

## 10A SURFACE MOUNT BRIDGE RECTIFIER

### FEATURES:

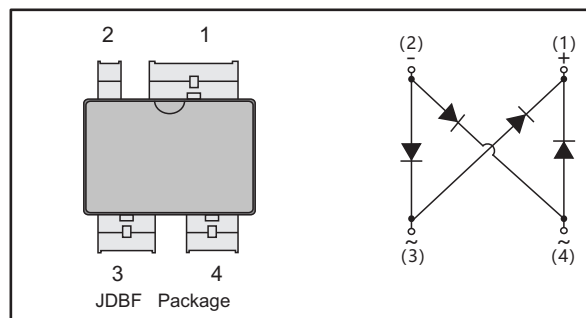
- Reverse Voltage - 100 to 1000 V
- Forward Current - 10 A
- High Surge Current Capability
- Designed for Surface Mount Application

### MECHANICAL DATA

- Case: JDBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 2.745g / 0.0968oz

### PINNING

PIN	DESCRIPTION
1	Output Anode (+)
2	Output Cathode (-)
3	Input Pin (~)
4	Input Pin (~)



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 current derate by 20 %.

Parameter	Symbols	JDBFC 10B	JDBFC 10D	JDBFC 10G	JDBFC 10J	JDBFC 10K	JDBFC 10M	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	100	200	400	600	800	1000	V
Average Rectified Output Current	$I_O$	10						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	180						A
$I^2t$ Rating for Fusing $t=8.3ms$	$I^2t$	134						A <sup>2</sup> S
Maximum Forward Voltage Per Diode at 5.0 A	$V_F$	1.0						V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A=25\text{ }^\circ\text{C}$ @ $T_A=125\text{ }^\circ\text{C}$	$I_R$	5 100						$\mu\text{A}$
Typical Junction Capacitance (Note1)	$C_j$	45						pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	25 5 10						$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j$ $T_{stg}$	-55 ~ +150						$^\circ\text{C}$

Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Mounted on glass epoxy PC board with 4× 3.81cm ×3.81cm copper pad.



Fig.1 Average Rectified Output Current Derating Curve

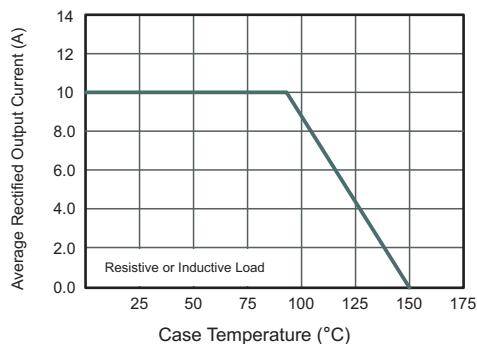


Fig.2 Typical Reverse Characteristics

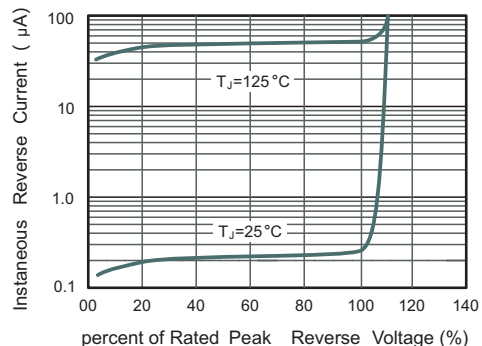


Fig.3 Typical Instantaneous Forward Characteristics

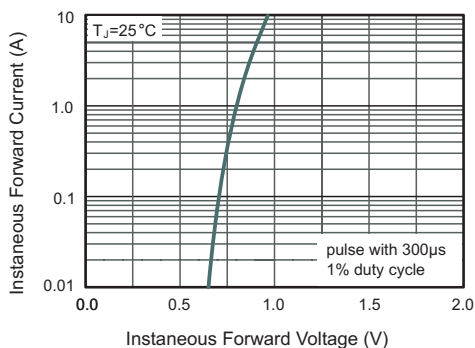


Fig.4 Typical Junction Capacitance

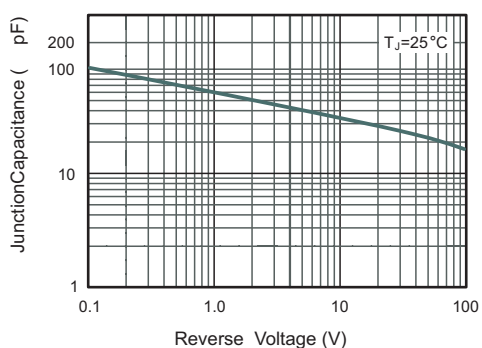
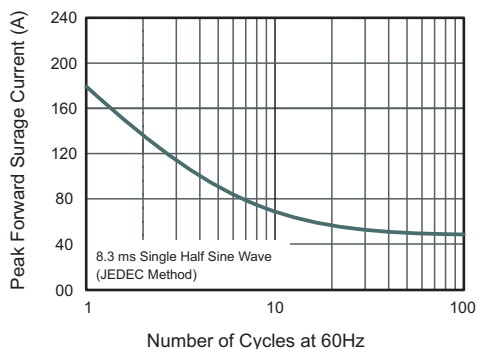


