Technical Data
Data Sheet N1736, Rev. B

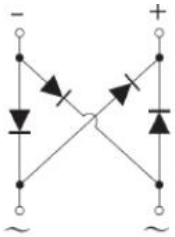
DF151 THRU DF157 SINGLE-PHASE GLASS PASSIVATED SILICON BRIDGE RECTIFIER

DB-M

Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0
- Terminals finish: 100% Pure Tin
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: DB-M, Molded plastic
- Terminals: Plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS / Lead Free Version

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase half wave 60Hz, resistive or inductive load. For capacitive load current derate by 20%.

Characteristic	Symbol	DF151	DF152	DF153	DF154	DF155	DF156	DF157	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Average Forward Output Current (Note 1) @ T_A=40°C	$I_{F(AV)}$	1.5							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	55							A

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Electrical Characteristics:

Characteristic	Symbol	DF151	DF152	DF153	DF154	DF155	DF156	DF157	Units
Maximum Forward Voltage Drop per Bridge Element @I_F =1.5A, T_J=25°C	V_F	1.1							V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 125°C	I_R	5 500							μA
Typical Junction Capacitance (Note 2)	C_J	25							pF

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristic	Symbol	DF151	DF152	DF153	DF154	DF155	DF156	DF157	Units
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	40							°C/W
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	15							°C/W
Operating Junction and Storage Temperature Range	T_J , T_{STG}	-55 to + 150							°C

Note: 1. Mounted on glass epoxy PC board with 1.3mm² solder pad.
2. Measured at 1.0 MHZ and applied reverse voltage of 4.0 VDC

Ratings and Characteristics Curves

Fig. 1 Output Current Derating Curve

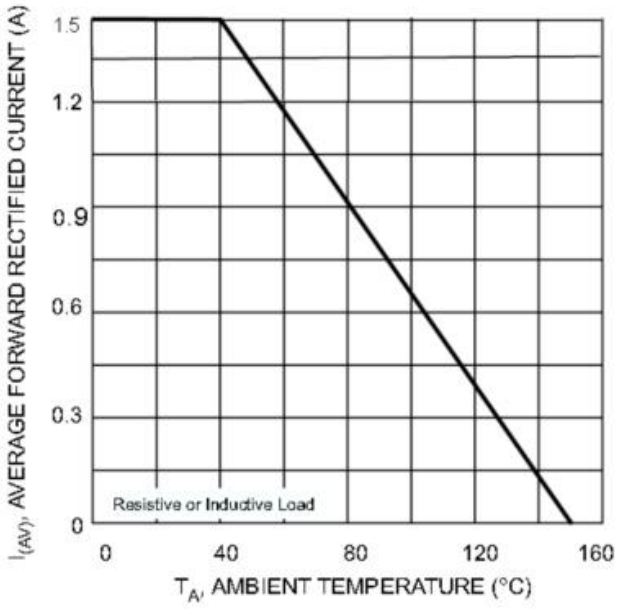
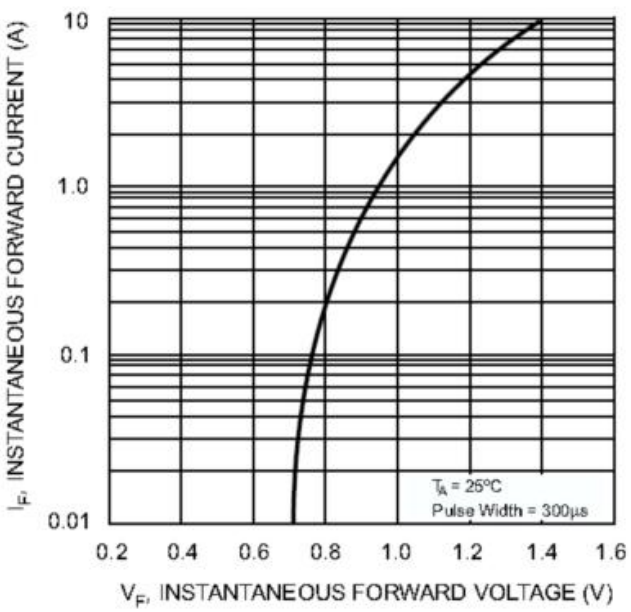


Fig. 2 Typical Forward Characteristics (per leg)



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RoHS

Fig. 3 Maximum Peak Forward Surge Current (per leg)

