Features

- Glass passivated junction
- Ideal for printed circuit board application
- High surge current capability
- Meets MSL level1,per J-STD-020, LF maximum
  peak of 260℃

Typical Applications

General purpose use in AC/DC bridge full wave rectification fo SMPS, lighting ballaster, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

Mechanical Data

- Package: HBS
  Molding compound meets UL 94 V-0 flammability
  rating, RoHS-compliant,Halogen-free
- Terminals: Tin plated leads, solderable per
  J-STD-002 and JESD22-B102
- Polarity: As marked on body

Package ： HBS

Dimensions in inches and (milimeters)
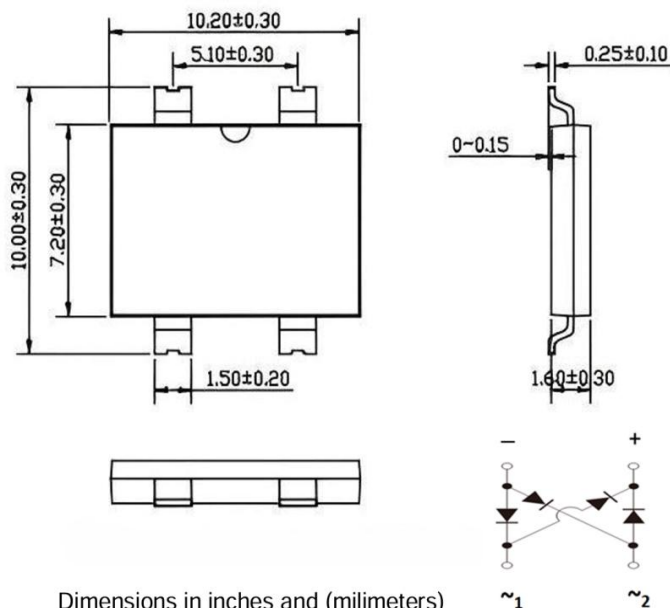
Maximum Ratings （Ta=25℃ Unless otherwise specified）

Parameter		Symbol	RHBS 1010		unit
Maximum repetitive peak reverse voltage		V_{RRM}	1000		V
Maximum RMS bridge input voltage		V_{RMS}	700		V
Maximum DC blocking voltage		V_{DC}	1000		V
Average rectified output current @60HZ sine wave, R-load, Tc=30℃		I_O	10.0		A
Instantaneous forward voltage drop per diode @ I_{FM}=5.0A		V_F	1.10　Typ.	1.3　Max.	V
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃		I_{FSM}	220		A
Forward Surge Current (Non-repetitive) @1ms square wave,1 cycle, Tj=25℃			440		
Maximum DC reverse current at ratde TA=25℃		I_R	5		μA
DC blocking voltage per element　TA=125℃			100		
Rating for fusing(t<8.3ms)		I^2t	200.9		A^2sec
Maximum reverse recovery time @ IF=0.5A,IR=1.0A, Irr=0.25A		t_{rr}	500.0		ns
Thermal resistance	Between Junction and Ambient	R_{eJ-A}	55		℃/w
	Between Junction and Lead	R_{eJ-L}	14		
	Between Junction and Case	R_{eJ-C}	8		
Operating junction and stroage temperature range		$T_J,$	-55to+150		℃
		T_{STG}			

Characteristics (Typical)
RHBS1010

FIG1:Io-Tc Curve

Average Forward Output(A)

10.0
8.0
6.0
4.0
2.0
0

SINGLE PHASE HALF WAVE
60HZ RESISTIVE LOAD

0   50   100   150

CASE TEMPERATURE ,℃
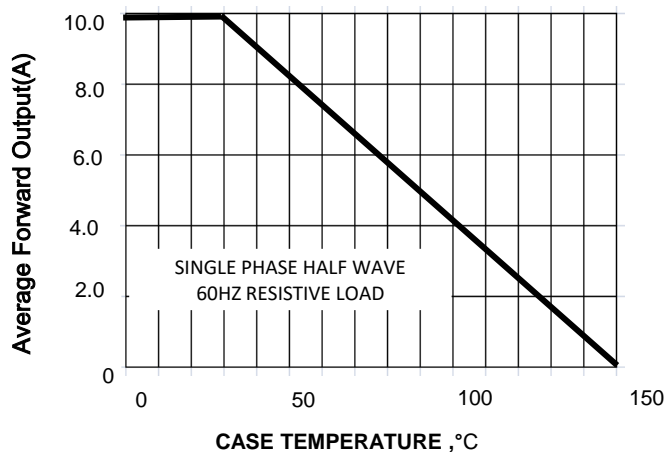
FIG2:Surge Forward Current Capability

Peak Forward Surge Current
Amperes

240
200
160
120
80
40
0

PULSE WIDTH 8.3ms
SINGLE HALF-SINE-WAVE
(JEDEC METHOD)

