

3A SURFACE MOUNT FAST EFFICIENT RECOVERY RECTIFIERS

| Dim. | Value Inch[mm] | |
|------|----------------|-------------|
| | Min. | Max. |
| A | 0.188[4.78] | 0.220[5.60] |
| B | 0.157[3.99] | 0.181[4.60] |
| C | 0.090[2.30] | 0.114[2.90] |
| D | 0.078[1.98] | 0.100[2.60] |
| E | 0.030[0.76] | 0.060[1.52] |
| F | 0.040[1.25] | 0.065[1.65] |

PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION: 94V-0
2. GLASS PASSIVATED CHIP JUNCTION
3. BUILT-IN STRAIN RELIEF
4. LOW PROFILE
5. CASE: DO-214AC(SMA) MOLDED PLASTIC
6. DIMENSIONS IN INCHES AND (MILLIMETERS)
7. POLARITY: INDICATED BY CATHODE BAND
8. WEIGHT: 0.064 GRAMS
9. LEADS: SOLDERABILITY PER MIL-STD-750 METHOD 2026
10. RoHS

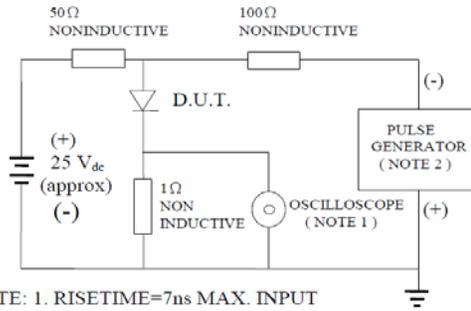
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED STORAGE AND OPERATING TEMPERATURE RANGE -55°C TO +150°C. SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%.

| RATINGS | SYMBOL | VALUE | UNITS |
|---|-----------------|-------|-------|
| MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT @ TL=90°C | I_o | 3 | A |
| PEAK FWD SURGE CURRENT, 8.3ms HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD | I_{FSM} | 100 | A |
| TYPICAL JUNCTION CAPACITANCE (NOTE3) | C_j | 70 | pF |
| TYPICAL THERMAL RESISTANCE (NOTE 2) | $R_{\theta ja}$ | 12 | °C/W |
| MAXIMUM REVERSE CURRENT @ 25°C | I_R | 10 | uA |
| MAXIMUM REVERSE CURRENT @ 100°C | I_R | 200 | uA |
| MAXIMUM REVERSE RECOVERY TIME (NOTE1) | T_{RR} | 25 | nS |

1. REVERSE RECOVERY TIME TEST CONDITION, $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
2. THERMAL RESISTANCE FROM JUNCTION TO AMBIENT AND JUNCTION TO LEAD P.C.B. MOUNTED ON 0.3x0.3"(8.0x8.0mm) COPPER PAD AREAS
3. MEASURED @ 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
4. MAXIMUM FORWARD VOLTAGE @ I_o

| PART NUMBER | MAX RECURRENT PK REV VOLTAGE V_{RRM} (V) | MAX RMS VOLTAGE V_{RMS} (V) | MAX DC BLOCKING VOLTAGE V_{DC} (V) | MAX FWD VOLTAGE V_F (V) | MARKING |
|-------------|--|-------------------------------|--------------------------------------|---------------------------|---------|
| ES3AA | 50 | 35 | 50 | 0.98 | ES3AA |
| ES3BA | 100 | 70 | 100 | 0.98 | ES3BA |
| ES3DA | 200 | 140 | 200 | 0.98 | ES3DA |
| ES3EA | 300 | 210 | 300 | 1.3 | ES3EA |
| ES3GA | 400 | 280 | 400 | 1.3 | ES3GA |
| ES3JA | 600 | 420 | 600 | 1.75 | ES3JA |

RATING AND CHARACTERISTIC CURVES



NOTE: 1. RISE TIME = 7ns MAX. INPUT IMPEDANCE = 1 MEGOHM 22PF
 2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50OHMS

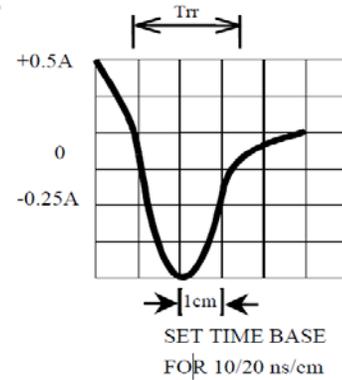


FIG. 2-TYPICAL FORWARD CURRENT DERATING CURVE

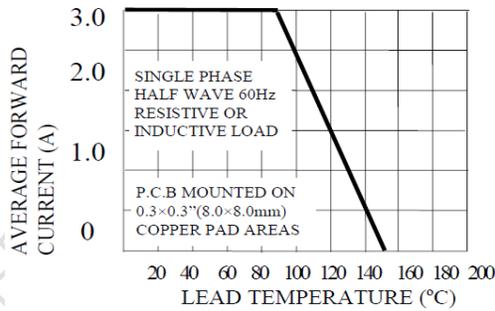


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

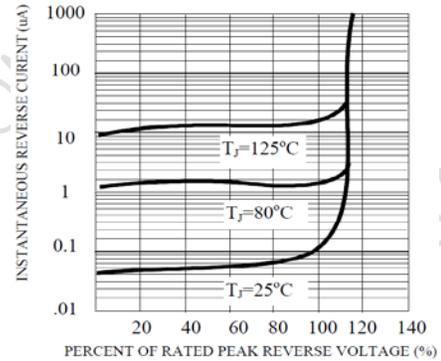


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

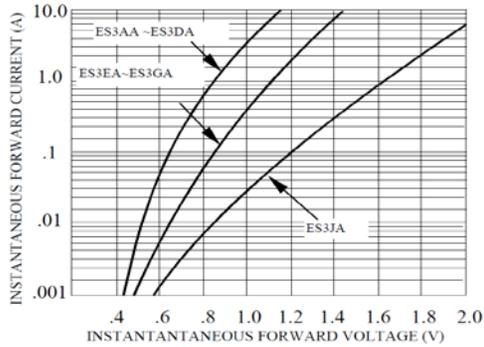


FIG. 5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

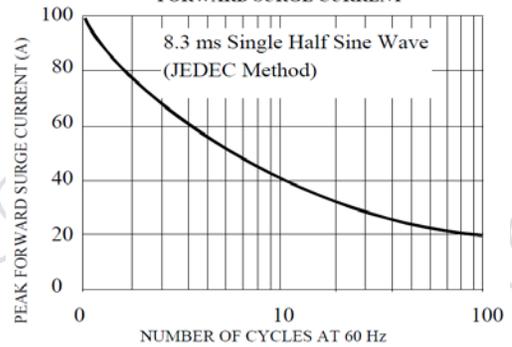
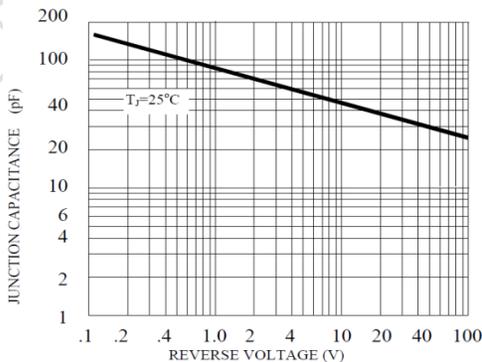


FIG. 6-TYPICAL JUNCTION CAPACITANCE





ES3AA THRU ES3JA SPECIFICATIONS

Rev. A

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