



DATA SHEET

ER3A~ER3J

SURFACE MOUNT RECTIFIER

VOLTAGE 50 to 600 Volts **CURRENT** 3.0 Amperes

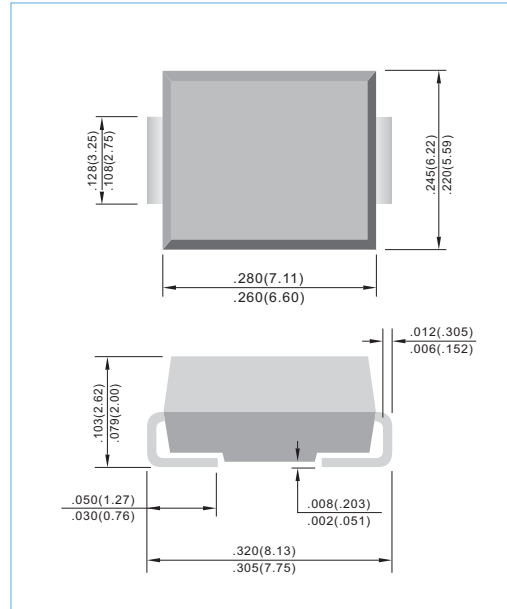
SMC/DO-214AB Unit: inch (mm)

FEATURES

- For surface mounted applications
- High temperature metallurgically bonded-no compression contacts as found in other diode-constructed rectifiers
- Glass passivated junction
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Both normal and Pb free product are available :
Normal : 80~95% Sn, 5~20% Pb
Pb free: 98.5% Sn above

MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Indicated by cathode band
Standard packaging: 16mm tape (EIA-481)
Weight: 0.007 ounce, 0.21 gram



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 current by 20%.

PARAMETER	SYMBOL	ER 3A	ER 3B	ER 3C	ER 3D	ER 3E	ER 3G	ER 3J	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 Current .375" (9.5mm) lead length at $T_L=75^\circ C$	I_{AV}	3.0							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	100							A
Maximum Forward Voltage at 3.0A	V_F	0.95			1.25		1.7		V
Maximum DC Reverse Current $T_A=25^\circ C$ at Rated DC Blocking Voltage $T_A=100^\circ C$	I_R					5.0 200			μA
Maximum Reverse Recovery Time (Note 1)	T_{RR}					35			ns
Typical Junction capacitance (Note 2)	C_J					45			pF
Maximum thermal Resistance (Note 3)	$R_{\theta JL}$					16			$^\circ C / W$
Operating and Storage Temperature Range	T_J, T_{STG}	-50 TO +150							$^\circ C$

NOTES: 1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$
2. Measured at 1 MHz and applied $V_r = 4.0$ volts.
3. 8.0 mm² (.013mm thick) land areas.



RATING AND CHARACTERISTIC CURVES

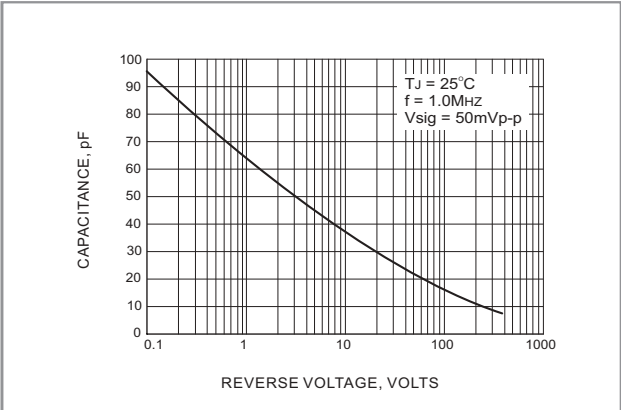


FIG.1 TYPICAL JUNCTION CAPACITANCE

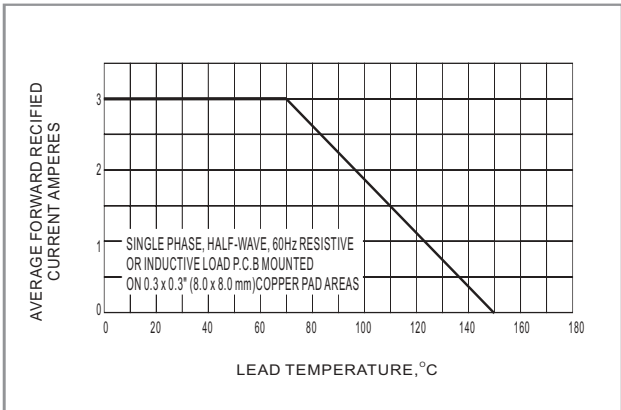


FIG.2 MAXIMUM AVERAGE FORWARD CURRENT RATING

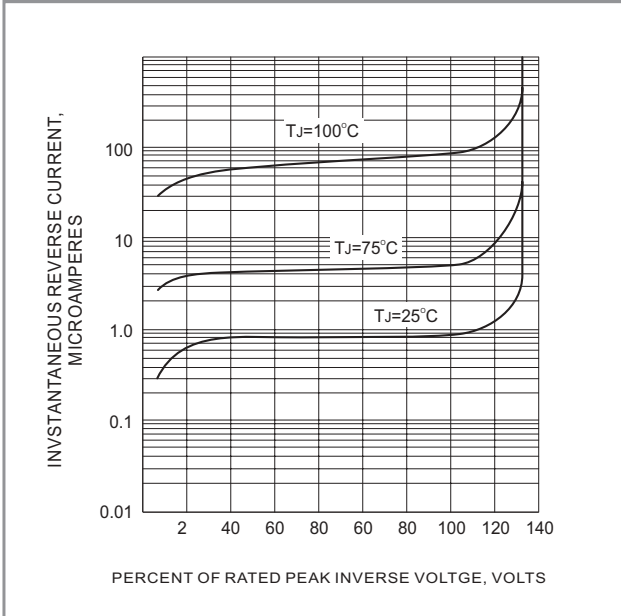


FIG.3 TYPICAL REVERSE CHARACTERISTICS

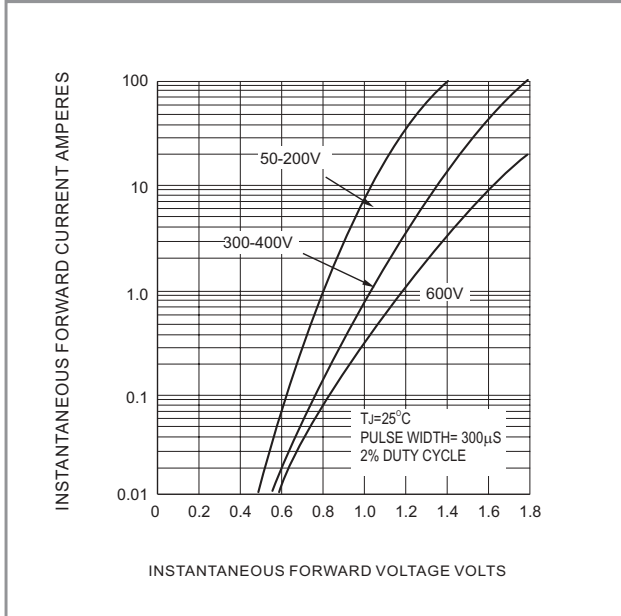


FIG.4 TYPICAL FORWARD CHARACTERISTICS

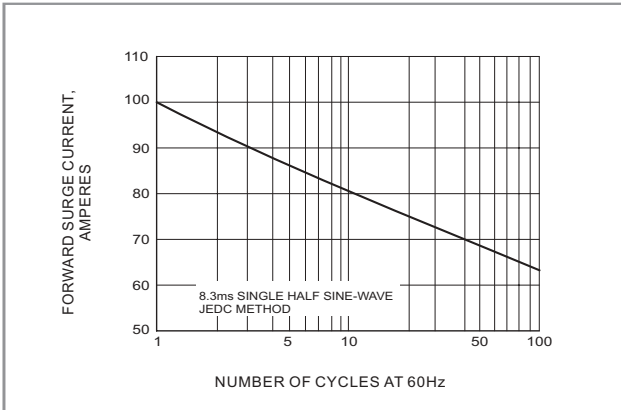


FIG.5 MAXIMUM NON-REPETITIVE SURGE CURRENT