

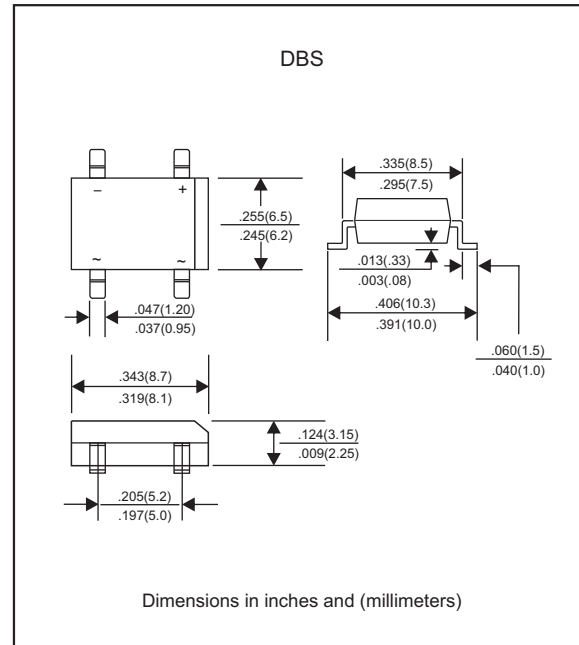
**Features**

- Rating to 1000V PRV
- Ideal for printed circuit board
- Low forward voltage drop,high current capability
- Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- The plastic material has UL flammability classification 94V-0

**Mechanical data**

- **Case:** DBS molded plastic body
- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity:** As marked
- **Mounting Position:** Any

**Package outline**



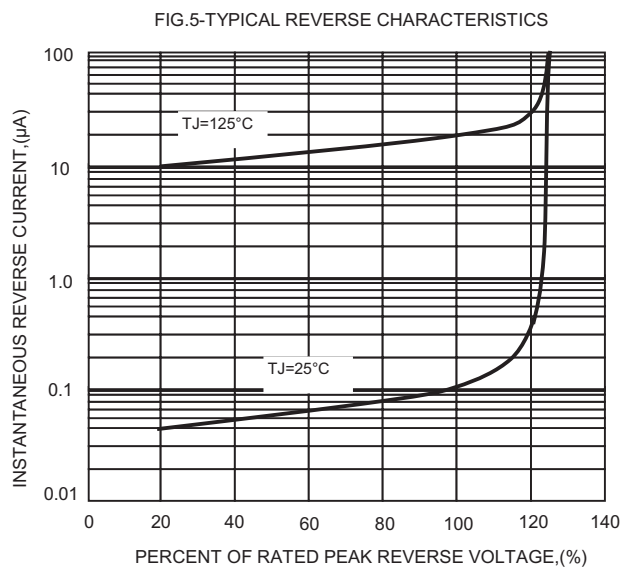
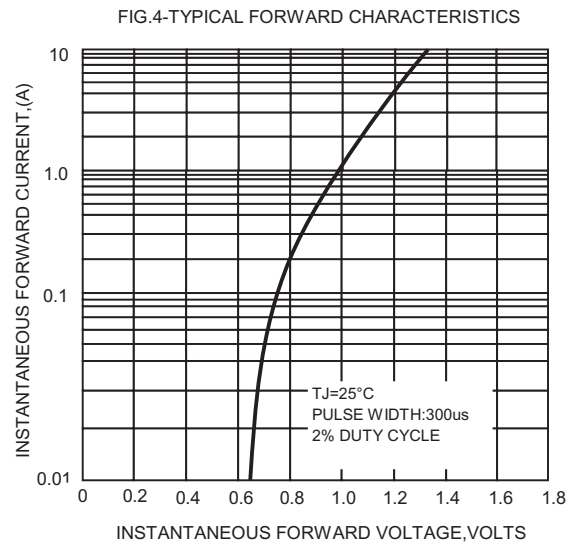
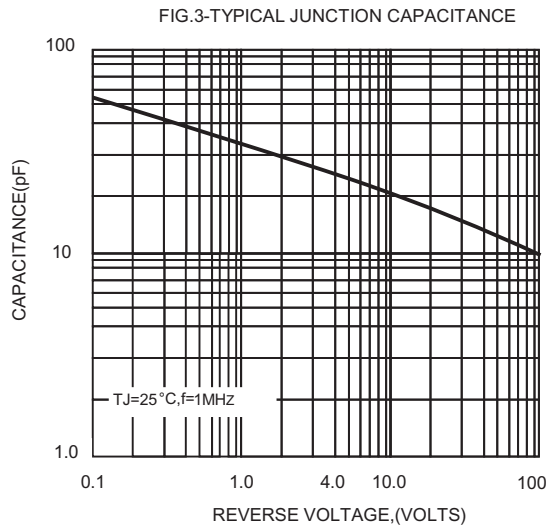
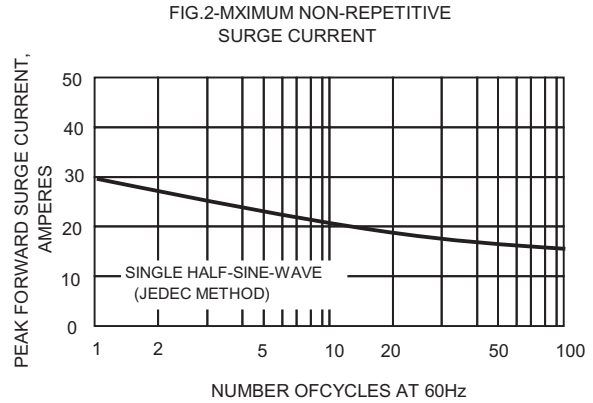
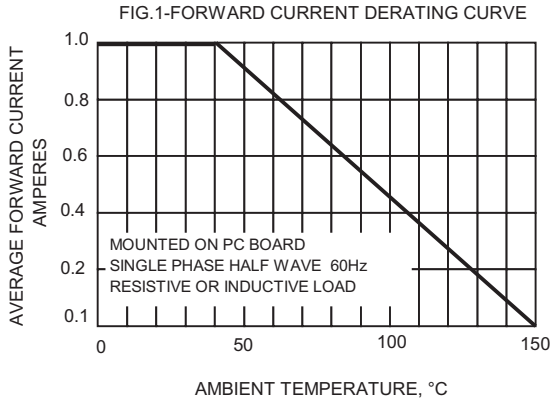
**Maximum ratings and Electrical Characteristics (AT  $T_A=25^{\circ}C$  unless otherwise noted)**

