



DC COMPONENTS CO., LTD.
RECTIFIER SPECIALISTS

**US1A
THRU
US1M**

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT ULTRA FAST RECTIFIER
VOLTAGE RANGE - 50 to 1000 Volts **CURRENT - 1.0 Ampere**

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Glass passivated junction
- * Low profile package
- * Low power loss, high efficiency
- * High surge capability

MECHANICAL DATA

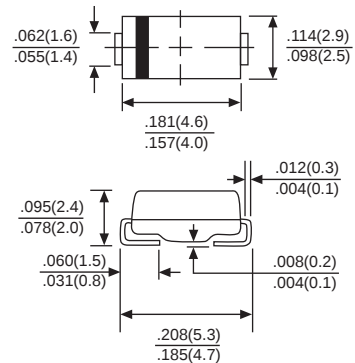
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.064 gram

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%.



SMA(DO-214AC)



Dimensions in inches and (millimeters)

		SYMBOL	US1A	US1B	US1D	US1G	US1J	US1K	US1M	UNITS
Maximum Recurrent Peak Reverse Voltage		VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at TA = 90°C		IO	1.0							Amps
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		IFSM	30							Amps
Maximum Forward Voltage at 1.0A DC		VF	1.0			1.3	1.7			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	IR	5.0							μAmps
	@ TA = 100°C		100							
Maximum Reverse Recovery Time (Note 1)		trr	50				70		nSec	
Typical Junction Capacitance (Note 2)		CJ	10							pF
Operating and Storage Temperature Range		TJ, TSTG	-65 to +175							°C

NOTES : 1. Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (US1A THRU US1M)

FIG. 1

TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

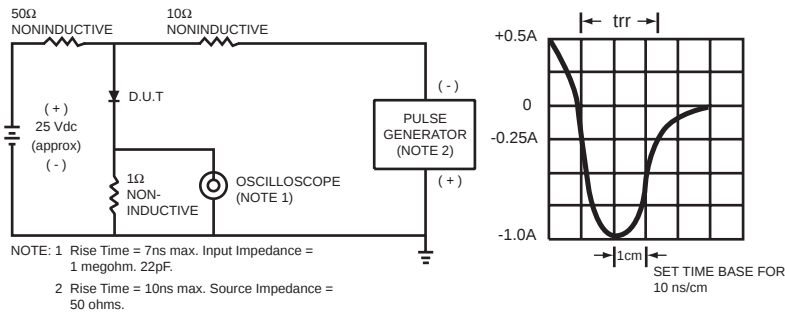


FIG. 2
TYPICAL FORWARD
CURRENT DERATING CURVE

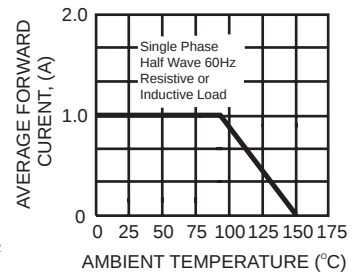


FIG. 3
TYPICAL REVERSE CHARACTERISTICS

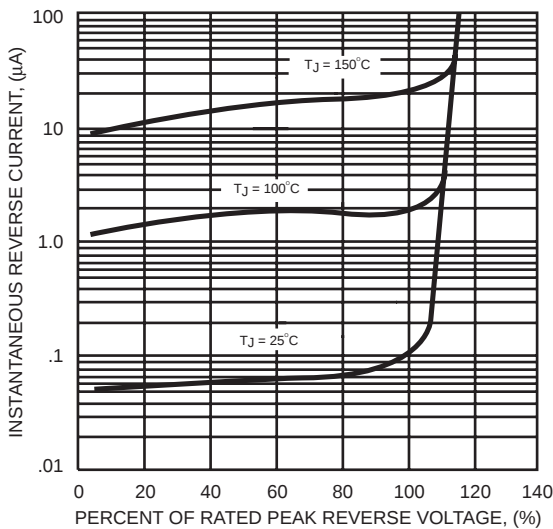


FIG. 4
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

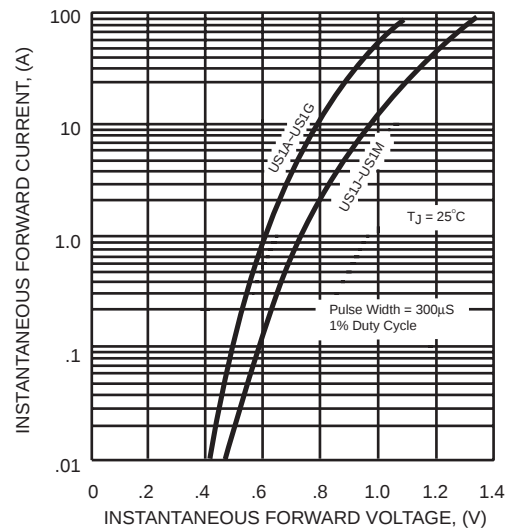


FIG. 5
MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

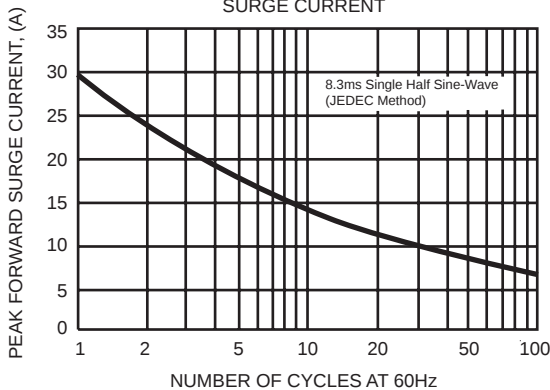
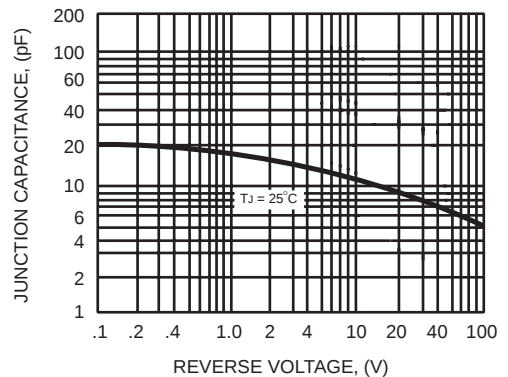


FIG. 6
TYPICAL JUNCTION CAPACITANCE



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