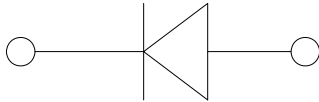
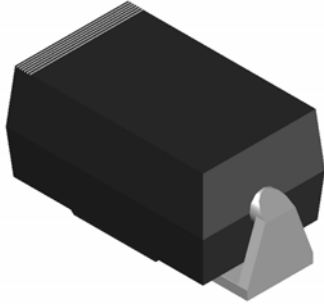


## High Efficient Rectifier



### Features

- High efficiency
- High current capability
- High Reliability
- High surge current capability
- Solder dip 260 °C max. 10 s, per JESD 22-B106

### Mechanical Data

- **Package:** SMA-W  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes cathode end

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	US1A	US1B	US1D	US1G	US1J	US1K	US1M
Device marking code			US1A	US1B	US1D	US1G	US1J	US1K	US1M
Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000
Average Forward Current @60Hz sine wave, Resistance load, T <sub>a</sub> =50°C	I <sub>O</sub>	A	1.0						
Surge(Non-repetitive)Forward Current @60Hz Half-sine wave, 1 cycle, T <sub>a</sub> =25°C	IFSM	A	30						
Storage Temperature	T <sub>stg</sub>	°C	-55 ~+150						
Junction Temperature	T <sub>j</sub>	°C	-55~+125						

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	US1A	US1B	US1D	US1G	US1J	US1K	US1M
Maximum instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	IFM=1.0A	1.0			1.3	1.7		
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	μA	T <sub>a</sub> =25°C	2.5						
	I <sub>RRM2</sub>		T <sub>a</sub> =100°C	150						
Reverse Recovery time	t <sub>rr</sub>	ns	I <sub>F</sub> =0.5A I <sub>R</sub> =1A I <sub>RR</sub> =0.25A	50				75		
Typical junction capacitance	C <sub>j</sub>	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	20				15		

### ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	US1A	US1B	US1D	US1G	US1J	US1K	US1M
Thermal Resistance(Typical)	R <sub>θJA</sub>	°C/W	55						



# US1A THRU US1M

## Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
US1A ~ US1M	F1	Approximate 0.067	5000	10000	80000	Reel

