TECHNICAL SPECIFICATIONS

SINGLE-PHASE SILICON BRIDGE RECTIFIER

DB151 THRU DB157

VOLTAGE RANGE - 50 to 1000 Volts   CURRENT - 1.5 Ampere

FEATURES
* Good for automation insertion
* Surge overload rating - 50 Amperes peak
* Ideal for printed circuit board
* Reliable low cost construction
* Glass passivated junction

MECHANICAL DATA
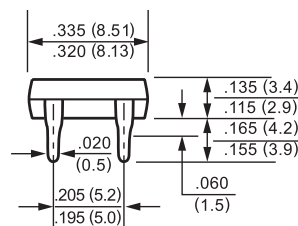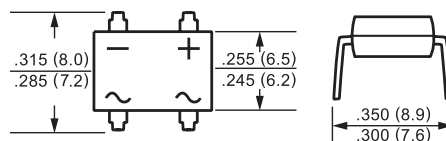* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: MIL-STD-202E, Method 208 guaranteed
* Polarity: Symbols molded or marked on body
* Mounting position: Any
* Weight: 0.4 gram

DB-1

.315 (8.0) / .285 (7.2)
.255 (6.5) / .245 (6.2)
.350 (8.9) / .300 (7.6)
.335 (8.51) / .320 (8.13)
.135 (3.4) / .115 (2.9)
.165 (4.2) / .155 (3.9)
.020 (0.5)
.060 (1.5)
.205 (5.2) / .195 (5.0)

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%.

	SYMBOL	DB151	DB152	DB153	DB154	DB155	DB156	DB157	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Output Current at $T_A = 40^{\circ}C$	I_O	1.5							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	60							Amps
Maximum Forward Voltage Drop per element at 1.0A DC	V_F	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element @$T_A = 25^{\circ}C$	I_R	10							uAmps
@$T_A = 125^{\circ}C$		500							
I^2t Rating for Fusing (t<8.3ms)	I^2t	10							A^2Sec
Typical Junction Capacitance (Note1)	C_J	25							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	40							$^{0}C/W$
Operating and Storage Temperature Range	$T_{J,TSTG}$	-65 to + 150							^{0}C

NOTES : 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts
2. Thermal Resistance from Junction to Ambient and from junction to lead mounted on P.C.B. with 0.5 x 0.5" (13x13mm) copper pads.

RATING AND CHARACTERISTIC CURVES (DB151 THRU DB157)
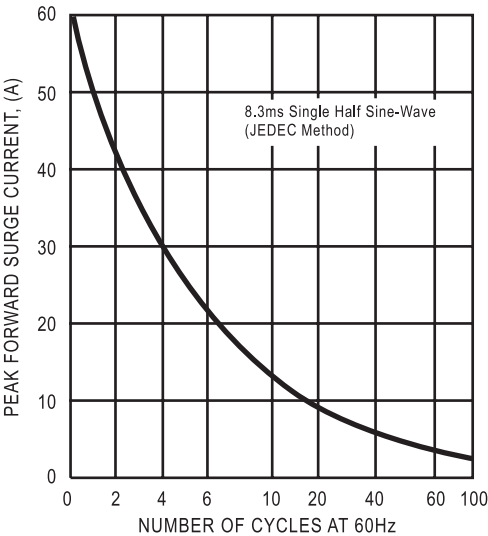
FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

8.3ms Single Half Sine-Wave
(JEDEC Method)

PEAK FORWARD SURGE CURRENT, (A)

NUMBER OF CYCLES AT 60Hz

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

Single Phase Half Wave
60Hz Inductive or
Resistive Load

AVERAGE FORWARD CURRENT, (A)

AMBIENT TEMPERATURE, (℃)
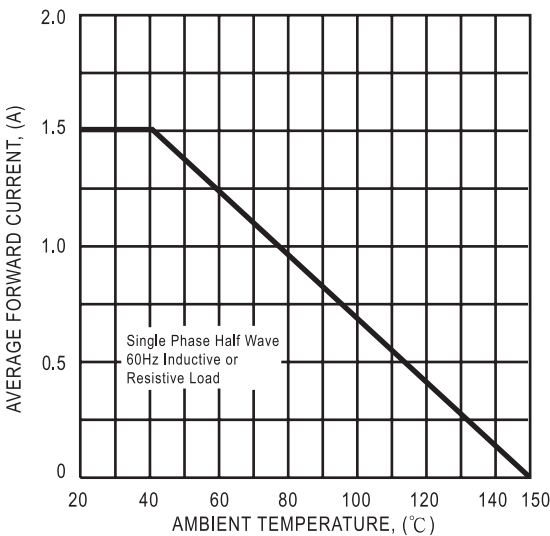
FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

Pulse Width = 300us
1% Duty Cycle
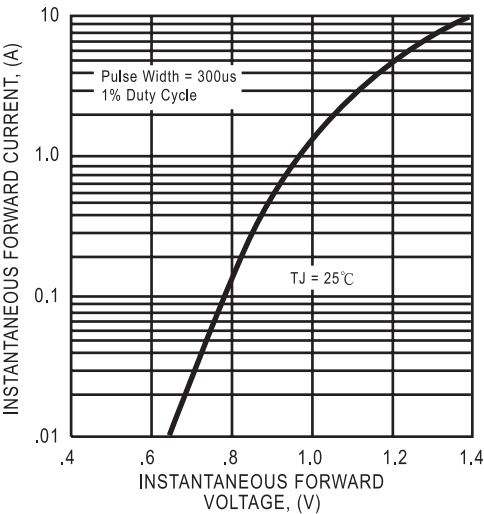
$T_J = 25℃$

INSTANTANEOUS FORWARD CURRENT, (A)

INSTANTANEOUS FORWARD VOLTAGE, (V)

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

$T_J = 25℃$

INSTANTANEOUS REVERSE CURRENT, (uA)

PERCENT OF RATED PEAK REVERSE VOLTAGE, (%)