SGBJ15D thru SGBJ15M

Microsemi Shanghai

Glass Passivated Single Phase Bridge Rectifiers

Reverse Voltage   200 to 1000V
Forward Current   15.Amp

Features
- Glass passivated die construction
- Ideal for printed circuit boards
- Plastic material used carries UL flammability recognition 94V-0
- High surge current capability
- High temperature soldering guaranteed: 265℃ /10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3kg) tension

Mechanical Data
Case: Molded plastic case
Terminals: Plated leads solderable per MIL-STD-750, Method 2026
Polarity: Marked on Body
Mounting Position: Any

Circuit

Module Type

TYPE	V_{RRM}	V_{RSM}
SGBJ15D	200V	300V
SGBJ15G	400V	500V
SGBJ15J	600V	700V
SGBJ15K	800V	900V
SGBJ15M	1000V	1100V

Maximum Ratings and Thermal Characteristics (TA = 25℃ unless otherwise noted)

Symbol	Conditions	Values	Units
$I_{F(AV)}$	Maximum average forward output rectified current Tc =100℃	15	A
I_{FSM}	Peak forward surge current single half sine-wave superimposed on rated load (JEDEC Method)	200	A
i^2t	Rating for fusing (t<8.3ms)	166	A^2s
Visol	a.c.50HZ;r.m.s.;1min	2500	V
$R_{\theta JA}$ $R_{\theta JC}$	Maximum thermal resistance per leg	22 [1] 1.5 [2]	℃/W
TOR	Mounting Torque (Recommended torque:0.5 N.m)	0.8	N.m
T_j, T_{STG}	Operating Junction and storage temperature range	-55 to +150	℃
Weight	Approximate Weight	7.0	g

Electrical Characteristics (TA = 25℃ unless otherwise noted)

Symbol	Conditions		Values	Units
V_F	Maximum Instantaneous Forward Voltage per leg	I_{FM} =7.5A	1.0	V
I_R	Maximum DC reverse current at rated DC blocking voltage per leg	TA = 25℃ TA = 125℃	5.0 500	μA

Notes: (1) Junction to ambient without heatsink
         (2) Junction to case with heatsink
         (3) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