## Characteristics (Typical)

FIG.1:  $I_o$ - $T_a$  Curve

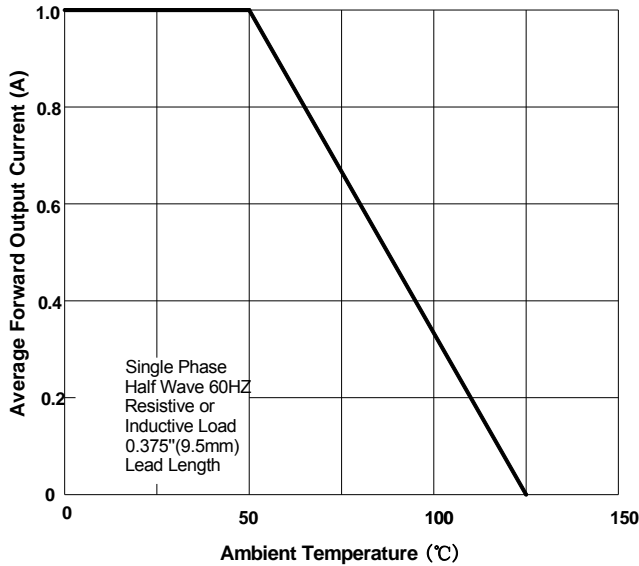


FIG.2: Surge Forward Current Capability

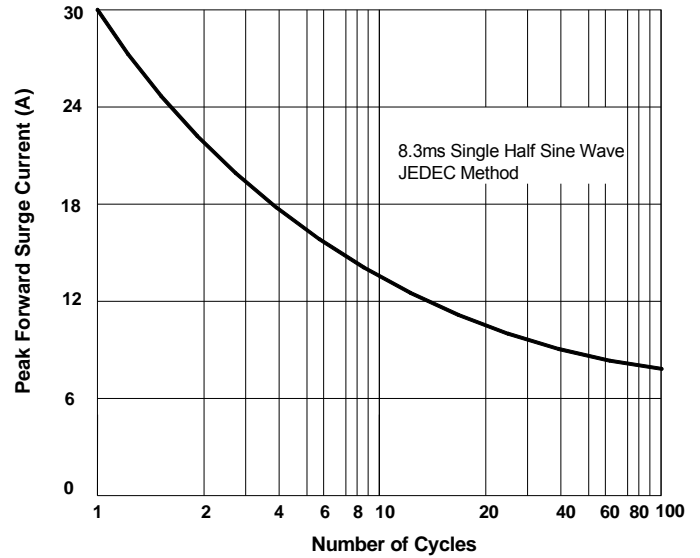


FIG.3: Forward Voltage

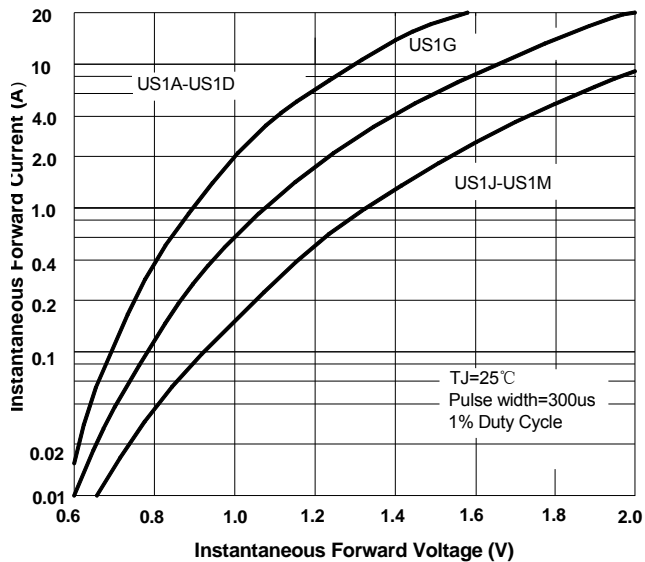
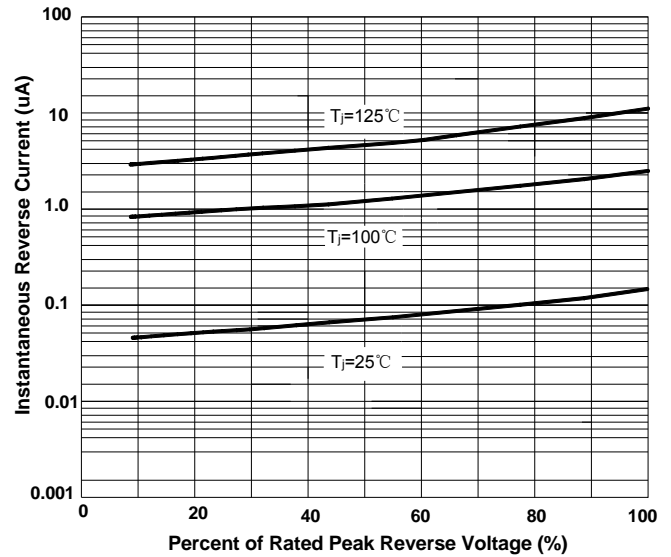


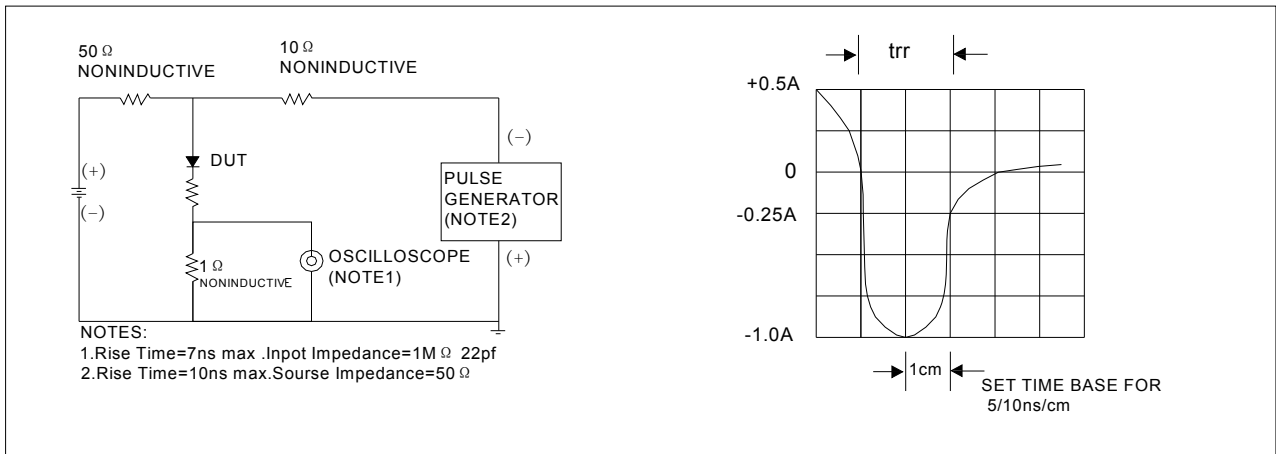
FIG.4: Typical Reverse Characteristics



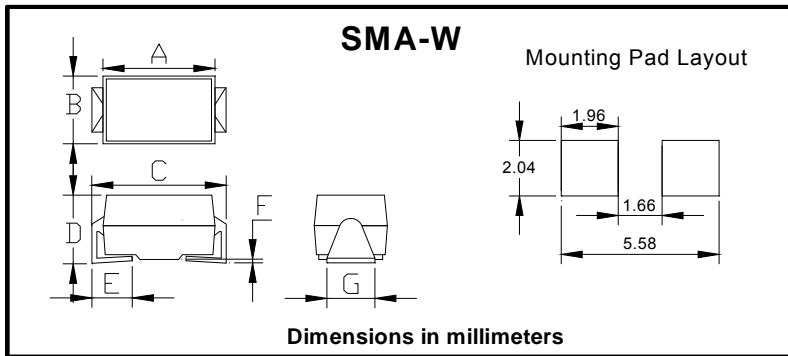


# US1A THRU US1M

FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



## ■ Outline Dimensions



SMA-W		
Dim	Min	Max
A	4.00	4.60
B	2.40	2.65
C	4.80	5.31
D	2.05	2.45
E	0.80	1.50
F	0.10	0.20
G	1.15	1.80



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