

Single Phase 3.0Amp Fast Recovery Bridge Rectifiers
DBF

Features

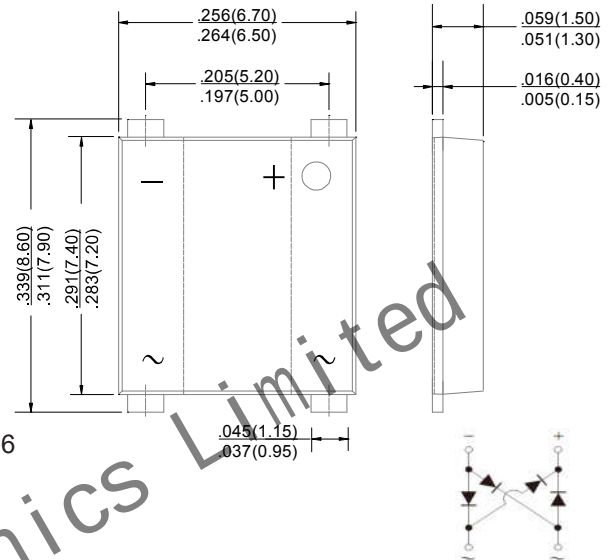
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated Junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed
260°C/10 seconds at terminals

Mechanical Data
Case : Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.0034 ounce, 0.098 grams


Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

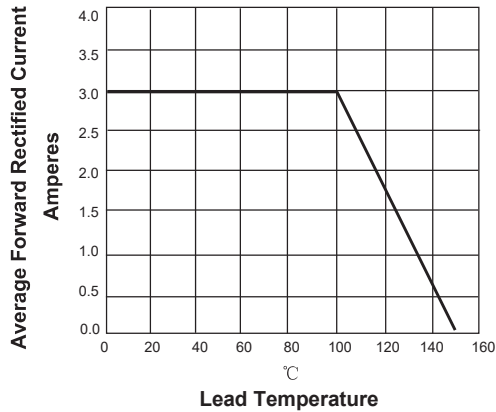
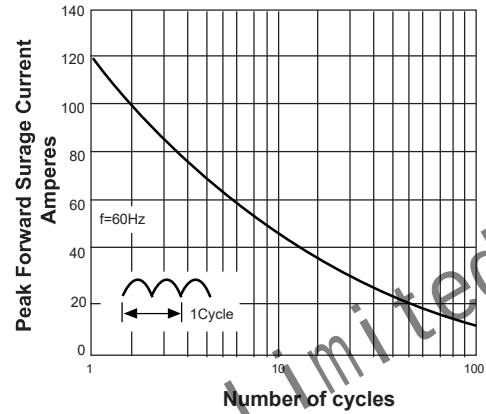
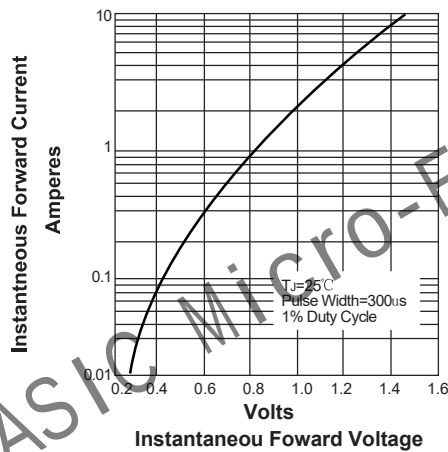
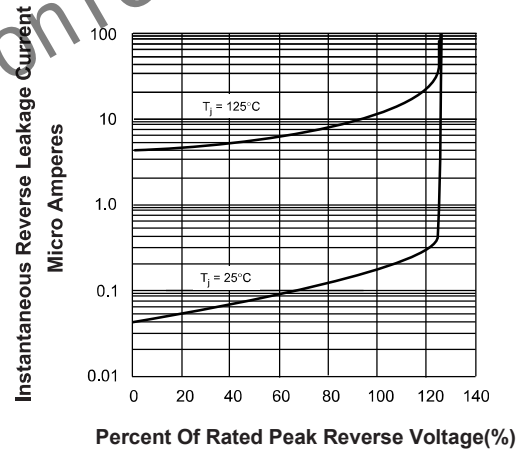
Parameter	SYMBOLS	ARDRDB F4005BX0	ARDRDB F401BX0	ARDRDB F402BX0	ARDRDB F404BX0	ARDRDB F406BX0	ARDRDB F408BX0	ARDRDB F410BX0	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T _L =100°C On glass-epoxy P.C.B (Note 1)	I _(AV)	4.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	120.0							A
Rating for fusing (t=8.3ms, T _a =25°C)	I ² _t	59.76							A ² _s
Maximum instantaneous forward voltage at 3.0A	V _F	1.30							V
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =125°C	I _R	5.0 500							uA
Maximum reverse recovery time (Note 2)	T _{rr}	150				250	500		ns
Typical junction capacitance (Note 3)	C _J	23.0							pF
Typical thermal resistance	R _{qJA}	55.0							°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 1.3*1.3mm solder pad

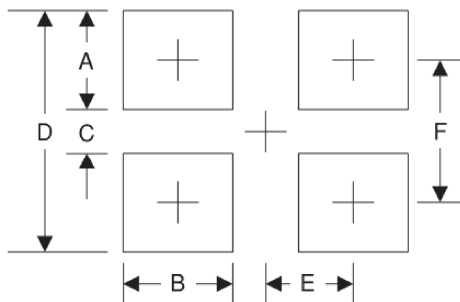
2. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Ratings And Characteristic Curves

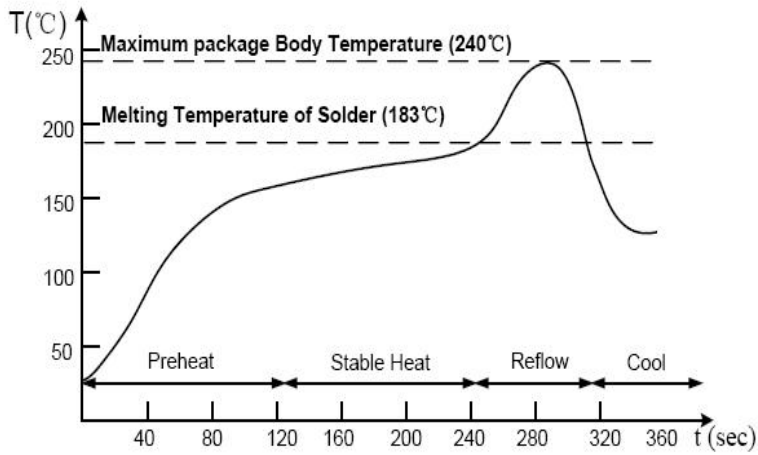
FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS


Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.8	0.071
B	2.0	0.078
C	5.50	0.216
D	9.15	0.360
E	2.6	0.102
F	7.35	0.289

Suggested Soldering Temperature Profile

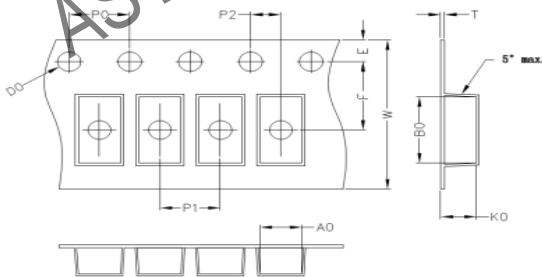


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
6.90	8.60	1.65	1.55	1.75	7.50
P0	P1	P2	T	W	Tolerance
4.0	12.0	2.0	0.30	16	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
DBF	13'	330	3	338	6	365*365*360	48