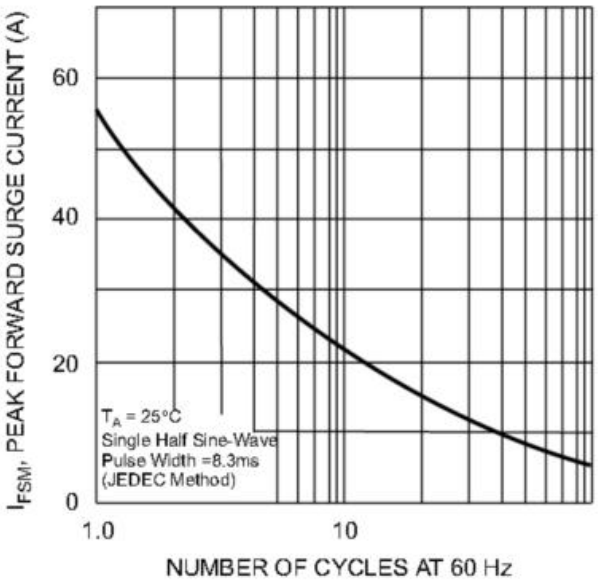
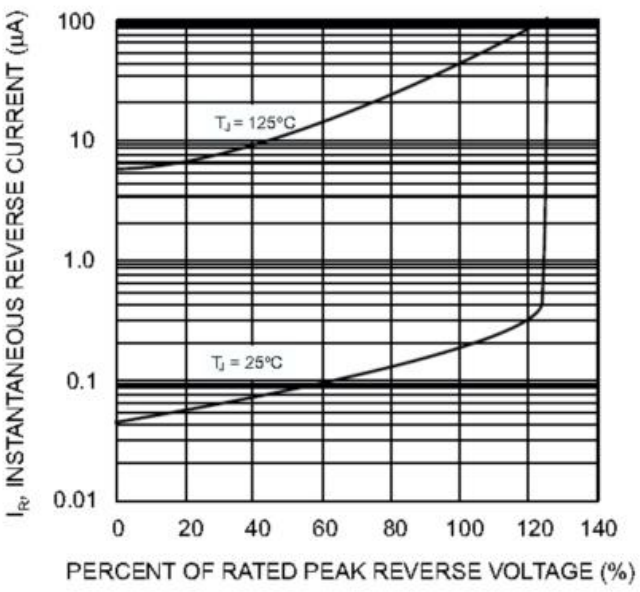
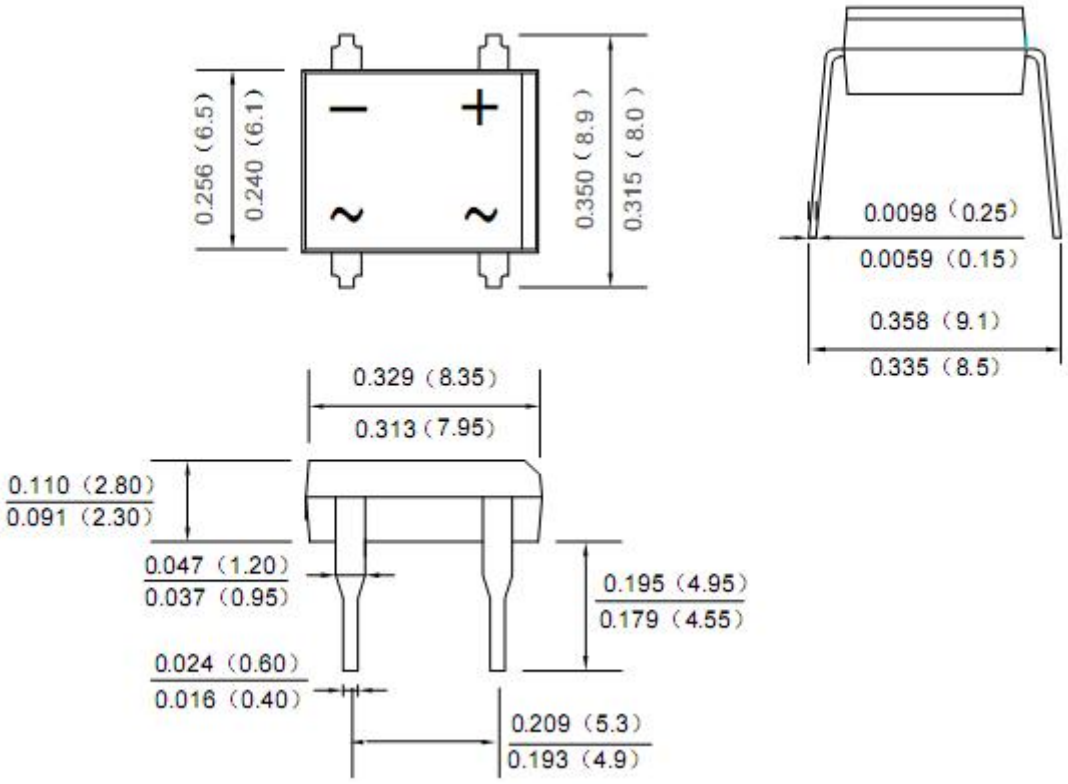


Fig. 4 T ypical Reverse Characteristics (per element)



Mechanical Dimensions DB-M(Inches/Millimeters)



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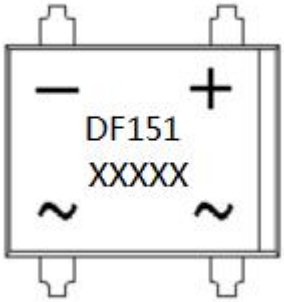
Marking Diagram



Where XXXXX is YYWWL

DF151 = Type Number
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Ordering Information

Device	Package	Plating	Shipping
DF151 THRU DF157	DB-M(Pb-Free)	Pure Sn	50pcs / tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

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