0   2   5   10   20   50   100

Number of Cycles
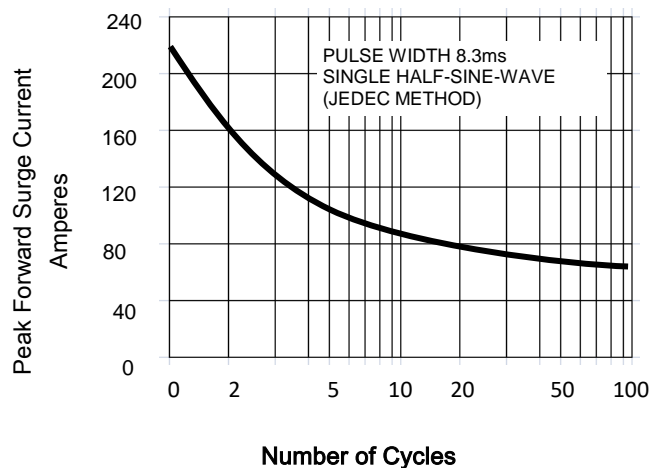
FIG3:Typical Reverse Characteristics

INSTANTANEOUS REVERSE CURRENT(µA)

100
10
1.0
0.1
0.01

Tj=125℃

Tj=25℃

0   20   40   60   80   100

Percent of Rated Peak Reverse Voltage (%)

FIG4: Typical Forward Voltage

INSTANTANEOUS FORWARD CURRENT,(A)

60
40
20
10
5.0
1.0
0.5
0.2
0.1

0   0.2   0.4   0.6   0.8   1.0   1.2   1.4   1.6   1.8   2.0

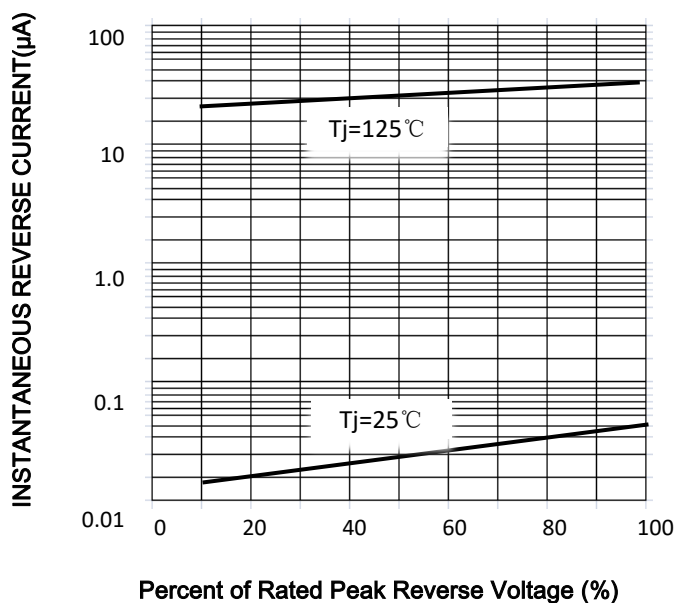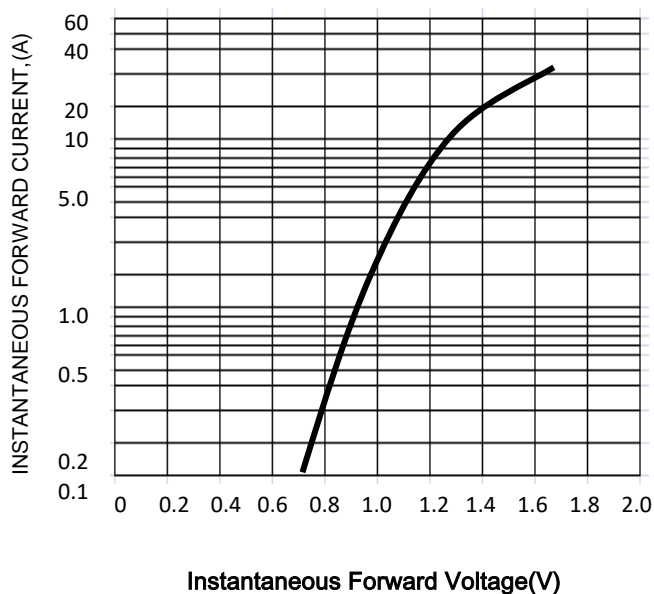**Instantaneous Forward Voltage(V)**

FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

50 Ω NONINDUCTIVE
10 Ω NONINDUCTIVE
(+)
(−)
DUT
(−)
1 Ω NONINDUCTIVE
OSCILLOSCOPE (NOTE1)
PULSE GENERATOR (NOTE2)
(+)

NOTES:
1.Rise Time=7ns max .Inpot Impedance=1M Ω 22pf
2.Rise Time=10ns max.Sourse Impedance=50 Ω

trr
+0.5A
0
-0.25A
-1.0A
1cm
SET TIME BASE FOR
5/10ns/cm