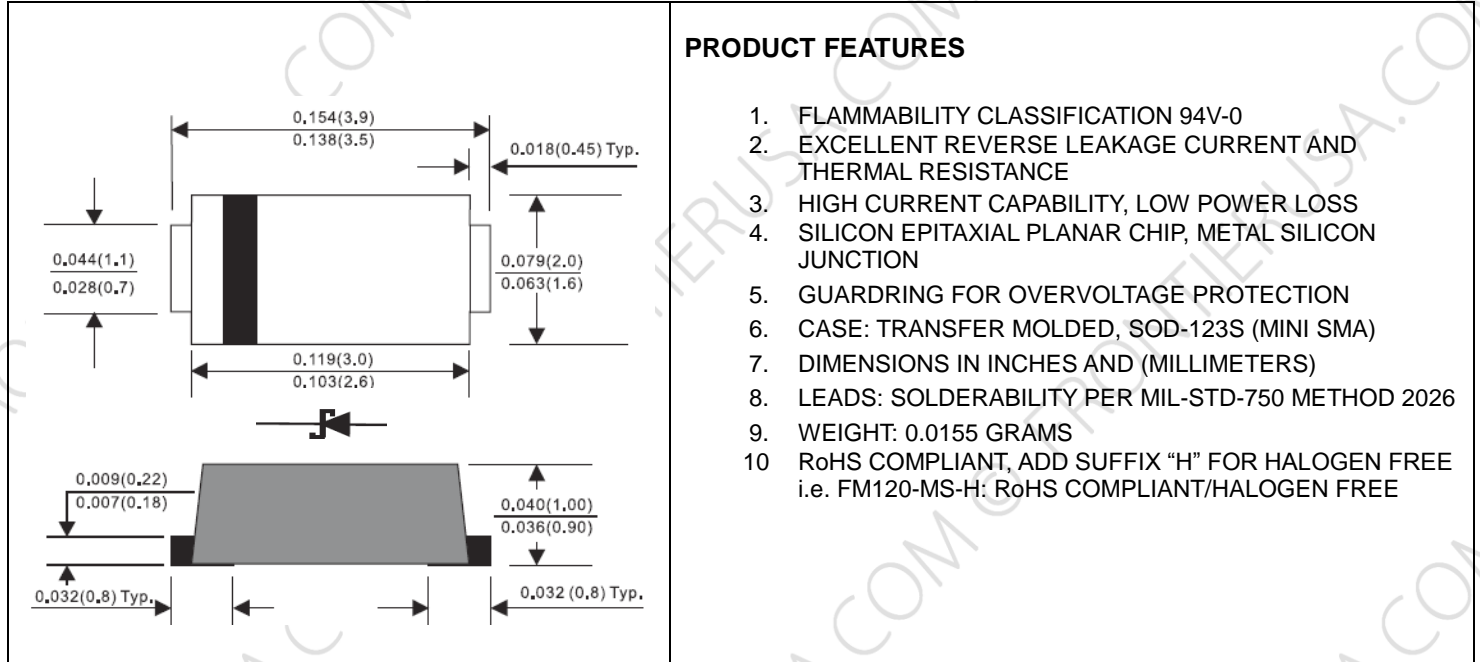


## 1A SMD SCHOTTKY BARRIER RECTIFIERS, 20V-200V



## ELECTRICAL CHARACTERISTICS

### MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED) AND ELECTRICAL CHARACTERISTICS

| RATING   | SYMBOL          |              | UNITS                     |
|--|-----------------|--------------|---------------------------|
| MAXIMUM FORWARD RECTIFIED CURRENT  | $I_o$           | 1            | A                         |
| PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD | $I_{FSM}$       | 30           | A                         |
| TYPICAL JUNCTION CAPACITANCE BETWEEN TERMINALS (NOTE 1)                            | $C_J$           | 120          | pF                        |
| STORAGE TEMPERATURE RANGE  | $T_{STG}$       | - 65 TO +175 | $^\circ\text{C}$          |
| OPERATING JUNCTION TEMPERATURE RANGE (NOTE 2)                                      | $T_J$           | - 55 TO +150 | $^\circ\text{C}$          |
| MAX. DC REVERSE CURRENT AT RATED DC BLOCKING VOLTAGE $T_J = 25^\circ\text{C}$      | $I_R$           | 0.5          | mA                        |
| MAX. DC REVERSE CURRENT AT RATED DC BLOCKING VOLTAGE $T_J = 100^\circ\text{C}$     | $I_R$           | 10           | mA                        |
| TYPICAL THERMAL RESISTANCE   | $R_{\theta JA}$ | 84           | $^\circ\text{C}/\text{W}$ |
|  | $R_{\theta JC}$ | 42           | $^\circ\text{C}/\text{W}$ |

