UMW US1A THRU US1M

50V-1000V 1.0A

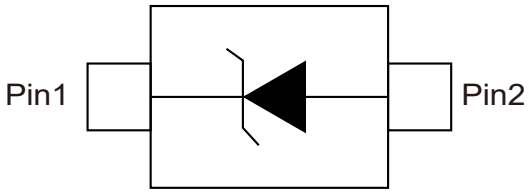
1.Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as a free wheeling diode
- Ultrafast recovery time for high efficiency
- Soft recovery characteristics
- Excellent high temperature switching
- Glass passivated junction
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

2.Mechanical Data

- Terminals: Axial leads, solderable per MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

3.Pinning Information



SMA

4.Maximum Ratings And Electrical Characteristics

Parameter	Symbol	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Units
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V_{RWM}	35	70	140	280	420	560	700	
DC Blocking Voltage	V_R	50	100	200	400	600	800	1000	
Average Rectified Output Current @ T_T=75°C	I_O	1							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Forward Voltage Drop	V_{FM}	1			1.3	1.7			V
Peak Reverse Current	I_{RM}	5							μA
at Rated DC Blocking Voltage		100							μA
Reverse Recovery Time (Note 2)	t_{rr}	50				75			ns
Typical Junction Capacitance (Note 1)	C_j	20				10			pF
Typical Thermal Resistance, Junction to Terminal	$R_{\theta JT}$	30							°C/W
Junction and Storage Temperature Range	T_J,T_{STG}	-65 to 150							°C

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A.

