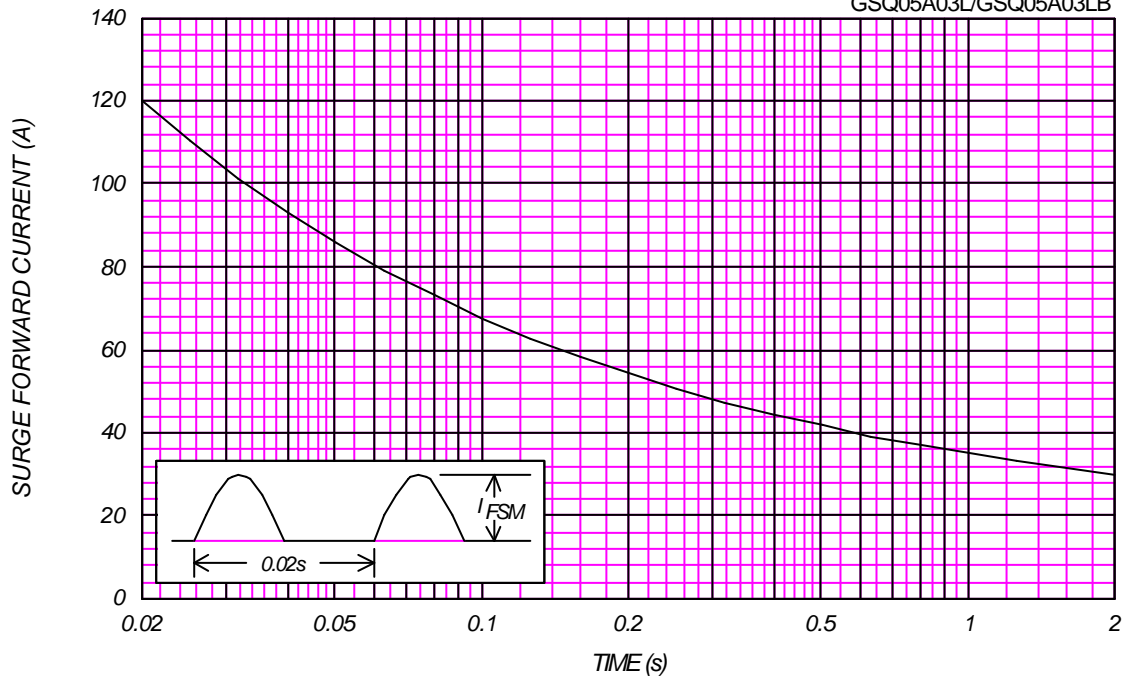
GSQ05A03L/GSQ05A03LB



### SURGE CURRENT RATINGS

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

GSQ05A03L/GSQ05A03LB



JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

$T_j=25^\circ\text{C}$ ,  $V_m=20\text{mV}_{\text{RMS}}$ ,  $f=100\text{kHz}$ , Typical Value

GSQ05A03L/GSQ05A03LB

