

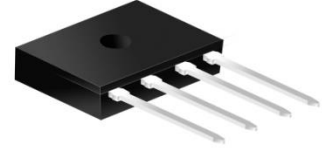
Silicon Bridge Rectifiers

GBS6J - GBS6M

Features

- Glass passivated junction
- High forward surge current capability
- Fast reverse recovery time for high efficiency
- High-temp soldering guaranteed: 260°C @ 10s.
- RoHS compliant with Halogen-free

HF



Mechanical Data

- Case: GBS molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Leads solderable per MIL-STD-750

Maximum Ratings (@T_A = 25°C unless otherwise specified)

Parameter	Symbol	GBS6J	GBS6K	GBS6M	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	600	800	1000	V
RMS Reverse Voltage	V _{RMS}	420	560	700	V
DC Blocking Voltage	V _{DC}	600	800	1000	V
Average Forward Output Current	I _{F(AV)}	6.0			A
Peak Forward Surge Current, 8.3ms Single Half-Sine-Wave	@T _J = 25°C I _{FSM}	175			A
I ² t Rating for Fusing	@T _J = 25°C I ² t	127			A ² s

Thermal Characteristics

Parameter	Symbol	GBS6J	GBS6K	GBS6M	Unit
Typical Thermal Resistance*1, *2	R _{ΘJA} *2	39			°C/W
	R _{ΘJC} *1	5.3			
Operating Junction Temperature Range	T _J	-55 ~ +150			°C
Storage Temperature Range	T _{STG}	-55 ~ +150			°C

Note 1: Unit mounted on p.c.b. of 65mm x 50mm x 2.4mm with aluminum plate heat sink

Note 2: Unit mounted on p.c.b. without heat sink

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Electrical Characteristics (@T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition		Typ.	Max.	Unit
Instantaneous Forward Voltage	V _F	I _F = 3.0A Per Diode		-	1.0	V
Reverse Current	I _R	Rated V _R	@ T _A = 25°C	-	5.0	μA
			@ T _A = 125°C	-	300.0	

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Ratings and Characteristics Curves (@ $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