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

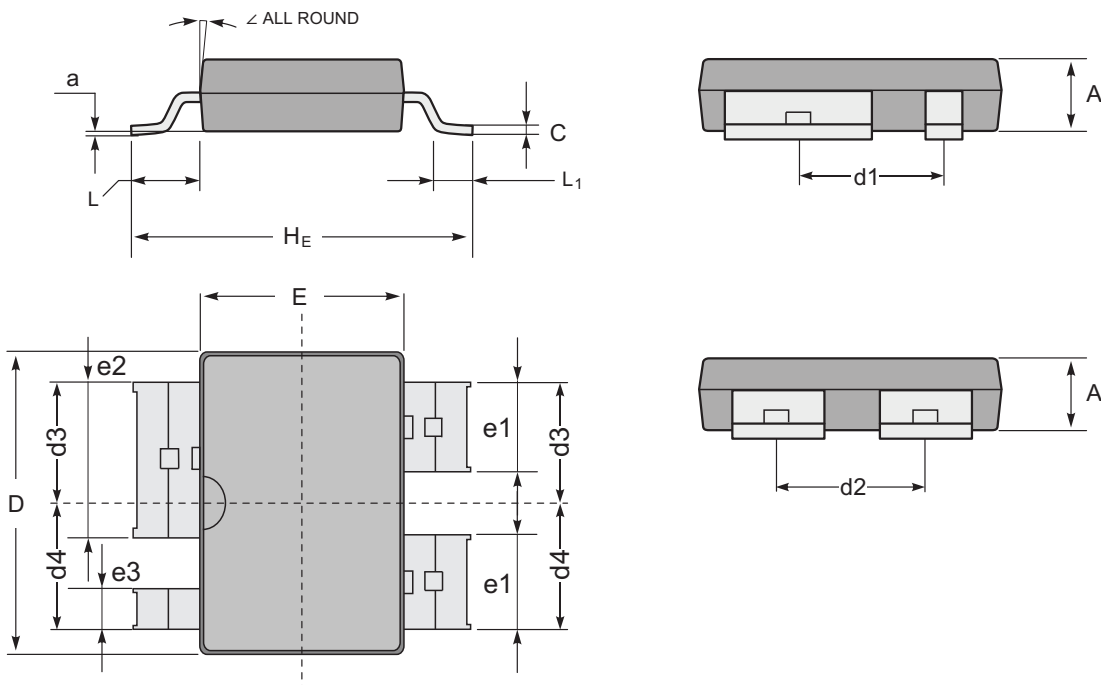




PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

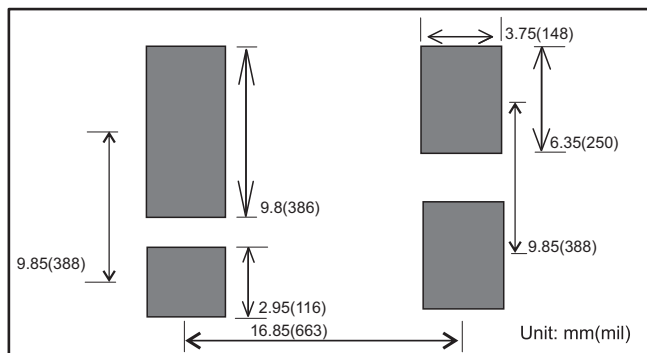
JDBF



Mechanical data

Unit		A	C	D	E	HE	e1	e2	e3	d1	d2	d3	d4	L	L1	a	∠
mm	max	3.9	0.50	20.9	13.6	20.5	6.35	9.8	2.95	9.85		8.0	3.85	2.72	0.19 (ref.)	12°	
	nom	3.6	0.40	20.4	13.1	20.0	6.05	9.5	2.65	9.55		7.8	3.45	2.32			
	min	3.3	0.30	19.9	12.6	19.5	5.75	9.2	2.35	9.25		7.6	3.05	1.92			
mil	max	153.5	19.7	822.8	535.4	807.1	250.0	385.8	116.1	387.8		315.0	151.6	107.1	7.5 (ref.)		
	nom	141.7	15.8	803.1	515.7	787.4	238.2	374.0	104.3	376.0		307.1	135.8	91.3			
	min	129.9	11.8	783.5	496.1	767.7	226.4	362.2	92.5	364.2		299.2	120.1	75.6			

The recommended mounting pad size



Marking

Type number	Marking code
JDBFC10B	JDBFC10B
JDBFC10D	JDBFC10D
JDBFC10G	JDBFC10G
JDBFC10J	JDBFC10J
JDBFC10K	JDBFC10K
JDBFC10M	JDBFC10M



文件履历表

序号	制/修订日期	生效日期	版次	修订内容	变更原因	制/修订人	备注
01	2022.9.6	2022.9.14	Rev 1.1	初版制定	/	张雷	
02	2022.10.30	2022.11.1	Rev 1.2	加严d3, d4尺寸标注	客户要求	郭金铮	



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