CHARACTERISTICS	SYMBOL	DB101S	DB102S	DB103S	DB104S	DB105S	DB106S	DB107S	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_A=40^{\circ}C$	I <sub>(AV)</sub>	1.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	30							A
Maximum Forward Voltage at 1.0A DC	V <sub>F</sub>	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_J=25^{\circ}C$ @ $T_J=125^{\circ}C$	I <sub>R</sub>	10 500							$\mu$ A
I <sup>2</sup> t Rating for Fusing(t<8.3ms)	I <sup>2</sup> t	3.74							A <sup>2</sup> s
Typical Junction Capacitance Per Element(Note1)	C <sub>J</sub>	25							pF
Typical Thermal Resistance (Note2)	R <sub>θJA</sub>	40							$^{\circ}C/W$
Operating Temperature Range	T <sub>J</sub>	-55 to +150							$^{\circ}C$
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							$^{\circ}C$

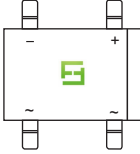
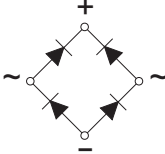
Note:1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC

2.Thermal resistance from junction to ambient mounted on P.C.B with 0.5\*0.5"(13\*13mm)copper pads.

**Rating and characteristic curves**



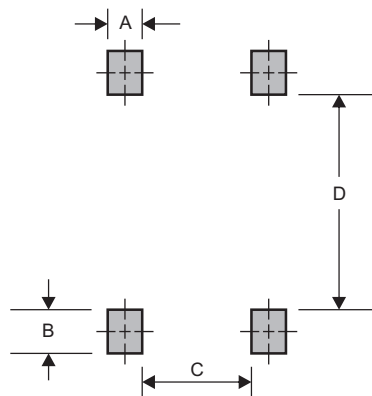
**Pinning information**

Simplified outline	Symbol
	

**Marking**

Type number	Marking code
DB101S	DB101S
DB102S	DB102S
DB103S	DB103S
DB104S	DB104S
DB105S	DB105S
DB106S	DB106S
DB107S	DB107S

**Suggested solder pad layout**



Dimensions in inches and (millimeters)

PACKAGE	A	B	C	D
DBS	0.059 (1.50)	0.047 (1.20)	0.157 (4.00)	0.291 (7.40)

**Suggested thermal profiles for soldering processes**

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(TL to TP)	<3°C/sec
Preheat -Temperature Min(Tsmmin) -Temperature Max(Tsmmax) -Time(min to max)(ts)	150°C 200°C 60~120sec
Tsmmax to TL -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(TL) -Time(tL)	217°C 60~260sec
Peak Temperature(TP)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(tp)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes