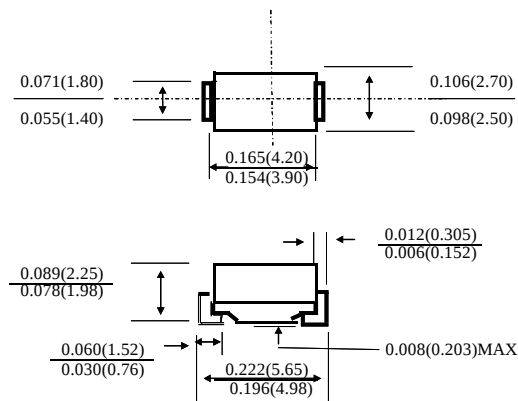


1.0AMP ULTRA FAST SURFACE MOUNT RECTIFIERS

REVERSE VOLTAGE: 50 TO 1000 VOLTS

DO - 214AC(SMA)



inch (mm)

FEATURES

- . Low cost
- . Diffused junction
- . Low Leakage
- . Low forward voltage drop
- . High current capability
- . Easily cleaned with Freon. Alcohol. Isopropanol and similar solvents
- . The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- . Case: JEDEC DO - 214AC. molded plastic body
- . Terminals: Solder plated. Solderable per MIL - STD - 750. Method 2026
- . Polarity: Color band denotes cathode
- . Weight: 0.075 grams
- . Mounting position: Any

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%

	SYMBOL	US1A	RS1B	US1D	US1G	US1J	US1K	US1M	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T _L = 110℃	I _(AV)	1.0							A
Peak Forward Surge Current 8.3ms Single half-sine-wave superimposed on rated T _j = 125℃	I _{FSM}	30							A
Maximum Forward Voltage at 1.0A DC	V _F	1.0				1.7			V
Maximum Reverse Current T _A = 25℃ at Rated DC Blocking Voltage T _A = 100℃	I _R	10.0 50							μ A
Maximum reverse recovery time (Note 1)	t _{rr}	50				75			ns
Typical Junction Capacitance (Note 2)	C _j	17							pF
Typical Thermal Resistance (Note 3)	R _{QJA}	60							℃/W
Operating Junction Temperature Range	T _j	— 55 to 150							℃
Storage Temperature Range	T _{STG}	— 55 to 150							℃

- NOTE:
1. Reverse recovery condition I_F=0.5A I_R=1.0A I_{rr}=0.25A.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Thermal Resistance Junction to Ambient.

