

Surface Mount Bridge-Rectifier

DB301S thru DB307S

Features

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ High surge current capability

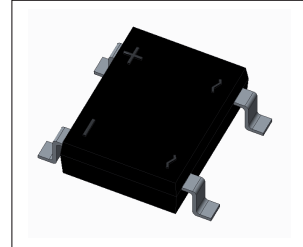
Mechanical Data

Case: DFS Molded plastic body

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

High temperature soldering guaranteed: 260°C/10 seconds

Mounting Position: Any



Maximum Ratings & Electrical Characteristics

Ratings at TA = 25°C unless otherwise specified

Parameter	Symbol	DB301S	DB302S	DB303S	DB304S	DB305S	DB306S	DB307S	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average forward rectified output current	$I_{F(AV)}$	3.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	80							A
Rating for fusig (t<8.3ms)	I^2t	26.5							A ² sec
Maximum instantaneous forward voltage dropper leg at 1.5A	VF	1.0							V
Maximum DC reverse current at rated DC blocking voltage per leg	Tj=25°C	5.0							uA
	Tj=125°C	500							

Thermal Characteristics

Typical thermal resistance per leg (Note 1)	$R_{\theta JA}$	68	°C/W
	$R_{\theta JL}$	15	
Operating junction temperature range	TJ	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

Note

(1) Units mounted on PCB with 0.47×0.47(12×12mm) Copper Pads

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Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

