

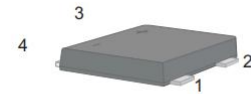
**B1 THRU B7**

VOLTAGE RANGE 50 to 1000 Volts
CURRENT 0.6 Ampere

Features

- Glass passivated chip
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering: 260°C/10S at terminals
- Component in accordance to ROHS 2002/95/1 and WEEE 2002/96/EC

UMBF



UMBF Package

Mechanical Data

- Case: Molded plastic body
- Molding compound meets UL 94 V-0 flammability rating, Halogen-free, RoHS-compliant, and commercial grade
- Polarity: Molded on body
- Weight: 0.0016 ounce, 0.0453 grams

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

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 derate current by 20%

TYPE NUMBER	SYMBOL	B1	B2	B3	B4	B5	B6	B7	UNITS
Marking	LS	B1	B2	B3	B4	B5	B6	B7	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current $T_L=115^\circ\text{C}$	$I_{(AV)}$	0.6							Amp
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	20							Amps
Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	2.7							A^2s
Maximum Instantaneous Forward Voltage @ 0.6 A	V_F	1.1							Volts
Power Dissipation Derate Above at 25°C	P_D	0.8							W
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	5.0							μA
	$T_A = 125^\circ\text{C}$	100							
Typical Junction Capacitance ^(Note 1)	C_j	30							pF
Typical Thermal Resistance ^(Note 2)	$R_{\theta JA}$	105							$^\circ\text{C}/\text{W}$
Operating Junction Temperature	T_J	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ\text{C}$

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
2. Unit mounted on P.C.B. with 0.033"×0.043"(1.00mm×1.30mm) copper pads.
3. The typical data above is for reference only.



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Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG.1-FORWARD CURRENT DERATING CURVE