| PART NUMBER | MAX RECURRENT PK REVERSE VOLTAGE/DC BLOCKING $V_{RRM}/V_R$ (V) | MAX $V_{RMS}$ (V) | TYPICAL FORWARD VOLTAGE AT $I_F = 1\text{A}$ $V_F$ (V) | MARKING |
|-------------|--|-------------------|--|---------|
| FM120-MS    | 20   | 14                | 0.50   | 12      |
| FM130-MS    | 30   | 21                | 0.50   | 13      |
| FM140-MS    | 40   | 28                | 0.50   | 14      |
| FM150-MS    | 50   | 35                | 0.70   | 15      |
| FM160-MS    | 60   | 42                | 0.70   | 16      |
| FM180-MS    | 80   | 56                | 0.85   | 18      |
| FM1100-MS   | 100  | 70                | 0.85   | 10      |
| FM1150-MS   | 150  | 105               | 0.90   | 115     |
| FM1200-MS   | 200  | 140               | 0.92   | 120     |

NOTE : 1. MEASURE AT 1MHz WITH 4VDC REVERSE VOLTAGE APPLIED .

2. FOR THE FM120-MS, FM130-MS, AND FM140-MS, THE OPERATING JUNCTION TEMPERATURE RANGE IS FROM -55 TO +125 $^\circ\text{C}$



3. CURRENT RATING IS BASED ON SINGLE PHASE, 1/2 WAVE, 60HZ, RESISTIVE, OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%.

## RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

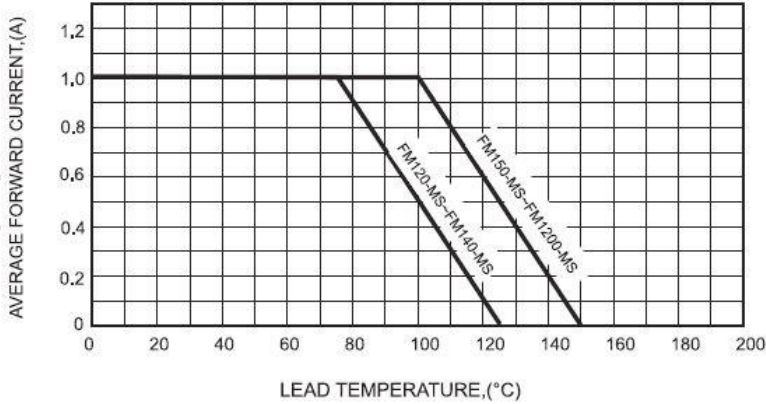


FIG.2-TYPICAL FORWARD CHARACTERISTICS

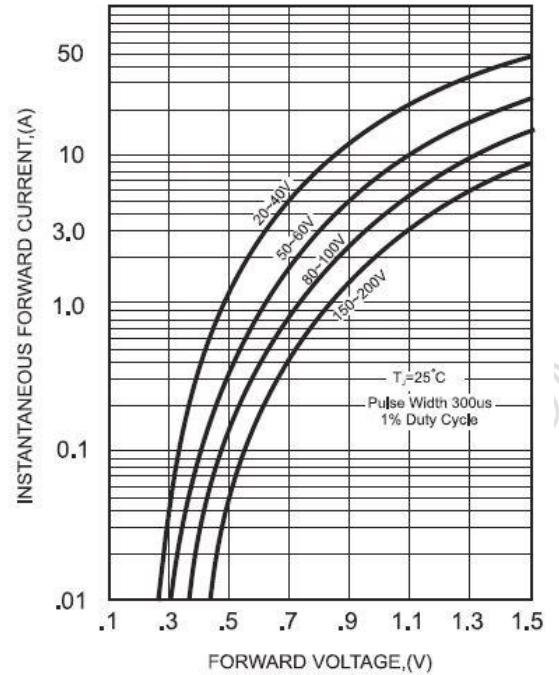


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

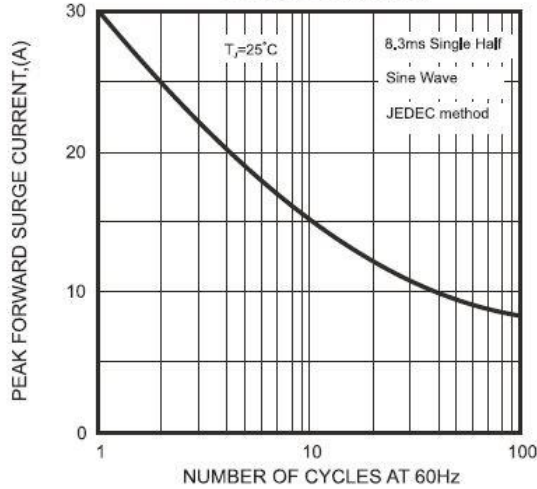


FIG.4-TYPICAL JUNCTION CAPACITANCE

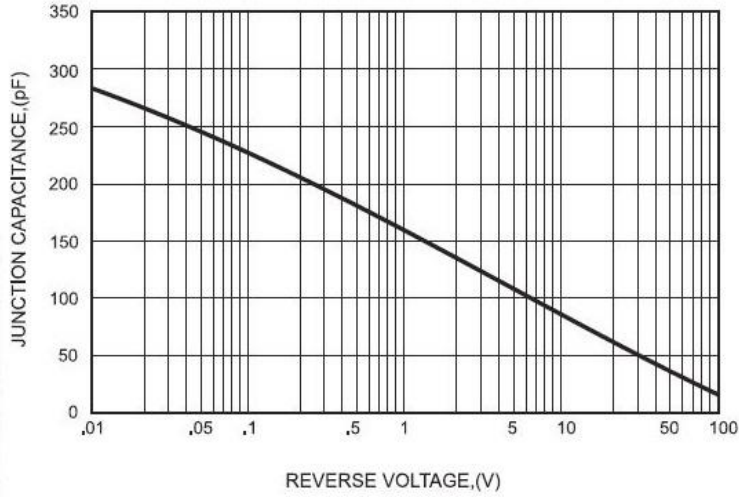
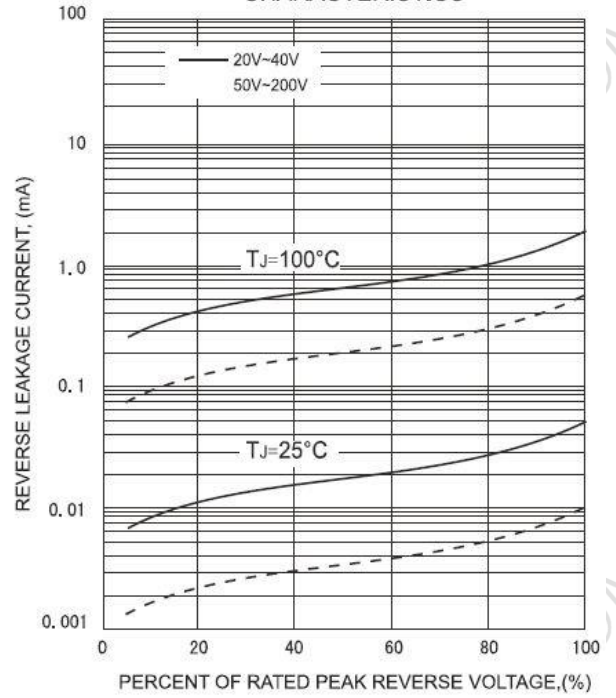
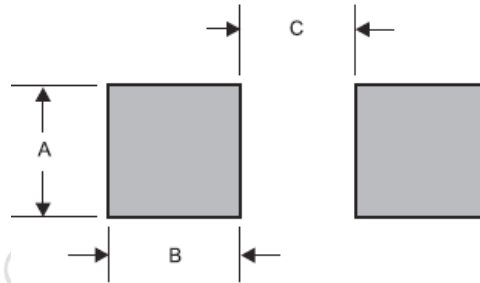


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



## LAYOUT RECOMMENDATION



| PACKAGE  | A            | B            | C            |
|----------|--------------|--------------|--------------|
| SOD-123S | 0.044 (1.10) | 0.040 (1.00) | 0.079 (2.00) |