RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

DB101S
THRU
DB1012S

SINGLE-PHASE GLASS PASSIVATED SILICON BRIDGE RECTIFIER

VOLTAGE RANGE 50 to 1200 Volts CURRENT 1.0 Ampere

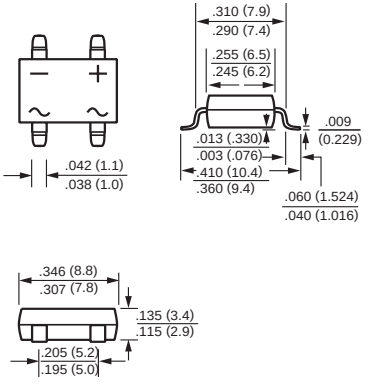
FEATURES

* Surge overload rating - 40 amperes peak
* Ideal for printed circuit board
* Reliable low cost construction utilizing molded
* Glass passivated device
* Polarity symbols molded on body
* Mounting position: Any
* Weight: 1.0 gram

MECHANICAL DATA

* Epoxy : Device has UL flammability classification 94V-0
* UL listed the recognized component directory, file #E94233

DB-S



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

MAXIMUM RATINGS (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	DB101S	DB102S	DB103S	DB104S	DB105S	DB106S	DB107S	DB1012S	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	1200	Volts
Maximum RMS Bridge Input Voltage	V_{RMS}	35	70	140	280	420	560	700	840	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	1200	Volts
Maximum Average Forward Output Current at T_A = 40°C	I_O	1.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	40								Amps
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	40								°C/W
	$R_{\theta JC}$	9								
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150								°C

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	DB101S	DB102S	DB103S	DB104S	DB105S	DB106S	DB107S	DB1012S	UNITS
Maximum Forward Voltage Drop per Bridge Element at 1.0A DC		V_F	1.1								Volts
Maximum Reverse Current at rated DC Blocking Voltage per element	@T_A = 25°C	I_R	5.0								uAmps
	@T_A = 125°C		0.5								mAmps

NOTE: 1.Suffix "-s" Surface Mount for Dip Bridge.
2.Units mounted on P.C.B.with 0.5x0.5" (13x13mm) copper pads.
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)

2005-2
REV:A

RATING AND CHARACTERISTIC CURVES (DB101S THRU DB1012S)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

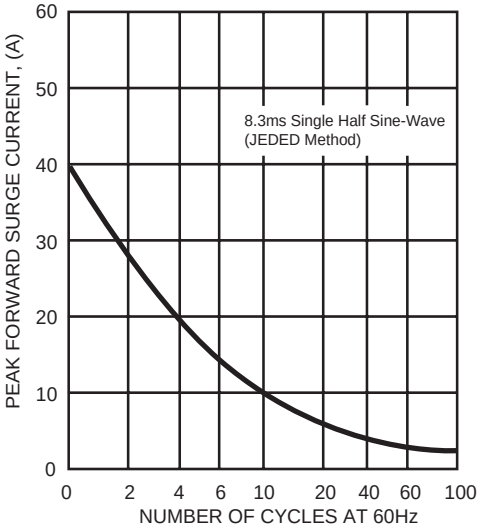


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

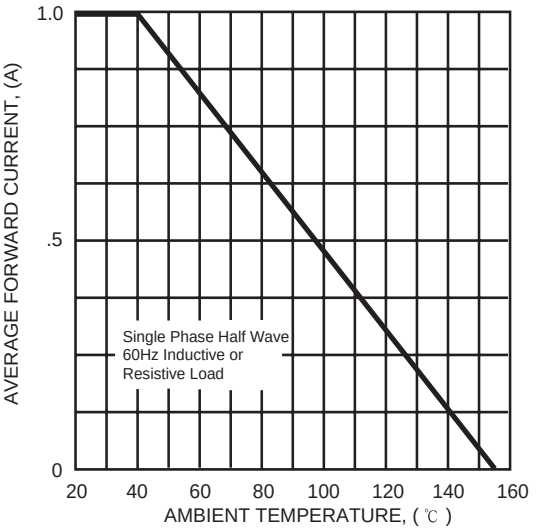


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

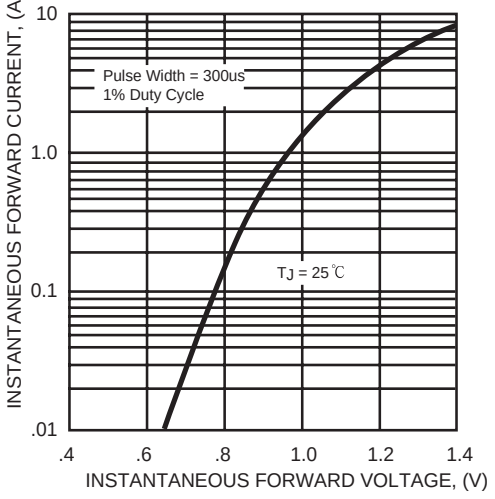
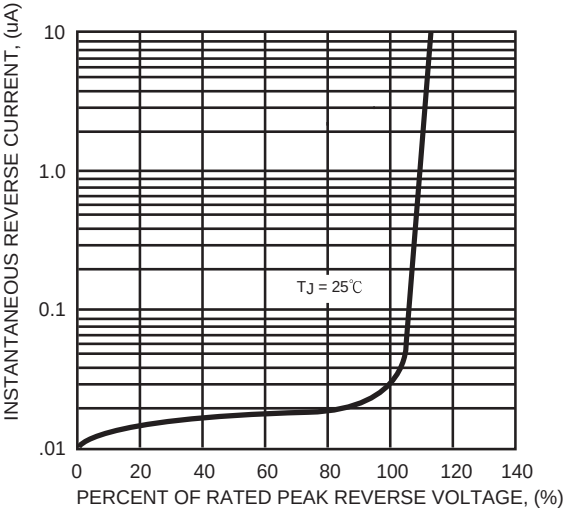
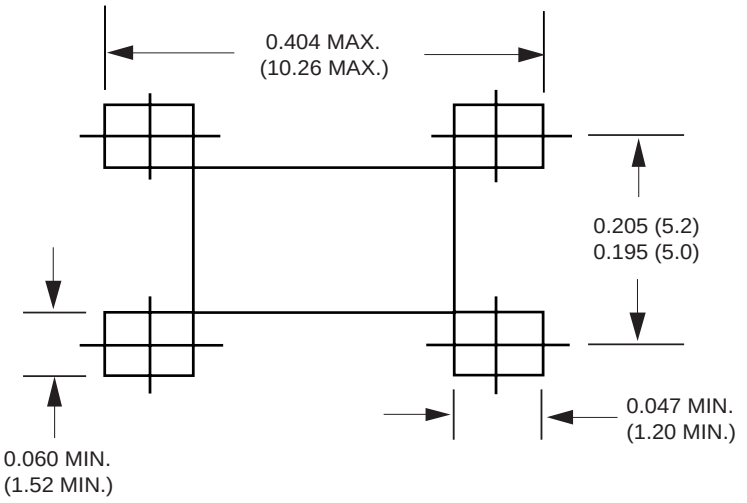


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



Mounting Pad Layout



Dimensions in inches and (millimeters)