ULBFR810
8A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

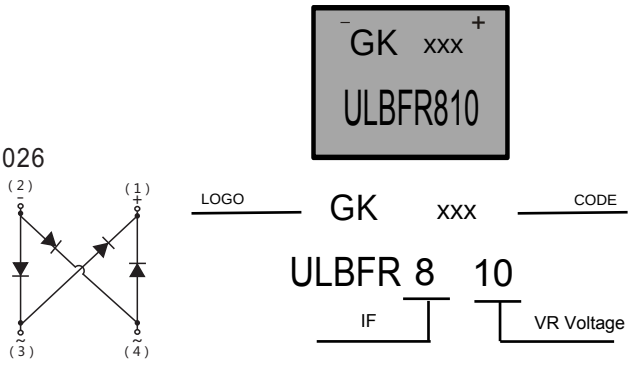
VOLTAGE RANGE
1000 Volts
CURRENT
8.0 Amperes

FEATURES

- Reverse Voltage - 1000 V
- Forward Current - 8.0 A
- Fast reverse recovery time
- Designed for Surface Mount Application

MECHANICAL DATA

- Case: ULBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0 461g / 0 0163oz



Internal Schematic

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	SYMBOL	ULBFR810	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS voltage	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	1000	V
Average Rectified Output Current at T_c = 100 °C	I_O	8.0	A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	220	A
I^2t Rating for Fusing	I^2t	220	A^2S
Typical Thermal Resistance (1)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	60 6 14	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

(1) Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25℃ ambient temperature unless otherwise specified

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	Units
Instantaneous forward voltage	V_F	I_F=1A TJ=25℃ I_F=4A TJ=25℃	– –	0.83 0.95	– 1.1	V
		I_F=1A TJ=125℃ I_F=4A TJ=125℃	– –	0.70 0.85	– –	
Reverse current at DC blocking voltage	I_R	TJ=25℃ TJ=125℃	– –	0.15 40	1 200	uA
Maximum Reverse Recovery Time	t_{rr}	Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A .	–	–	500	ns
Typical Junction Capacitance	C_j	f=1MHz,VR=4V DC T_j = 25 ℃	–	100	–	pF

RATING AND CHARACTERISTIC CURVES

Fig.1 Average Rectified Output Current Derating Curve

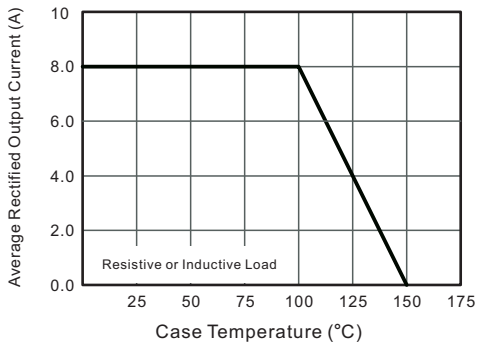


Fig.2 Typical Reverse Characteristics

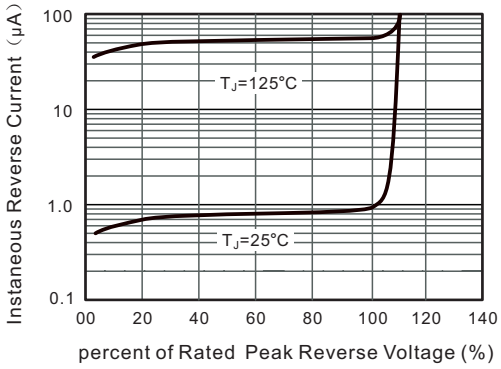


Fig.3 Typical Instaneous Forward Characteristics

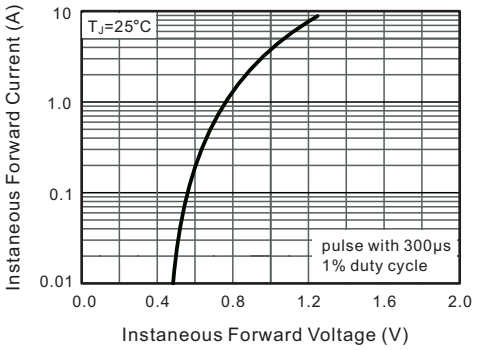


Fig.4 Typical Junction Capacitance

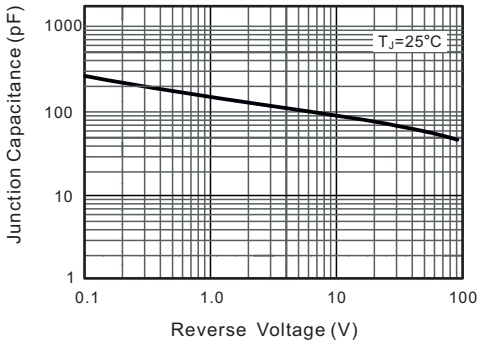


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

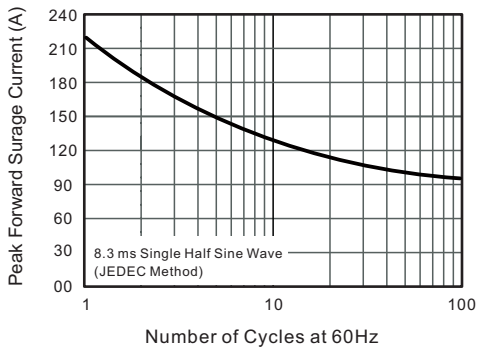
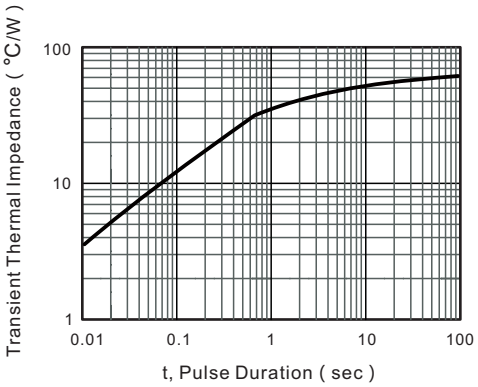