FIG. 1 -- TYPICAL FORWARD CHARACTERISTIC

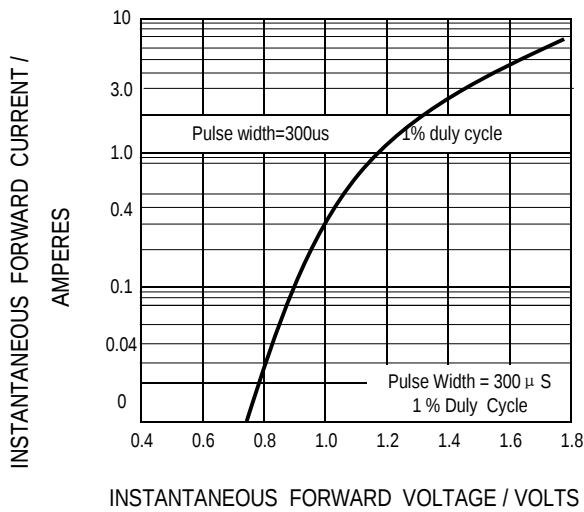


FIG. 2 -- TYPICAL JUNCTION CAPACITANCE

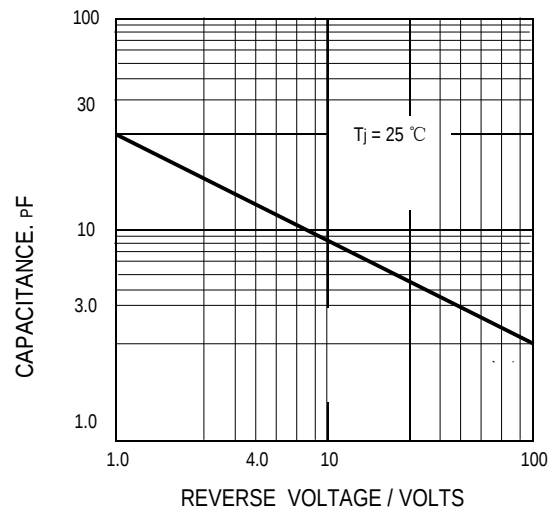


FIG. 3 -- FORWARD CURRENT DERATING CURVE

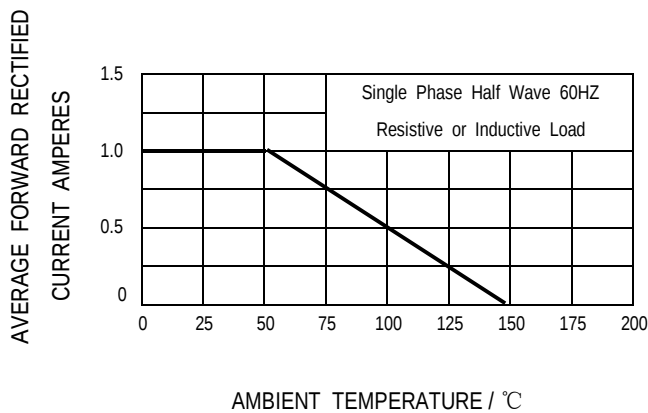


FIG. 4 -- PEAK FORWARD SURGE CURRENT

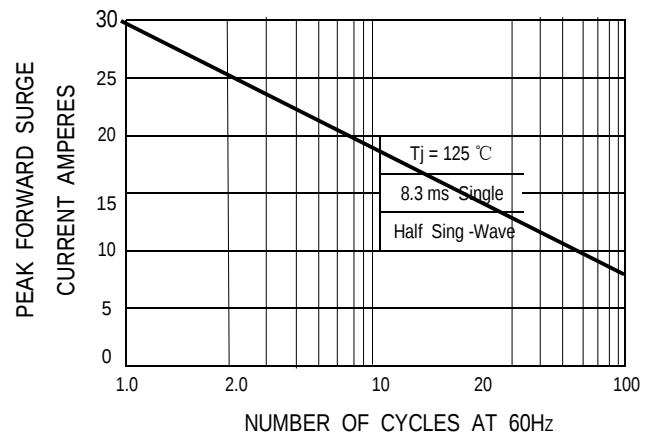
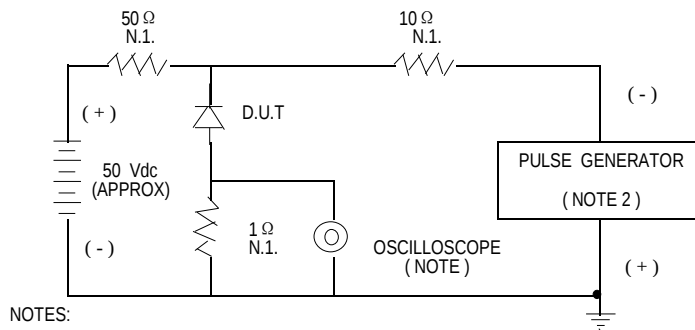
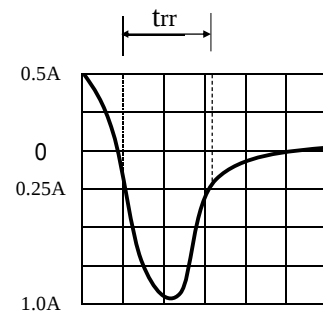


FIG. 5 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:

1. RISE TIME = 7n SEC MAX. INPUT IMPEDANCE = 1 MEGOHM, 22pF
2. RISE TIME = 10n SEC MAX. SOURCE IMPEDANCE = 50 OHM.



SET TIME BASE FOR 15 ns / cm