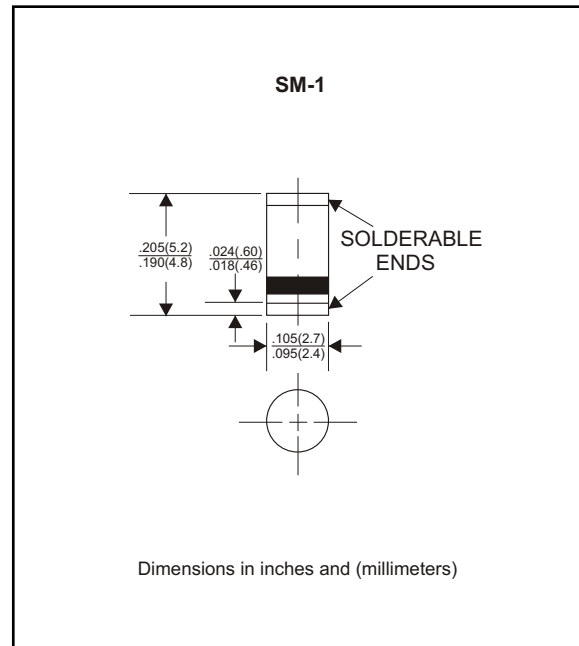


SM120 THRU SM160

Silicon epitaxial planer type

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing Flame Retardant Epoxy Molding Compound.
- For surface mounted applications.
- Exceeds environmental standards of ML-S-19500 / 228
- Low leakage current



Mechanical data

Case : Moulded plastic, SM-1 (MELF)
 Terminals : Solder plated, solderable per ML-STD-750, Method 2026
 Polarity : Indicated by cathode band
 Mounting Position : Any
 Weight : 0.015 gram

MAXIMUM RATINGS (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER | CONDITIONS | Symbol | MIN. | TYP. | MAX. | UNIT |
|----------------------------|---|-----------|------|------|------|-------------------------------|
| Forward rectified current | See Fig.1 | I_0 | | | 1.0 | A |
| Forward surge current | 8.3ms single half sine-wave superimposed on rate load (JEDEC methode) | I_{FSM} | | | 40 | A |
| Reverse current | $V_R = V_{RRM} T_A = 25^{\circ}\text{C}$ | I_R | | | 1.0 | mA |
| | $V_R = V_{RRM} T_A = 125^{\circ}\text{C}$ | | | | 10 | mA |
| Thermal resistance | Junction to ambient | R_{QJA} | | 50 | | $^{\circ}\text{C} / \text{w}$ |
| Diode junction capacitance | f=1MHz and applied 4vDC reverse voltage | C_J | | 110 | | pF |
| Storage temperature | | T_{STG} | -55 | | +150 | $^{\circ}\text{C}$ |

| SYMBOLS | MARKING CODE | V_{RRM}^{*1} (V) | V_{RMS}^{*2} (V) | V_R^{*3} (V) | V_F^{*4} (V) | Operating temperature ($^{\circ}\text{C}$) |
|---------|--------------|-----------------------|-----------------------|-------------------|-------------------|---|
| SM120 | - | 20 | 14 | 20 | 0.55 | -55 to +125 |
| SM130 | - | 30 | 21 | 30 | | |
| SM140 | - | 40 | 28 | 40 | | |
| SM150 | - | 50 | 35 | 50 | 0.70 | -55 to +150 |
| SM160 | - | 60 | 42 | 60 | | |

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage

RATING AND CHARACTERISTIC CURVES (SM120 THRU SM160)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

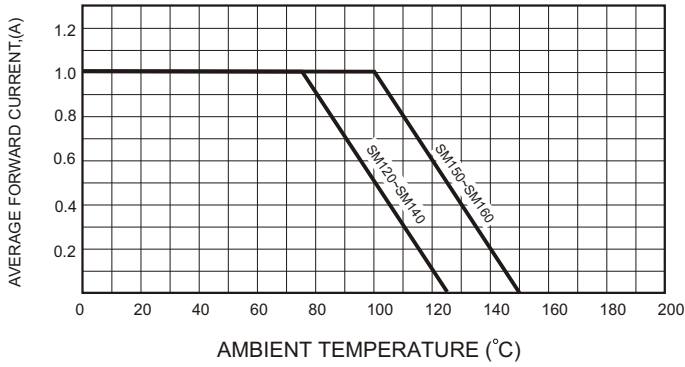


FIG.2-TYPICAL FORWARD CHARACTERISTICS

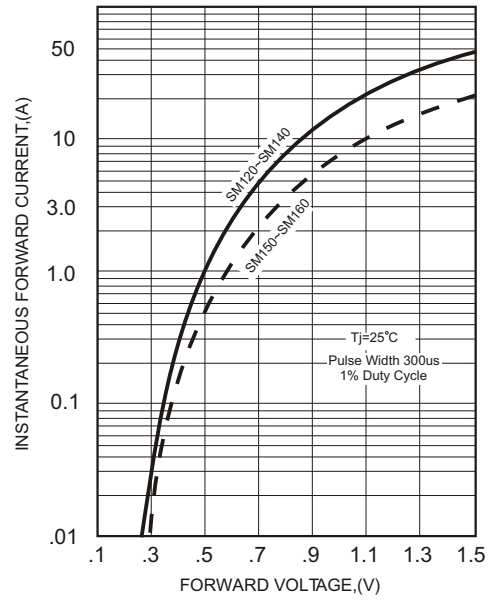


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

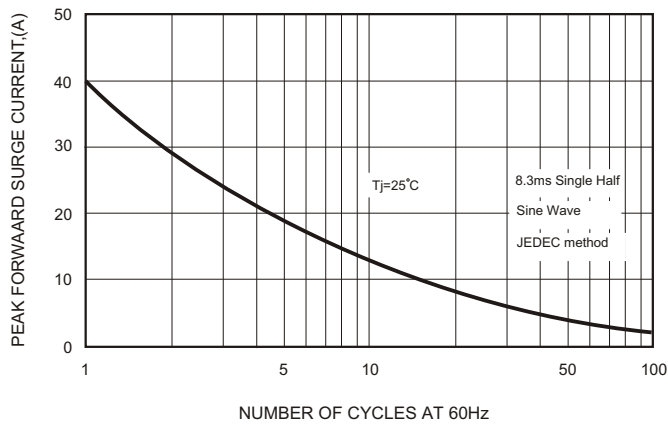


FIG.4-TYPICAL JUNCTION CAPACITANCE

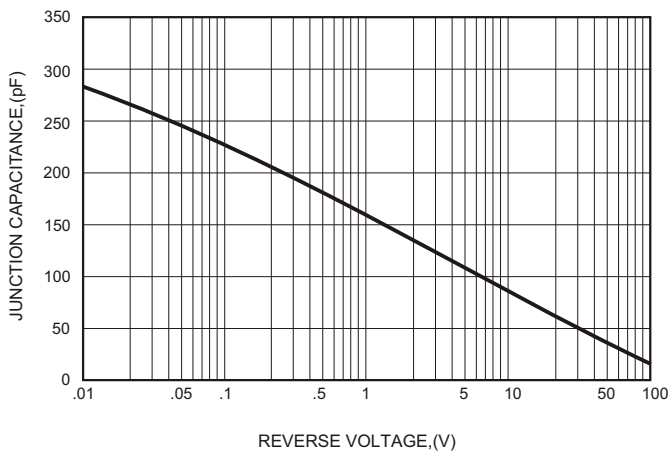


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

