

**SINGLE-PHASE GLASS PASSIVATED  
SILICON BRIDGE RECTIFIER**  
VOLTAGE RANGE 1000 Volts CURRENT 4.0 Amperes

**FEATURES**

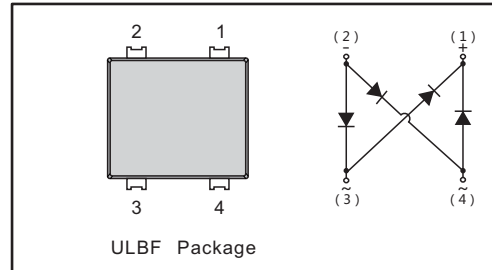
- \* Silver-plated copper leads
- \* Surge overload rating: 120 amperes peak
- \* Low leakage
- \* Mounting position: Any
- \* Low forward voltage

**MECHANICAL DATA**

- \* Epoxy: Device has UL flammability classification 94V-O
- \* UL listed the recognized component directory, file #94233

**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.  
resistive or inductive load.

**MAXIMUM RATINGS (@ T<sub>A</sub>=25 °C unless otherwise noted)**

RATINGS	SYMBOL	ULBF410	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	1000	Volts
Maximum Average Forward Rectified Current at T <sub>C</sub> = 75°C	I <sub>O</sub>	4.0	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	120	Amps
Current Squared Time	I <sup>2</sup> T	59.76	A <sup>2</sup> /Sec
Typical Thermal Resistance (Note 1)	R <sub>θJC</sub>	10	°C/W
	R <sub>θJA</sub>	70	
Typical Junction Capacitance (Note 3)	C <sub>J</sub>	35	pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150	°C

**ELECTRICAL CHARACTERISTICS (@ T<sub>A</sub>=25 °C unless otherwise noted)**

CHARACTERISTICS	SYMBOL	ULBF410	UNITS
Maximum Instantaneous Forward Voltage at 2.0A DC	V <sub>F</sub>	1.0	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T <sub>A</sub> = 25°C	5.0	uAmps
	@ T <sub>A</sub> = 125 °C	100	

NOTES : 1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.  
2. "RoHS compliant"  
3. Measured at 1MHz and applied reverse voltage of 4.0 volts.

