

DB101 THRU DB107

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深圳FMS Kinter 131 6803 0058

DB101 THRU DB107

1.0A Glass Passivated Single-Phase Bridge Rectifiers-50-1000V

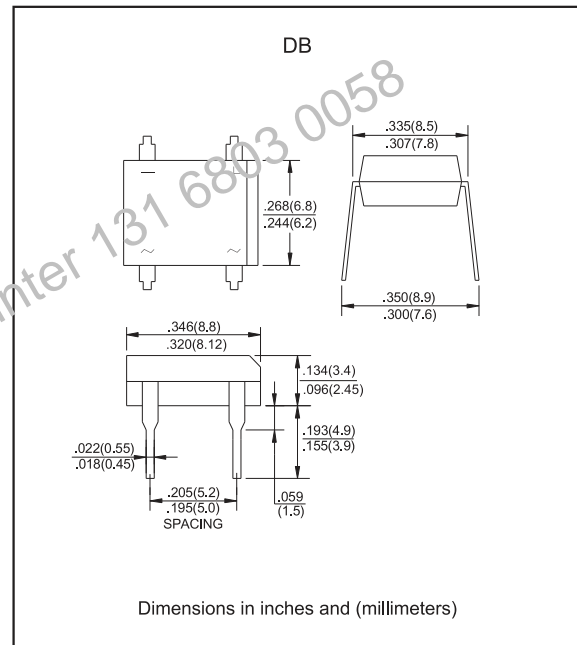
Features

- Surge overload ratings to 30 amperes peak.
- Recommended for non-automatic applications.
- Ideal for & save space on printed circuit board.
- Applicable for automatic insertion.
- Reliable low cost construction utilizing molded plastic technology results in inexpensive product.
- Glass passivated chip junctions.
- Lead-free parts meet RoHS requirements.
- UL recognized file # E321971
- Suffix "-H" indicates Halogen free parts, ex. DB101-H.

Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, DB
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body
- Mounting Position : Any
- Weight : Approximated 0.38gram

Package outline



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

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_o			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			30	A
Reverse current	$V_R = V_{RRM} T_J = 25^\circ\text{C}$	I_R			10	uA
	$V_R = V_{RRM} T_J = 125^\circ\text{C}$				500	
I^2t Rating for fusing	$t < 8.3\text{ms}$	I^2t			3.74	A^2s
Typical Junction Capacitance Per Element	Measured at 1.0MHz and applied reverse voltage of 4.0V DC.	C_J		25		pF
Typical thermal resistance	Junction to ambient mounted on P.C.B with 0.5*0.5"(13*13mm) copper pads.	$R_{\theta JA}$		40		$^\circ\text{C}/\text{W}$
Storage temperature		T_{STG}	-65		+175	$^\circ\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature T_J , ($^\circ\text{C}$)
DB101	50	35	50	1.10	-55 to +150
DB102	100	70	100		
DB103	200	140	200		
DB104	400	280	400		
DB105	600	420	600		
DB106	800	560	800		
DB107	1000	700	1000		