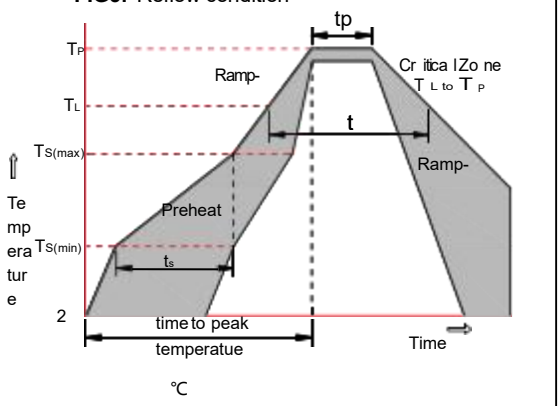
Fig.6- Typical Transient Thermal Impedance



Soldering parameters

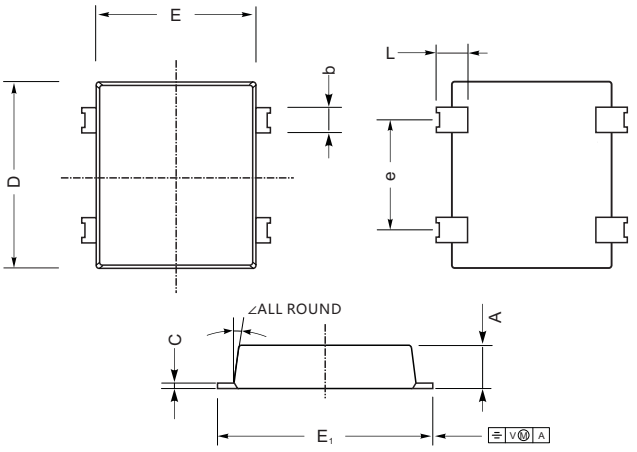
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

FIG5: Reflow condition

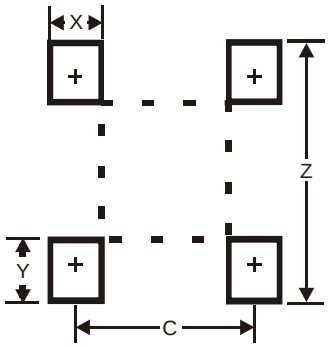


Package Dimensions & Suggested Pad Layout

ULBF



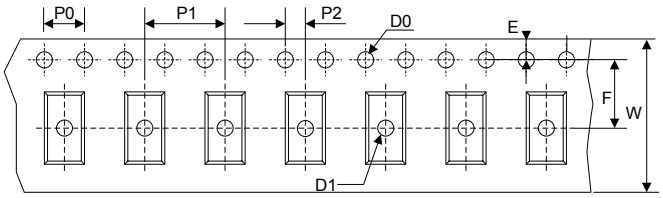
UNIT		A	C	D	E	E_1	L	e	b	∠
mm	max	1.75	0.55	10.8	9.8	10.2	1.10	5.7	1.9	10°
	min	1.35	0.25	9.4	8.4	9.8	0.70	4.9	1.3	
mil	max	68	21.6	425	386	401	43	224	74	
	min	53	9.8	370	330	385	27	193	51	

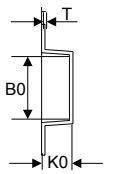


Dimensions	mm
Z	11.5
X	2.2
Y	2.5
C	5.6

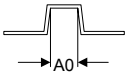
Tape & rell specification

Tape





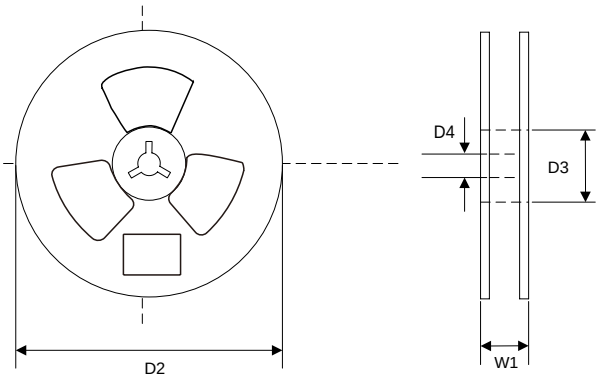
SECTION : B-B



SECTION : A-A

Symbol	Dimension (mm)
P0	4.00±0.20
P1	12.00±0.20
P2	2.00±0.20
D0	1.60±0.15
D1	1.60±0.15
E	1.75±0.20
F	7.50±0.15
W	16.00±0.20
A0	7.00±0.25
B0	9.30±0.25
K0	1.80±0.25
T	0.25±0.10

13” Reel



D2	330.0±5.0
D3	73Min.
D4	16.0±2.5
W1	21.0±3.0
Quantity: 3000PCS	