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3A SUPER FAST RECOVERY SURFACE MOUNT RECTIFIER

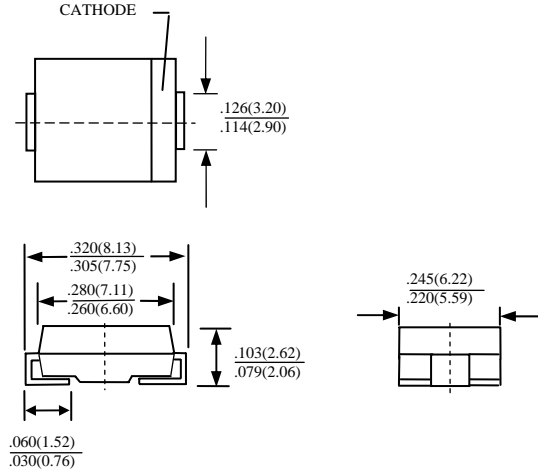
SFS3A THRU SFS3J

FEATURES

- LOW PROFILE PACKAGE
- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY 94V-0
- IDEAL FOR SURFACE MOUNTED APPLICATION
- GLASS PASSIVATED CHIP JUNCTION
- BUILT-IN STRAIN RELIEF DESIGN
- SUPER FAST RECOVERY TIME FOR HIGH EFFICIENT
- HIGH TEMPERATURE SOLDERING : 250°C/10 SECONDS AT TERMINAL

MECHANICAL DATA

- CASE: JEDEC DO-214AA MOLDED PLAS BODY, DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINAL: SOLDER PLATED, SOLDERABLE PER MIL-STD-750 METHOD 2026
- POLARITY: COLOR BAND DENOTES CATHODE
- WEIGHT: 0.21 GRAMS



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%

| RATINGS | SYMBOL | SFS3A | SFS3B | SFS3D | SFS3E | SFS3G | SFS3H | SFS3J | UNITS |
|--|-----------------|---------------|-------|-------|-------|-------|-------|-------|---------------------------|
| MAXIMUM RECURRENT PEAK REVERSE VOLTAGE | V_{RRM} | 50 | 100 | 200 | 300 | 400 | 500 | 600 | V |
| MAXIMUM RMS VOLTAGE | V_{RMS} | 35 | 70 | 140 | 210 | 280 | 350 | 420 | V |
| MAXIMUM DC BLOCKING VOLTAGE | V_{DC} | 50 | 100 | 200 | 300 | 400 | 500 | 600 | V |
| MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT AT $T_J=90^\circ\text{C}$ | I_O | 3.0 | | | | | | | A |
| PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD | I_{FSM} | 100 | | | | | | | A |
| TYPICAL JUNCTION CAPACITANCE (NOTE 1) | C_J | 25 | | | | | | | PF |
| TYPICAL THERMAL RESISTANCE (NOTE 2) | $R_{\theta jL}$ | 20 | | | | | | | $^\circ\text{C}/\text{W}$ |
| STORAGE TEMPERATURE RANGE | T_{STG} | - 55 TO + 150 | | | | | | | $^\circ\text{C}$ |
| OPERATING TEMPERATURE RANGE | T_{OP} | - 55 TO + 150 | | | | | | | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS ($A_T T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

| CHARACTERISTICS | SYMBOL | SFS3A | SFS3B | SFS3D | SFS3E | SFS3G | SFS3H | SFS3J | UNITS |
|---------------------------------------|----------|-------|-------|-------|-------|-------|-------|-------|---------------|
| MAXIMUM FORWARD VOLTAGE AT I_O DC | V_F | 0.95 | | | 1.25 | | 1.85 | | V |
| MAXIMUM REVERSE CURRENT AT 25°C | I_R | 10 | | | | | | | μA |
| MAXIMUM REVERSE CURRENT AT 100°C | I_R | 100 | | | | | | | μA |
| MAXIMUM REVERSE RECOVERY TIME (NOTE3) | T_{RR} | 35 | | | | | | | nS |
| MARKING | | SFS3A | SFS3B | SFS3D | SFS3E | SFS3G | SFS3H | SFS3J | |

NOTE: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS

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. REVERSE RECOVERY TEST CONDITIONS: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVE SFS3A THRU SFS3J