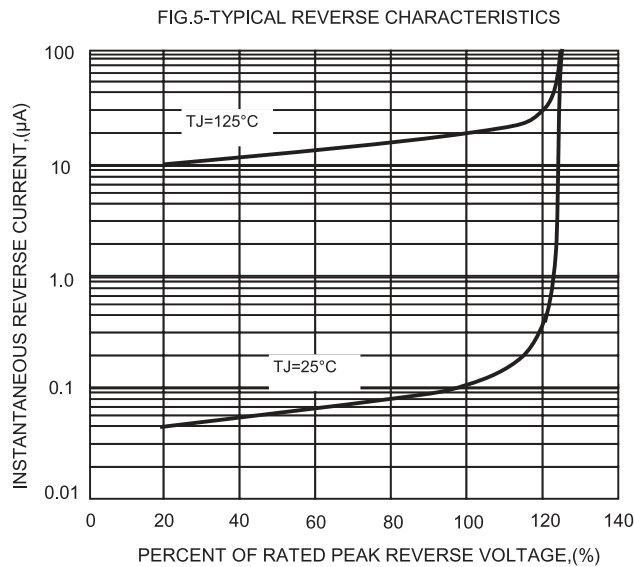
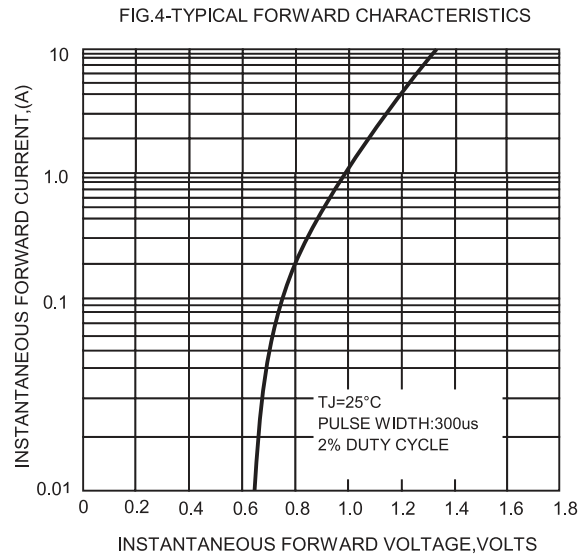
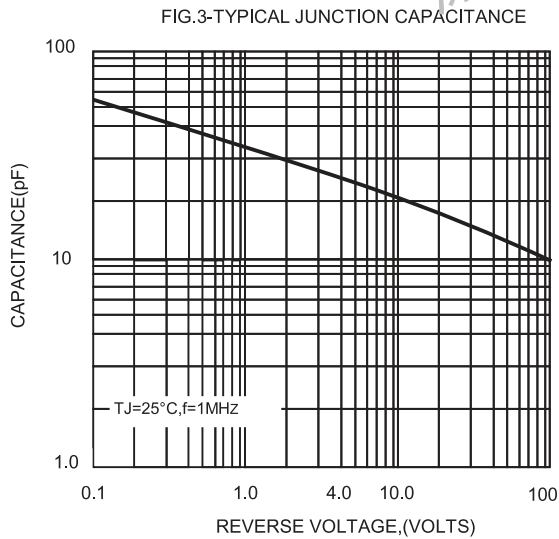
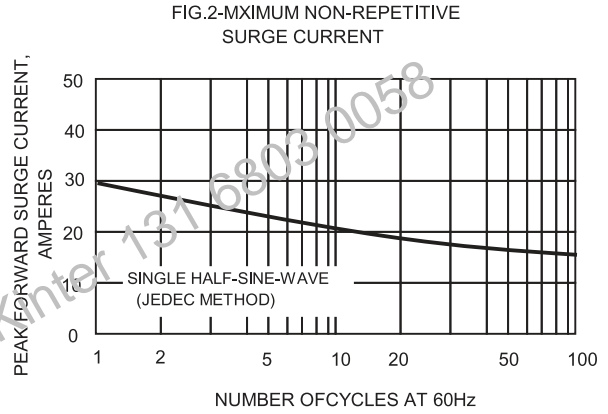
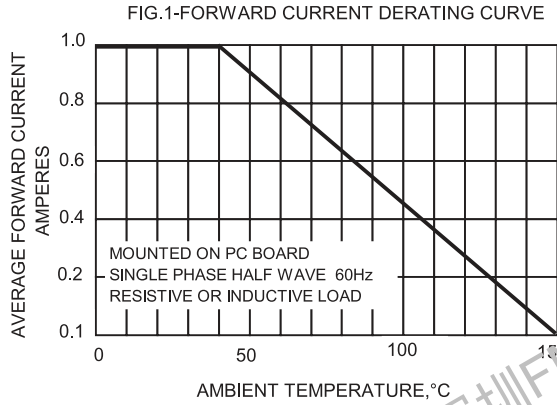
*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

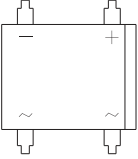
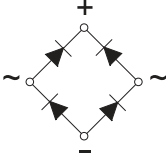
*4 Maximum forward voltage@ $I_F=1.0\text{A}$

Rating and characteristic curves (DB101 THRU DB107)



DB101 THRU DB107

Pinning information

Simplified outline	Symbol
	

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Marking

Type number	Marking code
DB101	DB101
DB102	DB102
DB103	DB103
DB104	DB104
DB105	DB105
DB106	DB106
DB107	DB107

