PANJIT SEMI CONDUCTOR

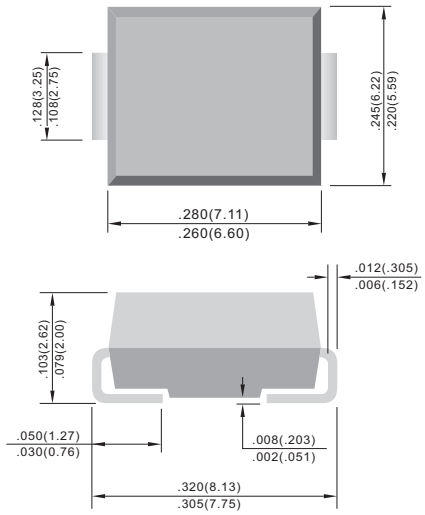
DATA SHEET

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	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 Current .375"(9.5mm) lead length at T_L=75°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 °C at Rated DC Blocking Voltage T_A=100 °C	I_R	5.0 200							uA
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							°C /W
Operating and Storage Temperature Range	T_J,T_{STG}	-50 TO +150							°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 mm^2 (.013mm thick) land areas.

RATING AND CHARACTERISTIC CURVES

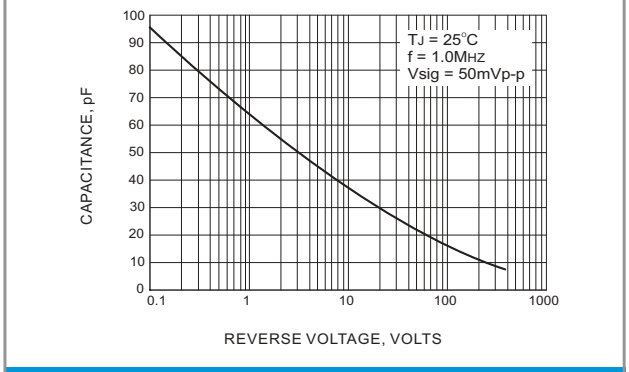


FIG.1 TYPICAL JUNCTION CAPACITANCE

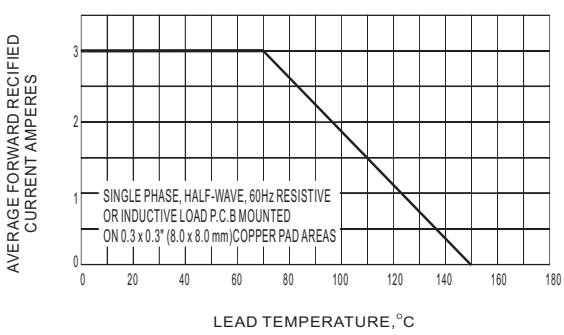


FIG.2 MAXIMUM AVERAGE FORWARD CURRENT RATING

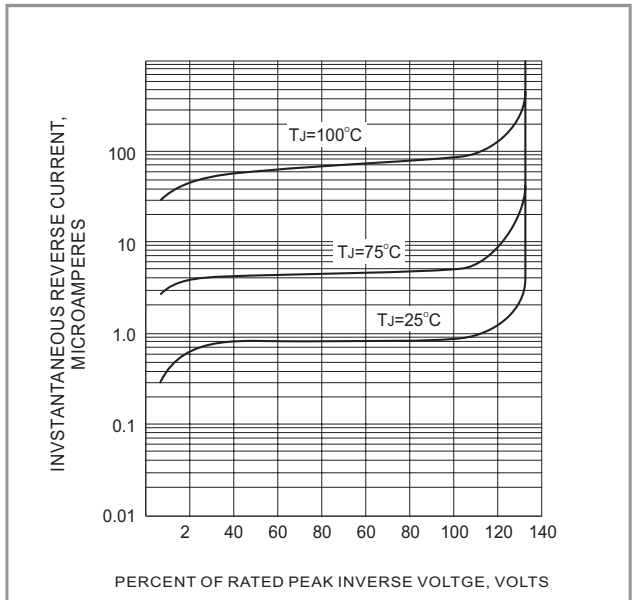


FIG.3 TYPICAL REVERSE CHARACTERISTICS

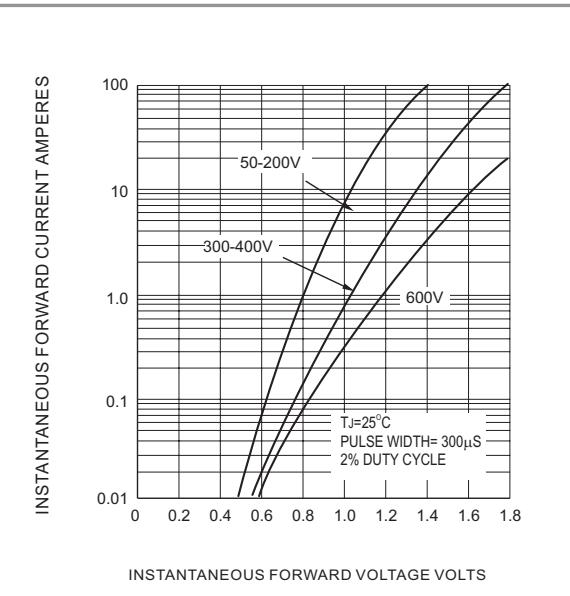


FIG.4 TYPICAL FORWARD CHARACTERISTICS

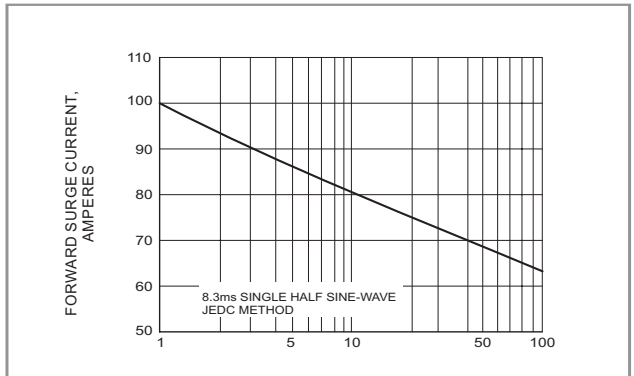


FIG.5 MAXIMUM NON-REPEITIVE SURGE CURRENT