FIG. 1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

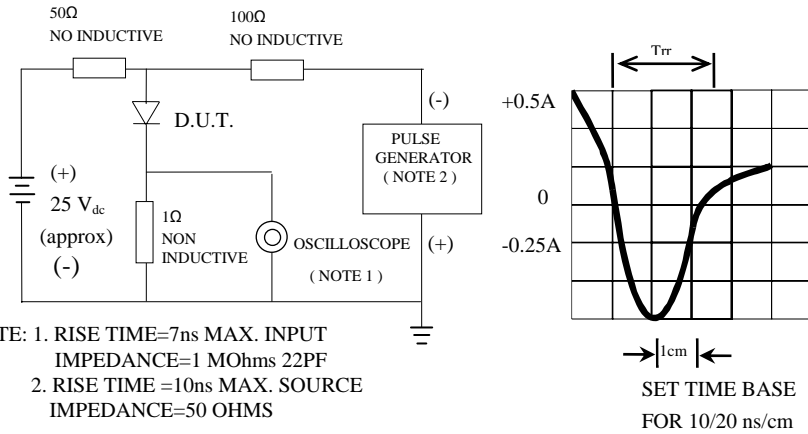


FIG. 2-TYPICAL FORWARD CURRENT DERATING CURVE

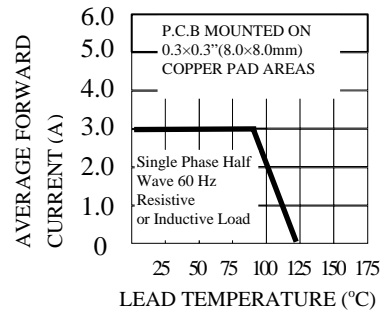


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

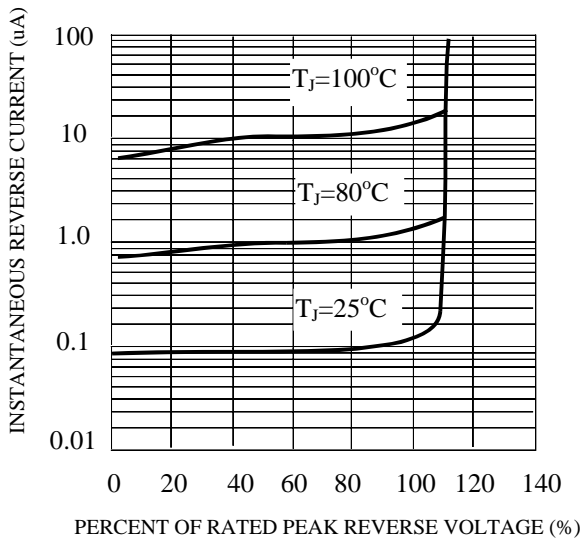


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

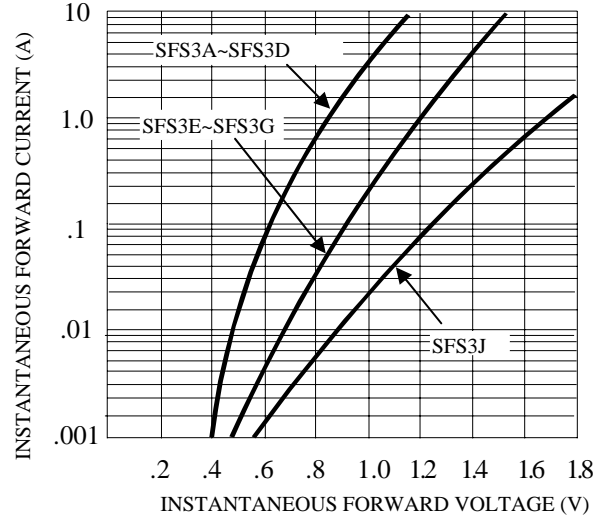


FIG. 5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

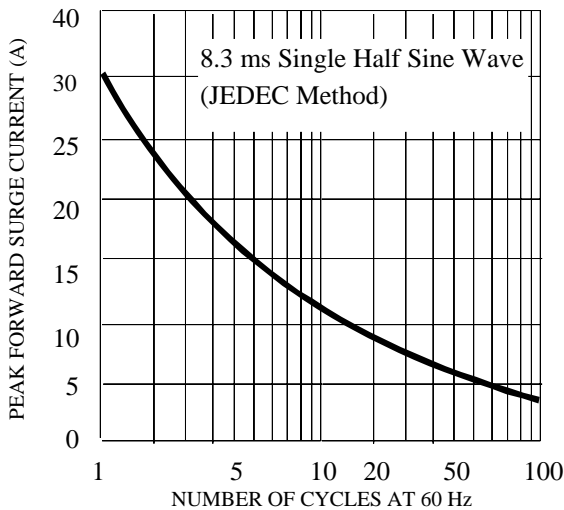


FIG. 6-TYPICAL JUNCTION CAPACITANCE