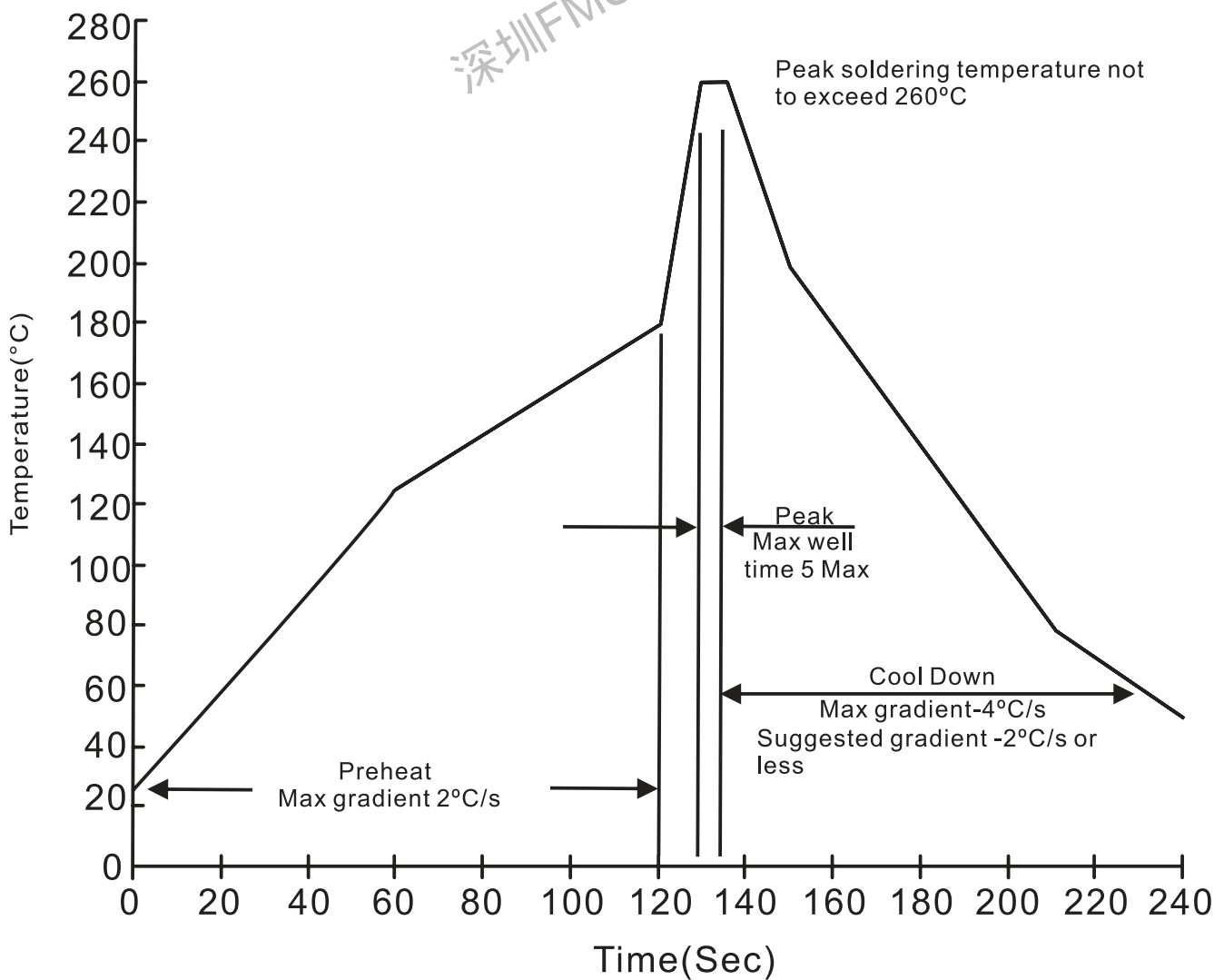
Tube packing

PACKAGE	TUBE (pcs)	TUBE SIZE (m/m)	BOX (pcs)	INNER BOX (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
DB	50	440*13.4*11.4	2500	450*145*73	470*240*310	15,000	13.0

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Suggested thermal profiles for soldering processes

1. Lead free temperature profile wave soldering



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High reliability test capabilities

Item Test	Conditions	Reference
1. Solder Resistance	at $260 \pm 5^\circ\text{C}$ for 10 ± 2 sec. immerse body into solder $1/16" \pm 1/32"$	MIL-STD-750D METHOD-2031
2. Solderability	at $245 \pm 5^\circ\text{C}$ for 5 sec.	MIL-STD-202F METHOD-208
3. High Temperature Reverse Bias	$V_R = 80\%$ rate at $T_J = 150^\circ\text{C}$ for 168 hrs.	MIL-STD-750D METHOD-1038
4. Forward Operation Life	Rated average rectifier current at $T_A = 25^\circ\text{C}$ for 500hrs.	MIL-STD-750D METHOD-1027
5. Intermittent Operation Life	$T_A = 25^\circ\text{C}$, $I_F = I_O$ On state: power on for 5 min. off state: power off for 5 min. on and off for 500 cycles.	MIL-STD-750D METHOD-1036
6. Pressure Cooker	$15P_{SIG}$ at $T_A = 121^\circ\text{C}$ for 4 hrs.	JESD22-A102
7. Temperature Cycling	-55°C to $+125^\circ\text{C}$ dwelled for 30 min. and transferred for 5min. total 10 cycles.	MIL-STD-750D METHOD-1051
8. Thermal Shock	0°C for 5 min. rise to 100°C for 5 min. total 10 cycles.	MIL-STD-750D METHOD-1056
9. Forward Surge	8.3ms single half sine-wave superimposed on rated load, one surge.	MIL-STD-750D METHOD-4066-2
10. Humidity	at $T_A = 85^\circ\text{C}$, RH=85% for 1000hrs.	MIL-STD-750D METHOD-1021
11. High Temperature Storage Life	at 175°C for 1000 hrs.	MIL-STD-750D METHOD-1031