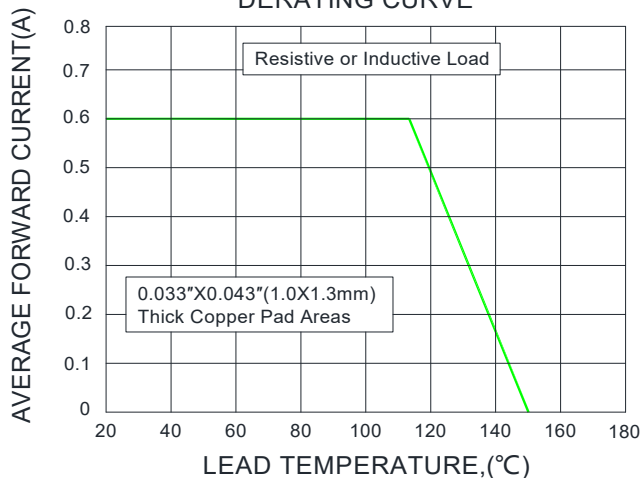


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

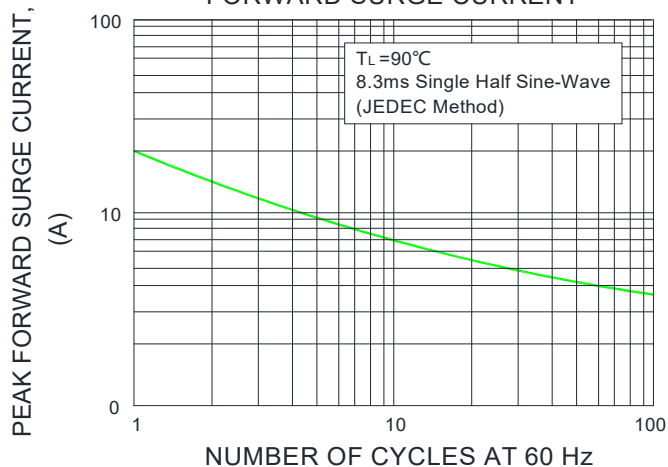


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

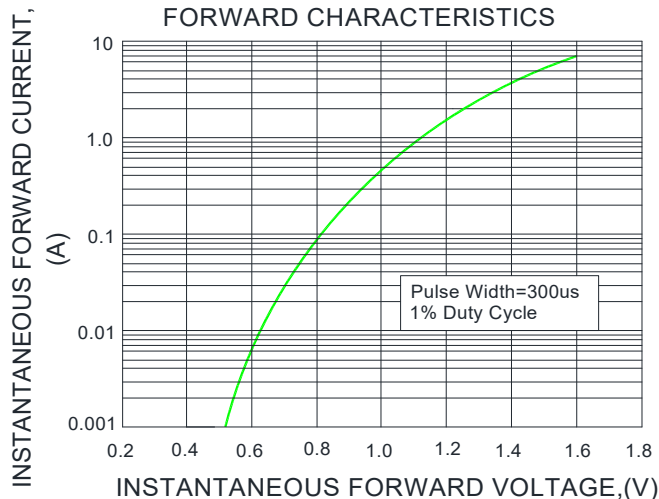


FIG.4-TYPICAL REVERSE CHARACTERISTICS

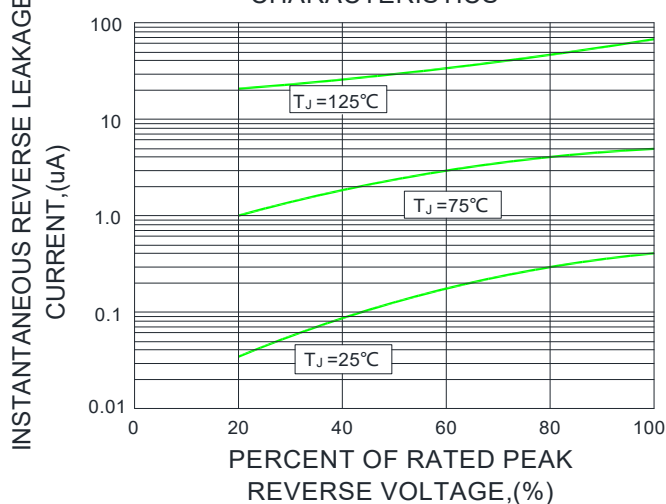
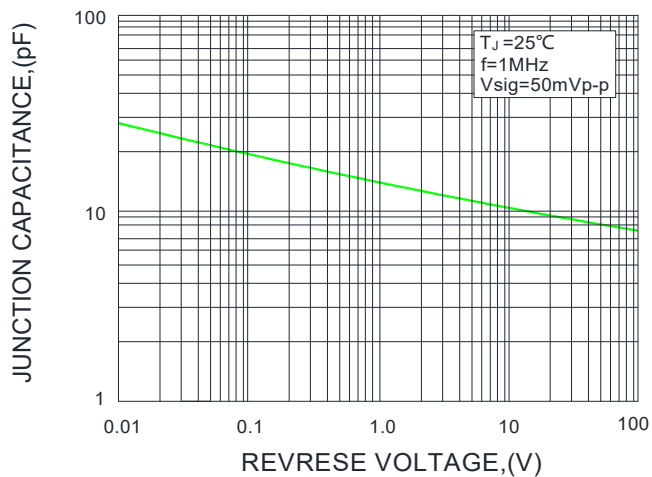


FIG.5-TYPICAL JUNCTION CAPACITANCE

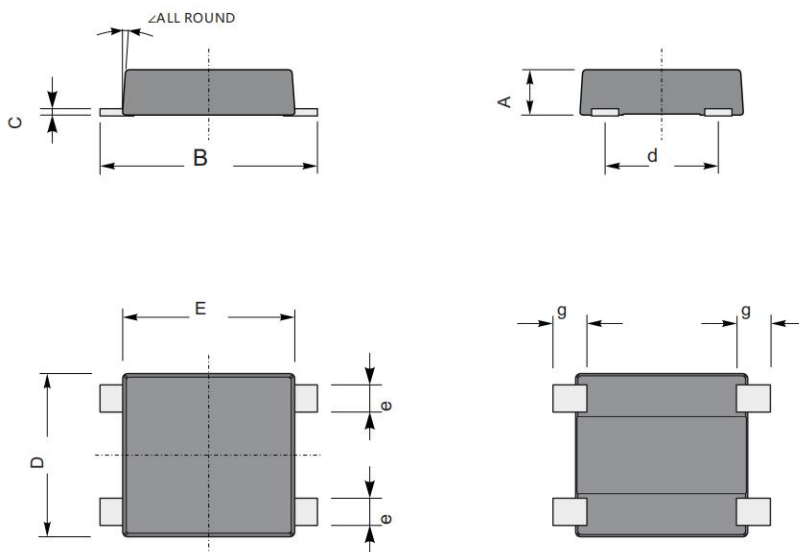




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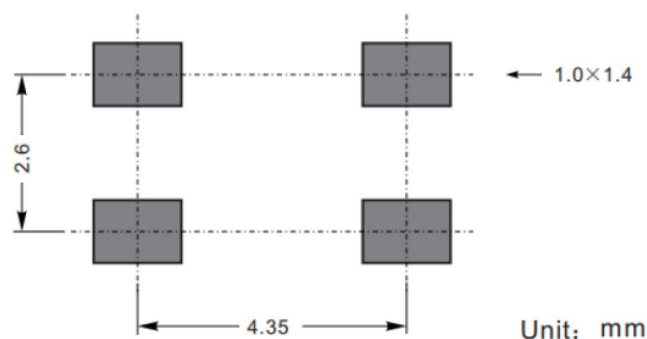
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Package Outline Dimensions in inches (millimeters)



