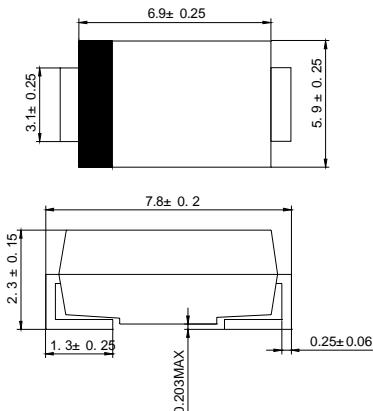


SURFACE MOUNT RECTIFIER
VOLTAGE RANGE: 50 --- 600 V
CURRENT: 3.0 A
FEATURES

- ◇ Low cost
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case: JEDEC DO-214AB, molded plastic
- ◇ Terminals: Solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.007 ounces, 0.21 grams
- ◇ Mounting position: Any

DO - 214AB(SMC)

Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

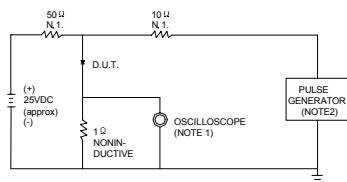
Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		ER3A	ER3B	ER3C	ER3D	ER3E	ER3G	ER3J	UNITS		
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V		
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V		
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V		
Maximum average forward rectified current @ $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	3.0						A			
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J = 125^\circ\text{C}$	I_{FSM}	100						A			
Maximum instantaneous forward voltage @ 3.0A	V_F	0.95			1.25		1.7	V			
Maximum reverse current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 125^\circ\text{C}$	I_R	5.0 300						μA			
Maximum reverse recovery time (Note 1)	t_{rr}	35						ns			
Typical junction capacitance (Note 2)	C_J	95						pF			
Typical thermal resistance (Note 3)	$R_{\theta JA}$	20						$^\circ\text{C}/\text{W}$			
Operating junction temperature range	T_J	- 55 ----- + 150						$^\circ\text{C}$			
Storage temperature range	T_{STG}	- 55 ----- + 150						$^\circ\text{C}$			

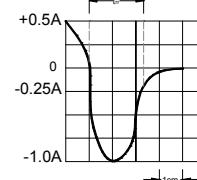
NOTE: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$.

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

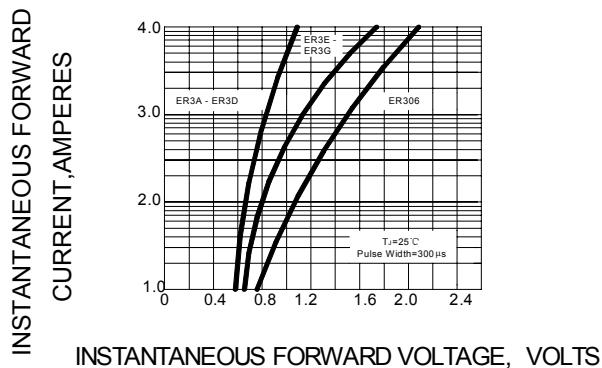
3. Thermal resistance junction to ambient.

FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

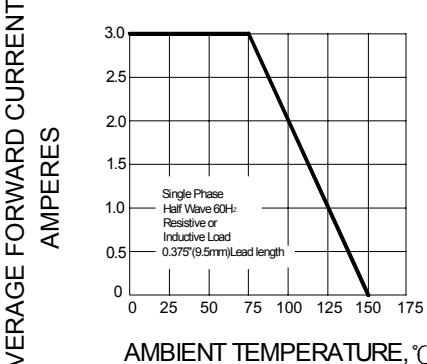
NOTES: 1. RISE TIME = 7ns MAX INPUT IMPEDANCE = 1MΩ.22pF.
2. RISE TIME = 10ns MAX SOURCE IMPEDANCE=50 Ω.



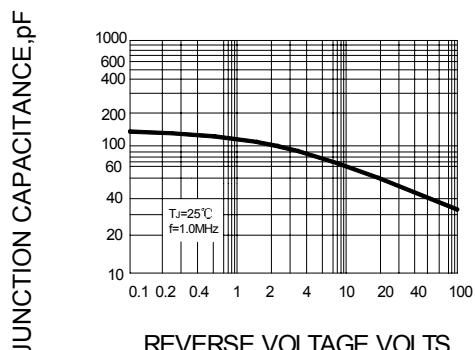
SET TIME BASE FOR 10 ns/cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

INSTANTANEOUS FORWARD VOLTAGE, VOLTS

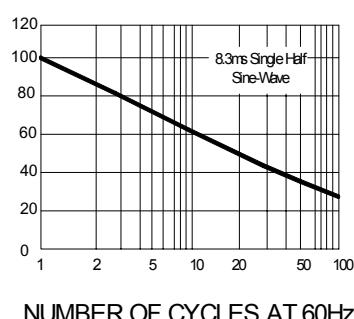
FIG.3 – FORWARD DERATING CURVE

AMBIENT TEMPERATURE, °C

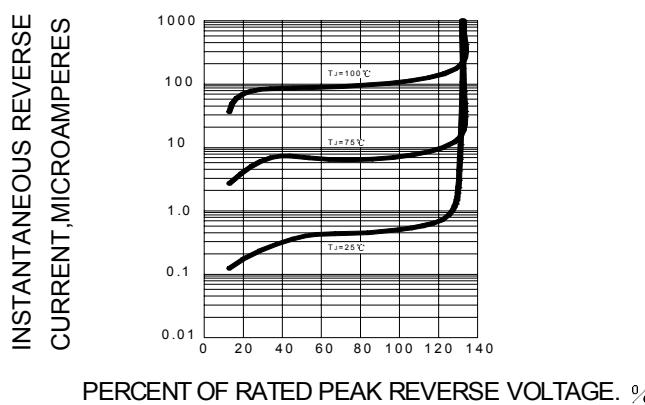
FIG.4 – TYPICAL JUNCTION CAPACITANCE

REVERSE VOLTAGE, VOLTS

AVERAGE FORWARD CURRENT
AMPERES

FIG.5 – PEAK FORWARD SURGE CURRENT

NUMBER OF CYCLES AT 60Hz

FIG.6 – TYPICAL REVERSE CHARACTERISTICS

PERCENT OF RATED PEAK REVERSE VOLTAGE. %

PEAK FORWARD SURGE
CURRENT, AMPERES