

VOLTAGE RANGE: 50 --- 400 V

CURRENT: 3.0 A

DO-214AA(SMB)

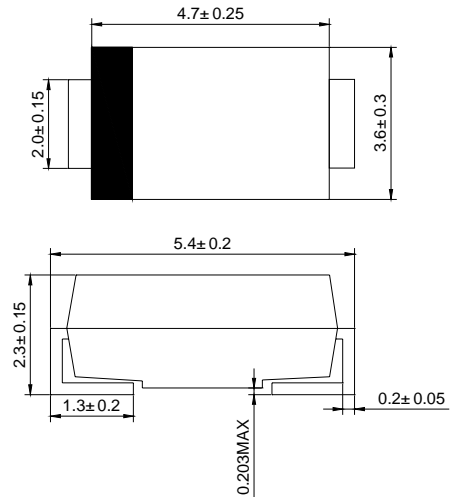


Features

- ◇ 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-214AA, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.003 ounces, 0.093 gram
- ◇ 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%.

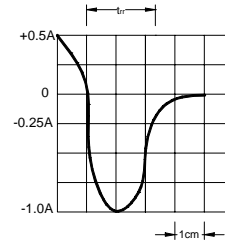
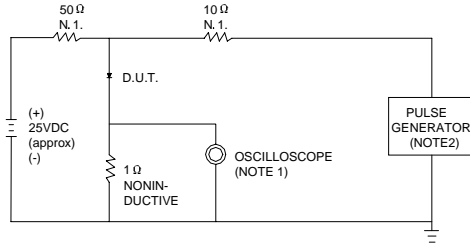
| | | ES3AB | ES3BB | ES3CB | ES3DB | ES3GB | UNITS |
|---|-----------------|-----------------|-------|-------|-------|-------|--------------------|
| Device marking code | | EA | EB | EC | ED | EG | |
| Maximum recurrent peak reverse voltage | V_{RRM} | 50 | 100 | 150 | 200 | 400 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 105 | 140 | 280 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 150 | 200 | 400 | V |
| Maximum average forward rectified current @ $T_A=100^\circ\text{C}$ | $I_{F(AV)}$ | 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 at 3.0 A | V_F | 0.95 | | | 1.25 | | V |
| Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$ | I_R | 10 500 | | | | | μA |
| Typical reverse recovery time (Note1) | t_{rr} | 35 | | | | | ns |
| Typical junction capacitance (Note2) | C_J | 45 | | | | | pF |
| Typical thermal resistance | $R_{\theta JA}$ | 40 | | | | | $^\circ\text{C/W}$ |
| 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 $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$.

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

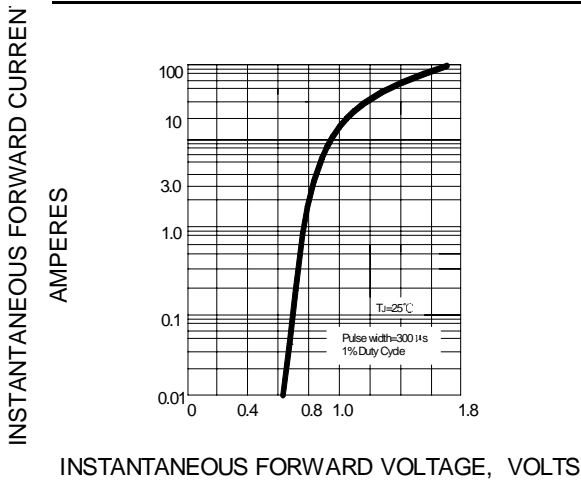
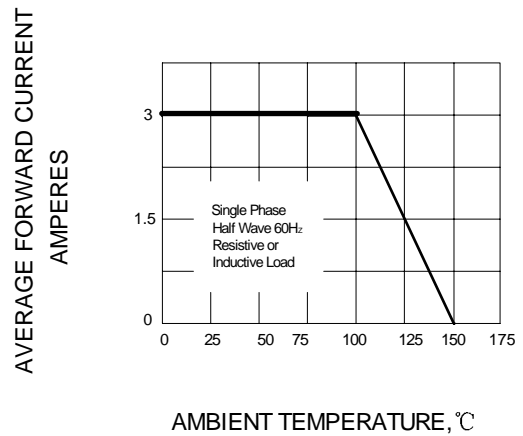
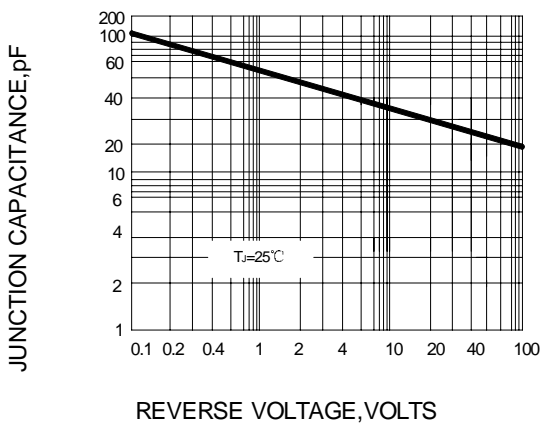
3. Thermal resistance from junction to ambient and junction to lead P.C.B. mounted on 0.27"X0.27"(7.0X7.0mm²) copper pad areas

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 20/30 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

FIG.3 -- FORWARD DERATING CURVE

FIG.4 -- TYPICAL JUNCTION CAPACITANCE

FIG.5 -- PEAK FORWARD SURGE CURRENT