UNIT		A	C	D	E	B	g	d	e	∠
mm	max	1.40	0.30	4.05	3.90	5.20	0.95	2.80	0.90	5°
	min	1.00	0.10	3.65	3.50	4.80	0.55	2.40	0.50	
mil	max	55.1	11.8	159.0	153.0	204.0	37.0	110.0	35.4	
	min	39.3	3.9	143.0	137.0	189.0	21.0	94.0	19.6	

The Recommended Mounting Pad Size



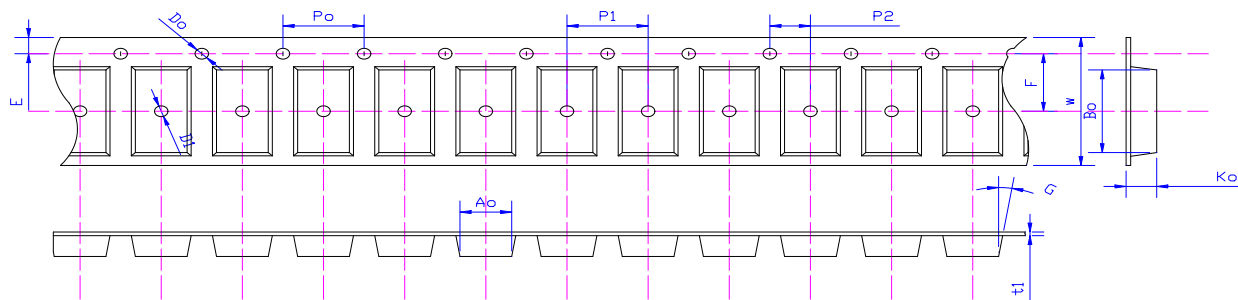


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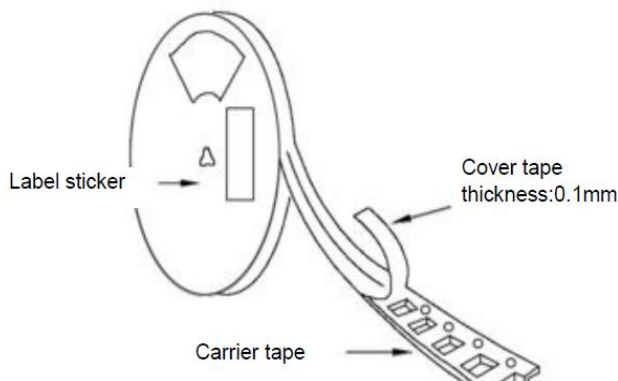
Packing Requirements

- PS black anti-static carrier tape packing



Specifications	Ao	Bo	Ko	Po	W	P1	P2	t1
UMBF	4.15±0.10	5.30±0.10	1.50±0.10	4.00±0.1	12.0±0.10	8.00±0.1	2.00±0.1	0.25±0.02

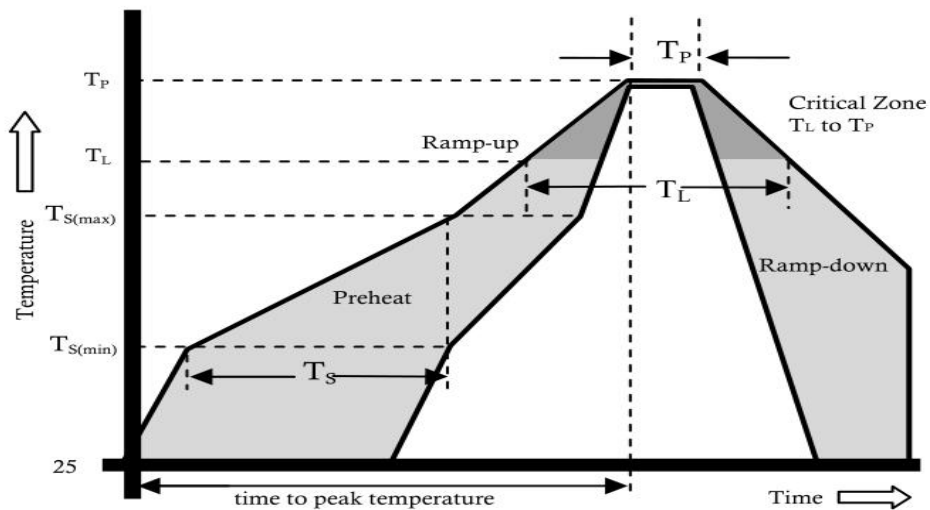
- 13 "antistatic plastic reel



DEVICE TYPE	13" Reel			
	Q'TY/REEL(pcs)	REEL/BOX	BOX/CARTOON	Q'TY/CARTON(pcs)
UMBF	10000	2	10	100000



Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus Temp(T_L) to peak)		3°C/sec. Max.
$T_S(max)$ to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (T_L)(Liquidus)	+217°C
	Temperature (T_I)	60-150 secs.
Peak Temp (T_p)		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (T_p)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_p)		8 min. Max.
Do not exceed		+260°C



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Disclaimer

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