



TAYCHIPST

SURFACE MOUNT SUPERFAST RECTIFIER

ES1AB THRU ES1JB

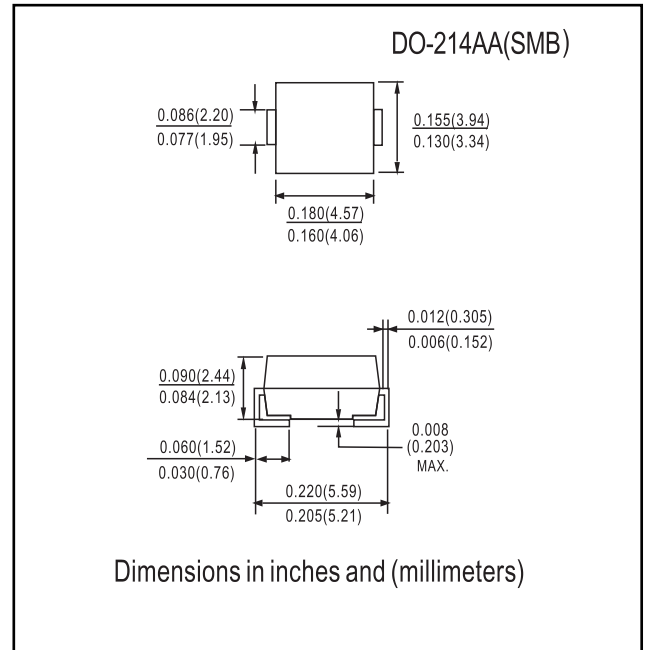
50V-600V 1.0A

FEATURES

- For surface mount applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Superfast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- High temperature soldering : 260°C/10seconds at terminals
- Pb free product are available : 99% Sn above can meet RoHS Environment substance directive request

MECHANICAL DATA

Case : JEDEC DO-214AA molded plastic
 Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
 Polarity : Indicated by cathode band
 Standard packaging : 16mm tape (EIA-481)
 Weight : 0.003 ounce, 0.093grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified
 Single phase, half wave, 60Hz, resistive or inductive load
 For capacitive load, derate current by 20%

| | SYMBOL | ES1AB | ES1BB | ES1CB | ES1DB | ES1EB | ES1GB | ES1JB | UNITS |
|---|--------------------|-------------|-------|-------|-------|------------|-------|-------|----------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | Volts |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 105 | 140 | 210 | 280 | 420 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | Volts |
| Maximum Average Forward Rectified Current @ $T_L = 100^\circ C$ | $I_{(AV)}$ | 1.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 30 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 1.0A | V_F | 0.95 | | | 1.25 | | 1.7 | | Volts |
| Maximum DC Reverse Current @ $T_J=25^\circ C$ at Rated DC Blocking Voltage @ $T_J=100^\circ C$ | I_R | | | | | 5.0 100 | | | μA |
| Maximum Reverse Recovery Time (NOTE 1) | T_{RR} | | | | | 35 | | | nS |
| Typical Junction Capacitance (NOTE 2) | C_J | | | | | 10 | | | pF |
| Typical Thermal Resistance (NOTE 3) | $R_{\theta JA}$ | | | | | 34 | | | $^\circ C / W$ |
| Operating and Storage Temperature Range | T_J T_{STG} | -55 to +150 | | | | | | | $^\circ C$ |

NOTES :

1. Rverse Recovery Test Condibons $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
2. Measured at 1 MHz and applied reverse Voltag of 4.0VDC
3. 8.0mm² (.013mm thick) land areas



RATINGS AND CHARACTERISTIC CURVES ES1AB THRU ES1JB

Fig. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM ES1A THRU ES1G

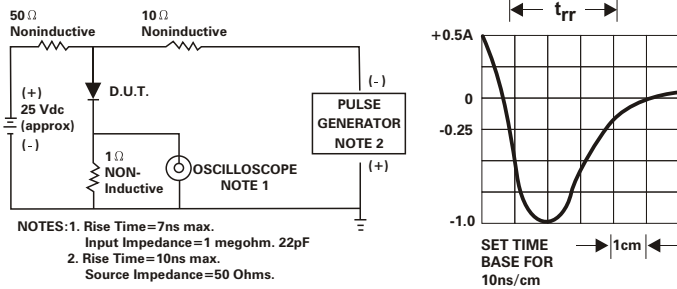


Fig. 2 - MAXIMUM AVERAGE FORWARD CURRENT RATING

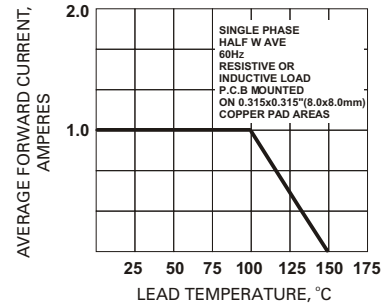


Fig. 3 - TYPICAL REVERSE CHARACTERISTICS

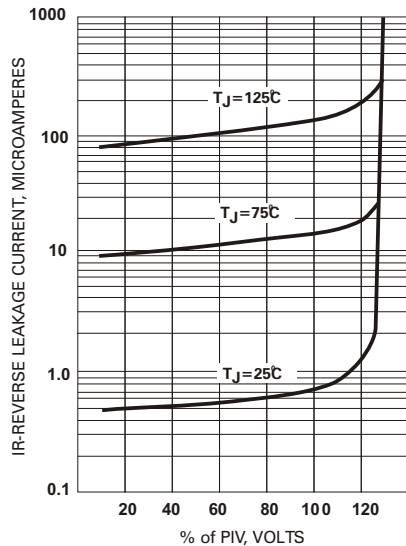


Fig. 4 - TYPICAL FORWARD CHARACTERISTICS

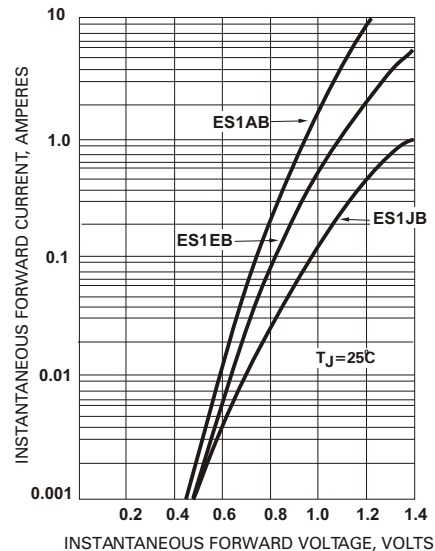


Fig. 5 - MAXIMUM NON-REPETITIVE SURGE CURRENT

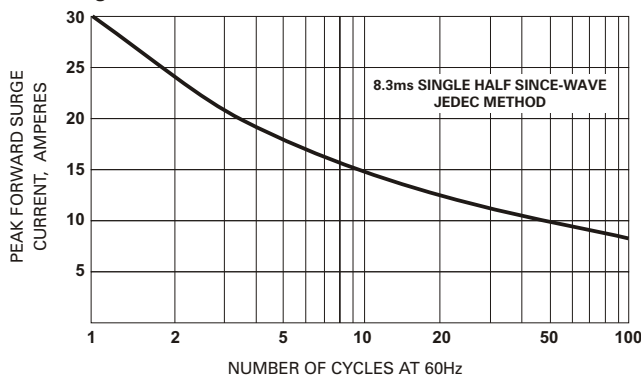


Fig. 6 - TYPICAL JUNCTION CAPACITANCE

