

ER3A-ER3J

Surface Mount Rectifiers

VOLTAGE RANGE: 50 --- 600 V

CURRENT: 3.0 A

DO - 214AB(SMC)

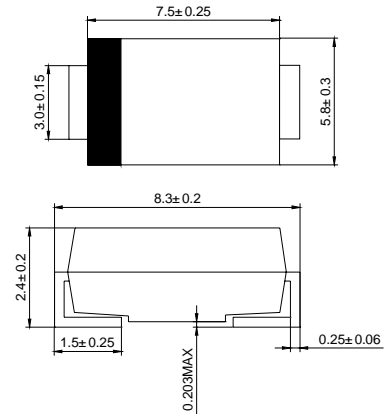


Features

- ◇ 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
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.007 ounces, 0.21 grams
- ◇ Mounting position: Any



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 @ $T_A=75^\circ C$	$I_{F(AV)}$	3.0							A	
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	100							A	
Maximum instantaneous forward voltage @ 3.0A	V_F	0.95				1.25		1.7	V	
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=125^\circ C$	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								$^\circ C/W$
Operating junction temperature range	T_J	- 55 ----- + 150							$^\circ C$	
Storage temperature range	T_{STG}	- 55 ----- + 150							$^\circ C$	

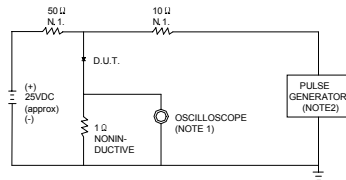
NOTE: 1. Measured with $I_F=0.5A$, $I_R=1A$, $t_{rr}=0.25A$.

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

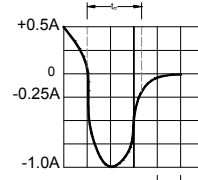
3. Thermal resistance junction to ambient.

Ratings AND Characteristic Curves

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

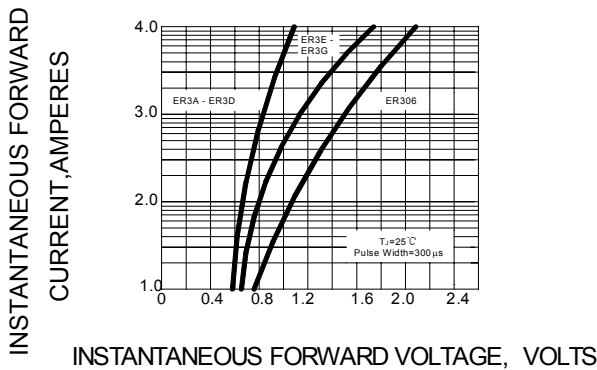


FIG.3 – FORWARD DERATING CURVE

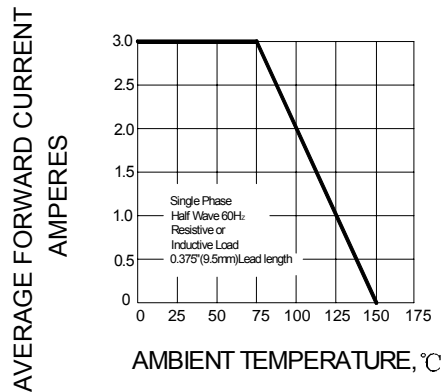


FIG.4 – TYPICAL JUNCTION CAPACITANCE

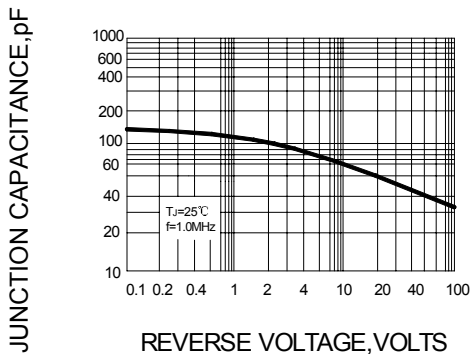


FIG.5 – PEAK FORWARD SURGE CURRENT

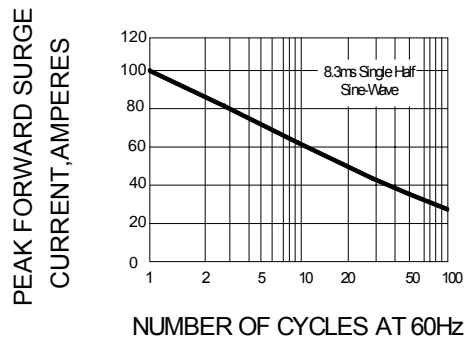


FIG.6 – TYPICAL REVERSE CHARACTERISTICS