5.Typical characteristic

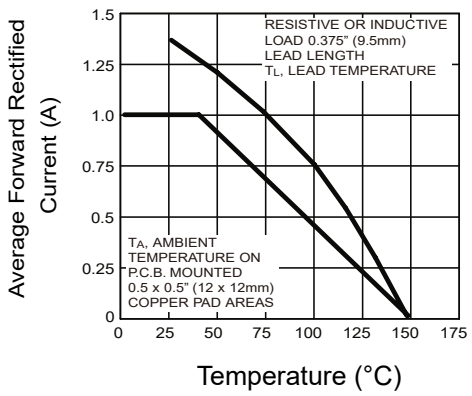


Figure 1: Forward Current Derating Curves

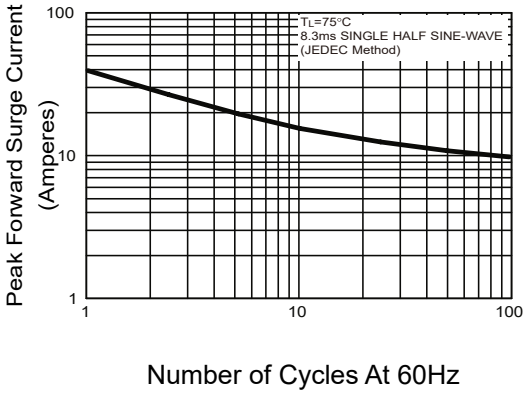


Figure 2: Maximum Non-repetitive Peak Forward Surge Current

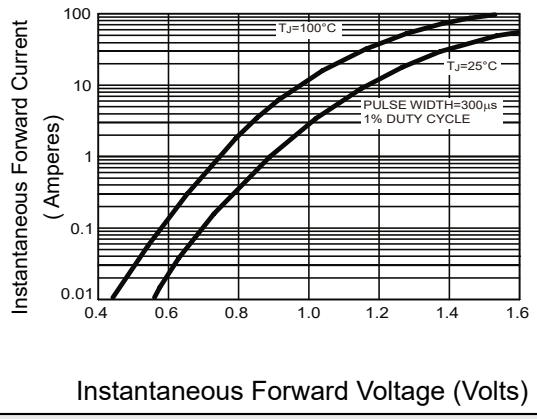


Figure 3: Typical Instantaneous Forward Characteristics

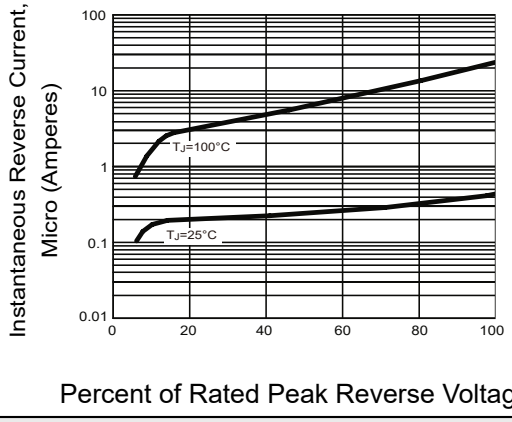


Figure 4: Typical Reverse Characteristics

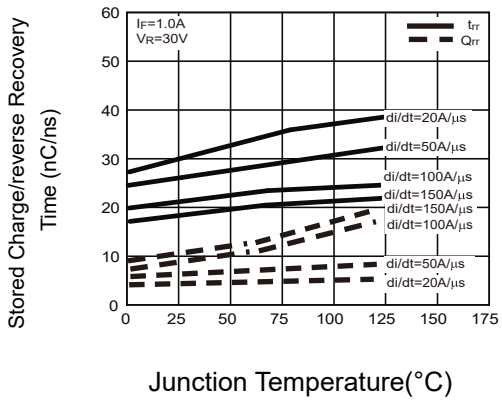


Figure 5: Reverse Switching Characteristics

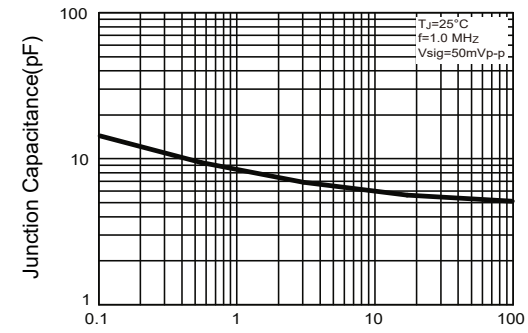
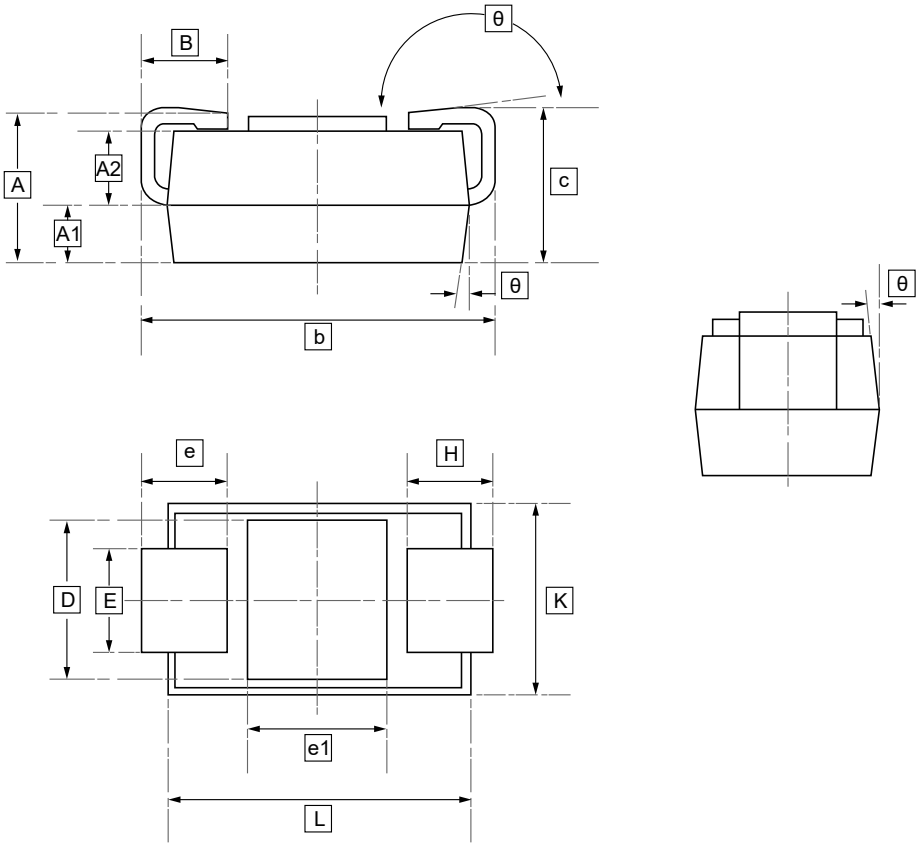


Figure 6: Typical Junction Capacitance

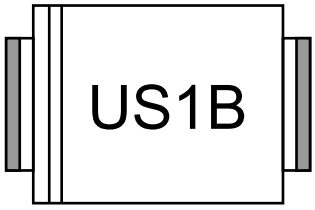
6.SMA Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	A2	B	b	c	D	E	e1	L	K	θ
Min	1.95	0.70	0.90	0.78	4.93	1.95	2.0	1.25	1.90	4.20	2.35	0°
Max	2.29	0.90	1.10	1.52	5.28	2.25	2.25	1.65	2.10	4.40	2.79	5°

7 .Ordering Information



Order Code	Marking	Package	Base QTY	Delivery Mode
UMW US1A	US1A	SMA	2000	Tape and reel
UMW US1B	US1B	SMA	2000	Tape and reel
UMW US1D	US1D	SMA	2000	Tape and reel
UMW US1G	US1G	SMA	2000	Tape and reel
UMW US1J	US1J	SMA	2000	Tape and reel
UMW US1K	US1K	SMA	2000	Tape and reel
UMW US1M	US1M	SMA	2000	Tape and reel

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