2023-03/85  
REV:O

# RATING AND CHARACTERISTICS CURVES (ULBF410)

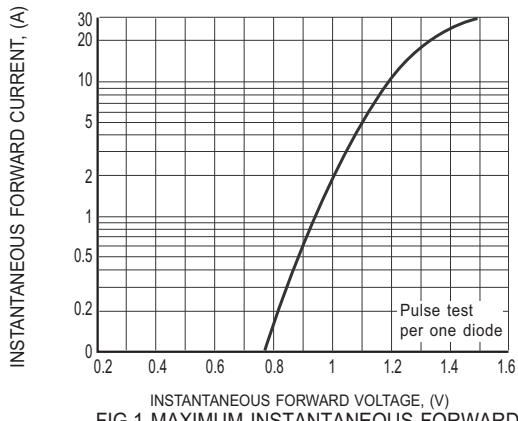


FIG.1 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

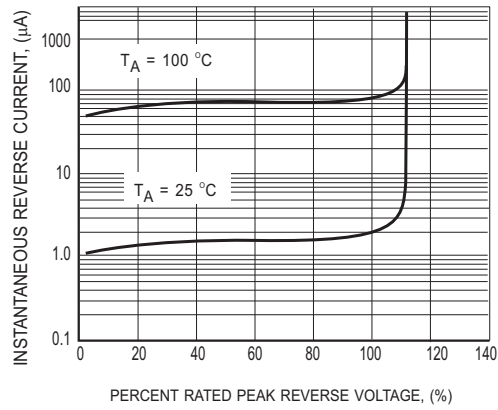


FIG.3 TYPICAL REVERSE CHARACTERISTICS

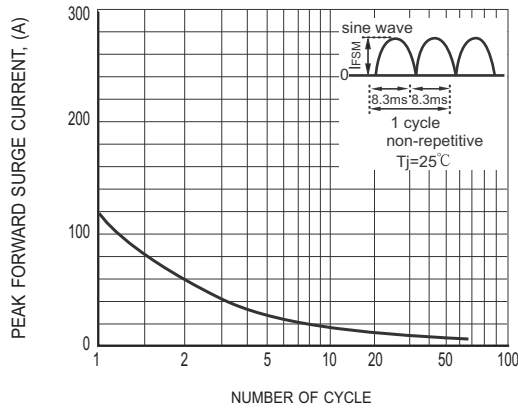


FIG.3 SURGE FORWARD CURRENT CAPABILITY

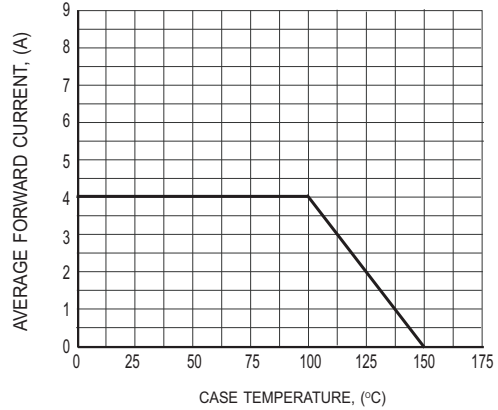
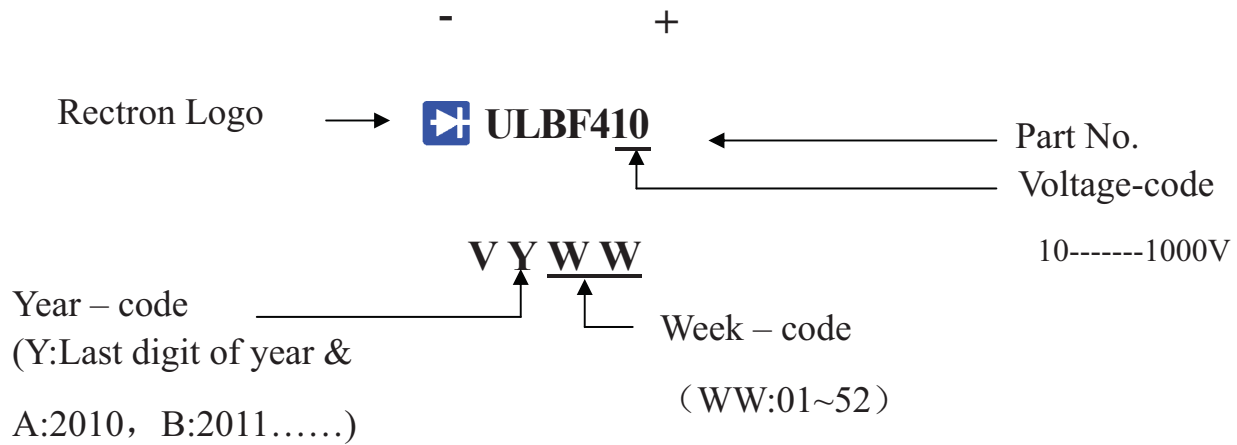


FIG.4 TYPICAL FORWARD CURRENT DERATING CURVE

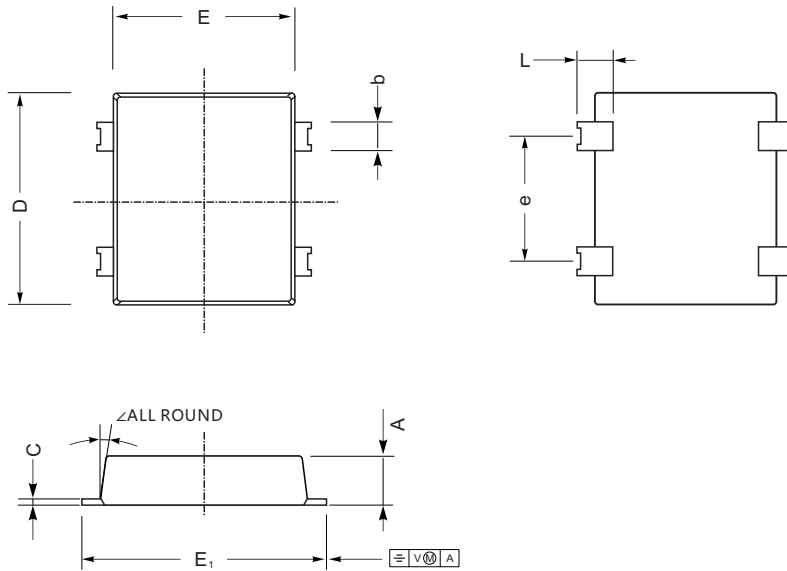
## Marking Description



## PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

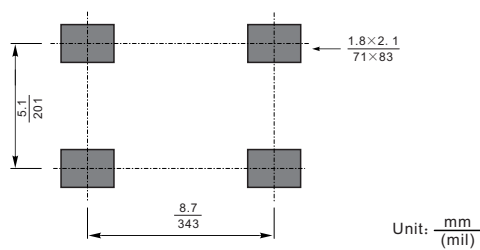
ULBF



ULBF mechanical data

UNIT		A	C	D	E	E <sub>1</sub>	L	e	b	∠
mm	max	1.75	0.55	9.8	8.8	10.2	1.25	5.3	1.55	10°
	min	1.35	0.25	9.4	8.4	9.8	0.85	4.9	1.25	
mil	max	68	21.6	385	346	401	49	209	61	
	min	53	9.8	370	330	385	33	193	49	

### The recommended mounting pad size



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	REEL (EA)	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
ULBF	-T	3,000	6,000	332*332*50	345*345*280	30,000	---

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