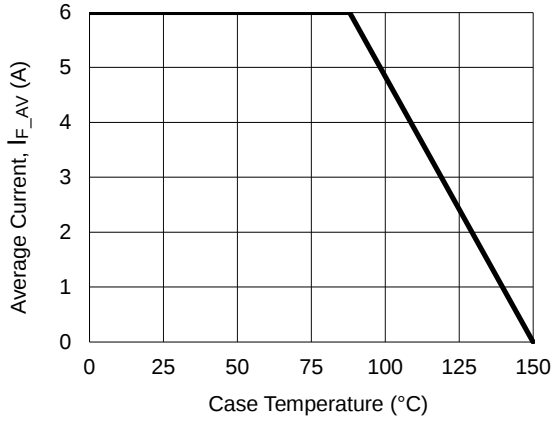


Fig.2 Surge Current Derating Curve

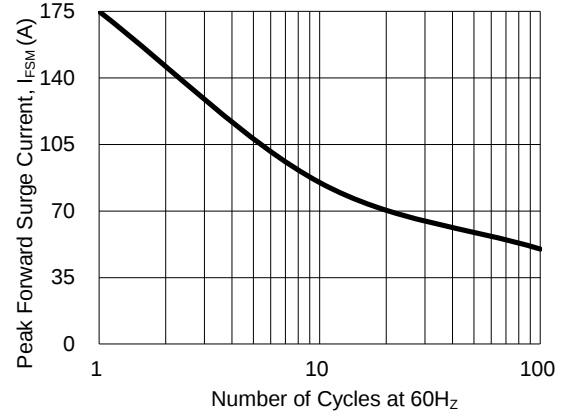


Fig.3 Typical Forward Voltage Characteristics

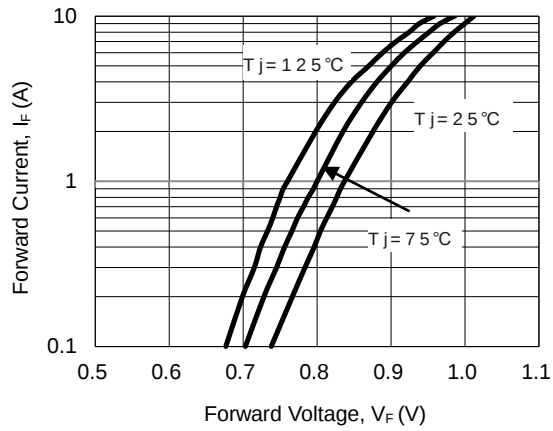
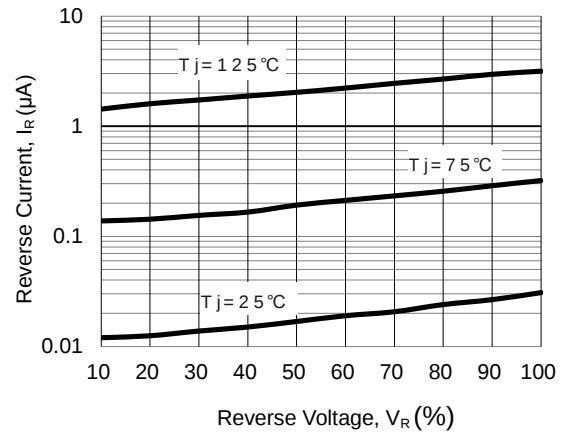


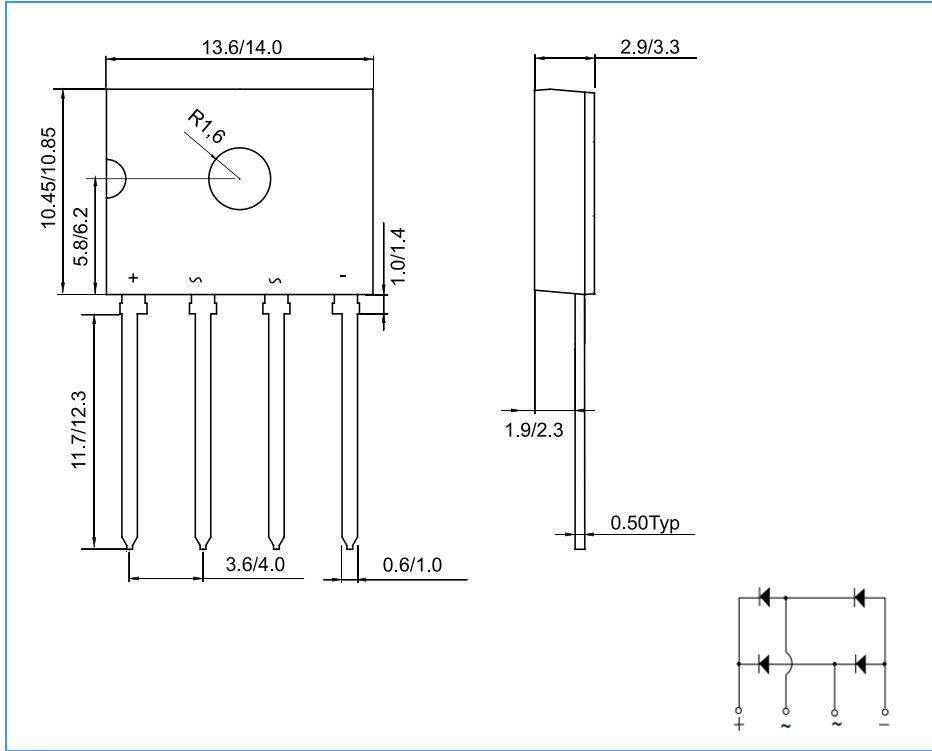
Fig.4 Typical Reverse Characteristics



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Package Outline Dimensions (unit: mm)



Ordering Information

Part Number	Marking	Package
GBS6J	GBS6J	GBS
GBS6K	GBS6K	GBS
GBS6M	GBS6M	GBS