Microsemi
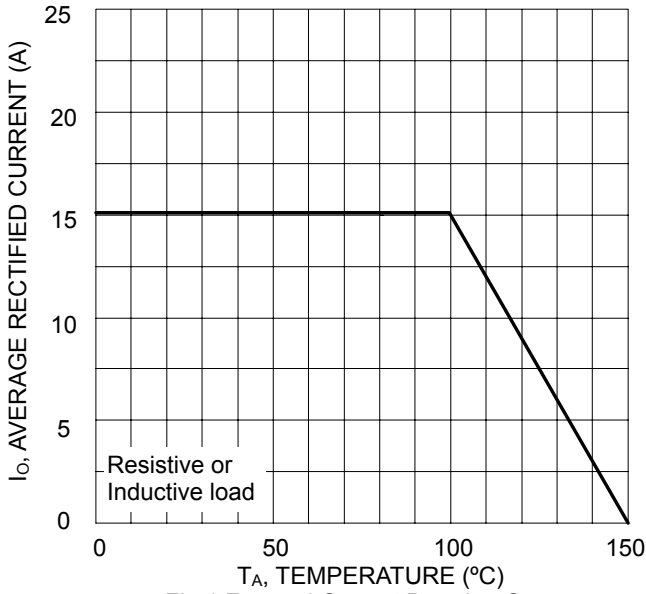**Shanghai**

Performance Curves
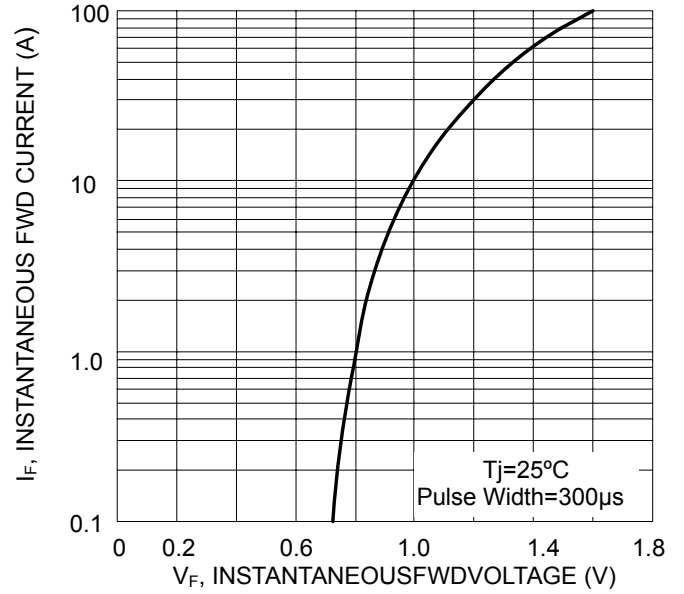

Fig.1 Forward Current Derating Curve

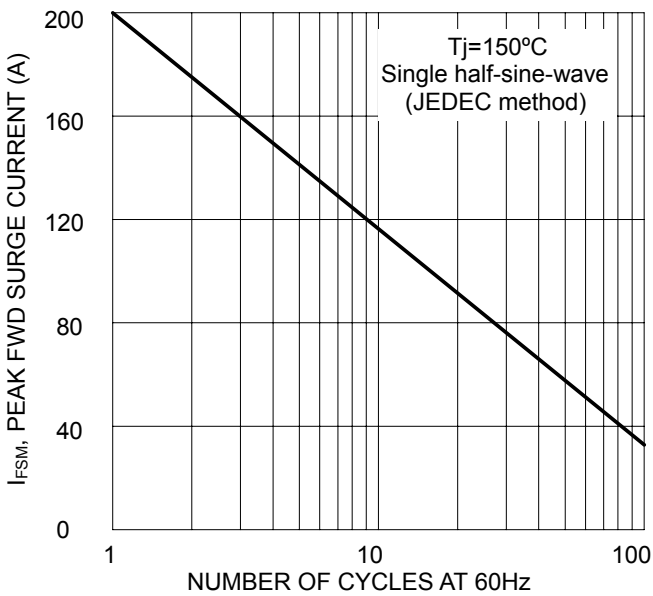Fig.2 Typical Forward Characteristics, per element

Fig.3 Max Non-Repetitive Peak Fwd Surge Current

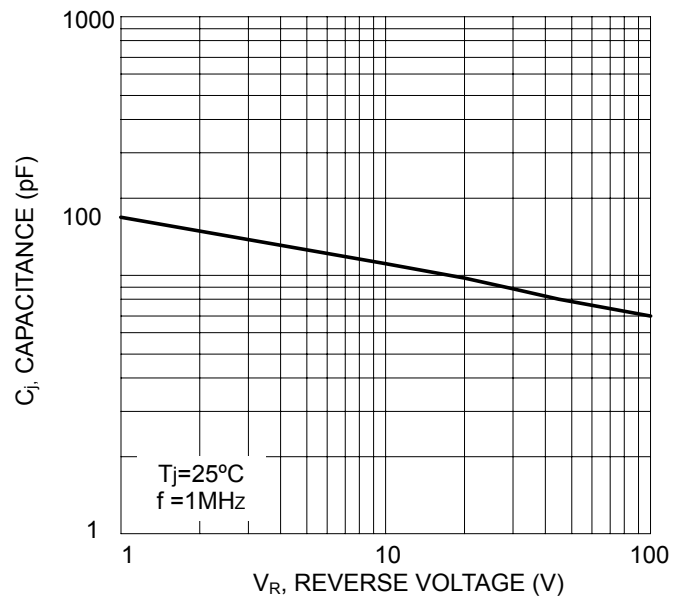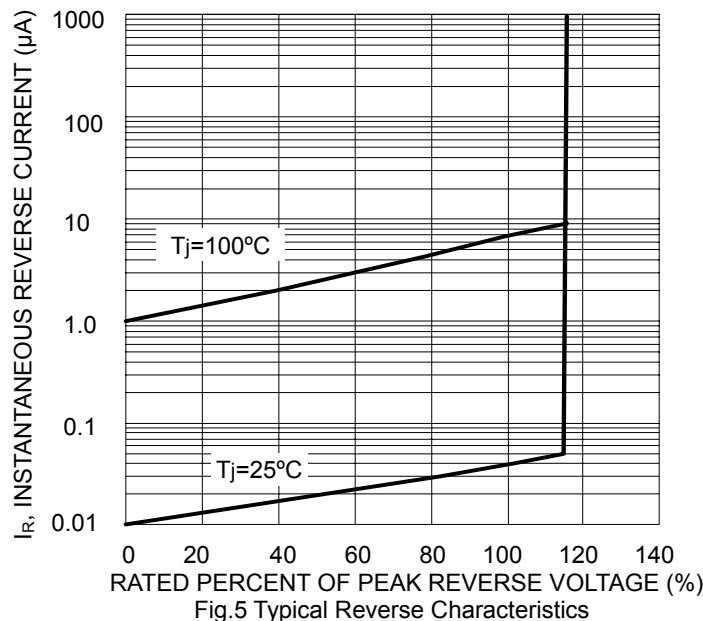Fig.4 Typical Junction Capacitance

Fig.5 Typical Reverse Characteristics

Package Outline Information

CASE: GBJ

1.193(30.3)
1.170(29.7)

0.150(3.8)
0.134(3.4)

0.134(3.4)
0.118(3.0)

0.799(20.3)
0.775(19.7)

0.197
(5.0)

0.441(11.2)
0.425(10.8)

0.189(4.8)
0.173(4.4)

+ ~ ~ -

0.165(4.2)
0.150(3.8)

0.106(2.7)
0.091(2.3)

0.094(2.4)
0.079(2.0)

0.043(1.1)
0.035(0.9)

0.697(17.7)
0.677(17.2)

0.114(2.9)
0.098(2.5)

0.031(0.8)
0.024(0.6)

0.409(10.4)
0.394(10.0)

0.303(7.7)
0.287(7.3) (2×)

Dimensions in inches (mm)