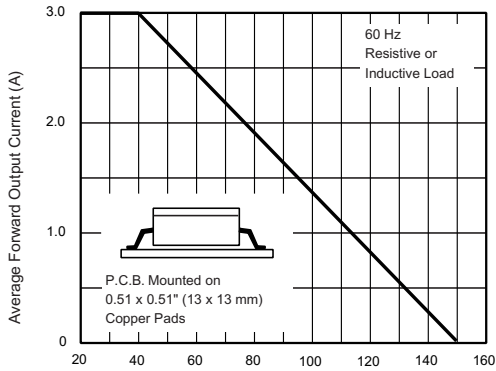


Figure 1. Derating Curve Output Rectified Current

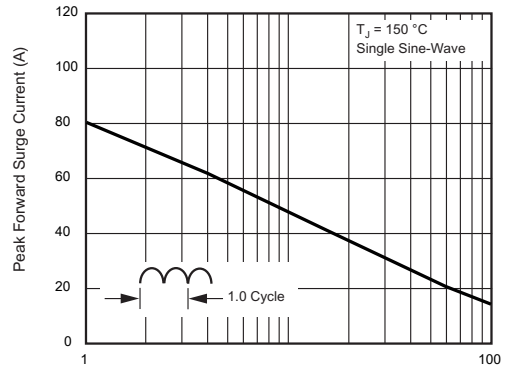


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

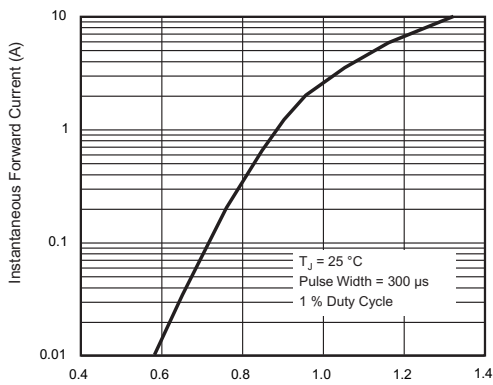


Figure 3. Typical Forward Characteristics Per Diode

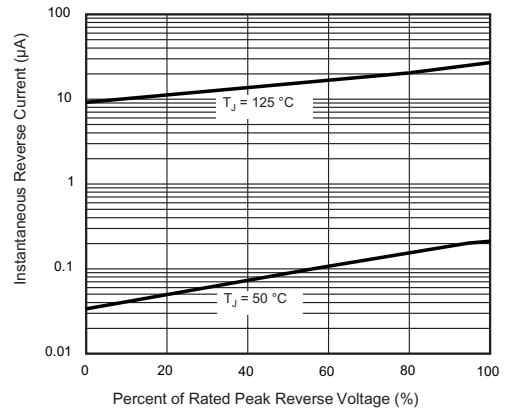


Figure 4. Typical Reverse Leakage Characteristics Per Diode

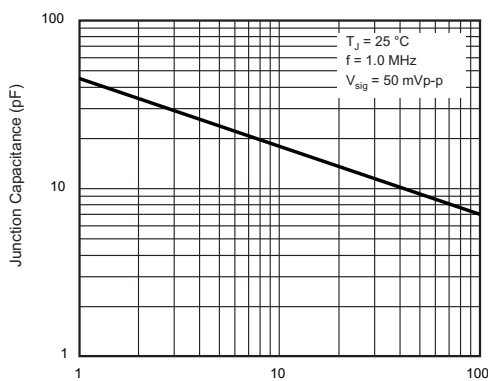


Figure 5. Typical Junction Capacitance Per Diode

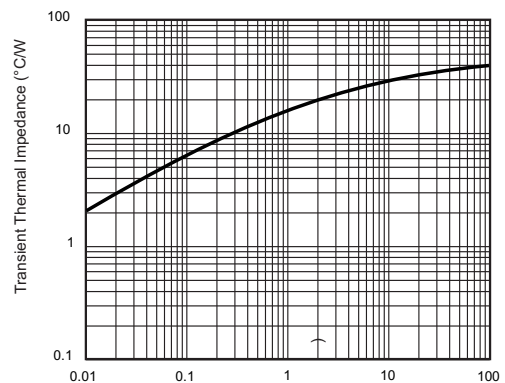
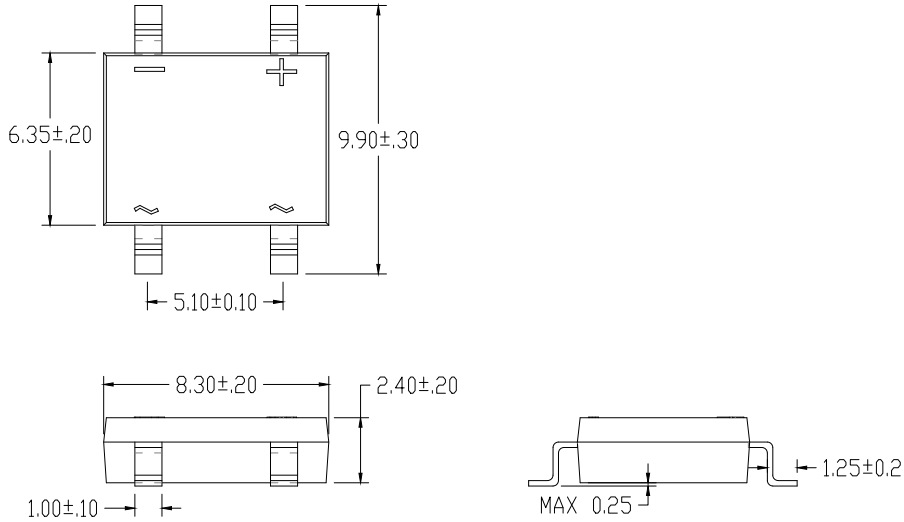


Figure 6. Typical Transient Thermal Impedance

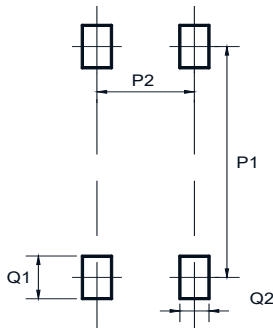
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Package Outline Dimensions(unit:mm)



Mounting Pad Layout(unit:mm)



Dim	Min
P1	8.73
P2	5.12
Q1	2.22
Q2	1.2

Ordering Information

Part No.	Marking	Package	Shipping
DB301S	DB301S	DFS	1500/Tape&Reel
DB302S	DB302S	DFS	1500/Tape&Reel
DB303S	DB303S	DFS	1500/Tape&Reel
DB304S	DB304S	DFS	1500/Tape&Reel
DB305S	DB305S	DFS	1500/Tape&Reel
DB306S	DB306S	DFS	1500/Tape&Reel
DB307S	DB307S	DFS	1500/Tape&Reel