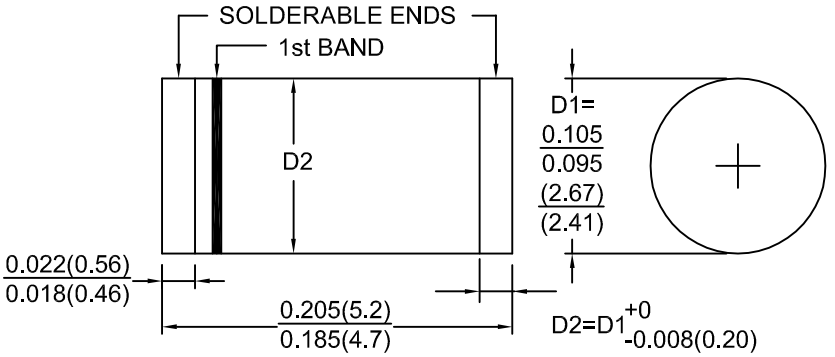
# SM5400 THRU SM5407

GLASS PASSIVATED RECTIFIERS

## FEATURES:

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Glass passivated junction

MELF / DO-213AB




1st band denotes type positive and (cathode)

## MECHANICAL DATA

Case : Molded plastic use UL 94V-0 recognized flame retardant epoxy

Terminals : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed

Polarity : Color band on body denotes cathode end

Mounting Position : Any

Weight : 0.116 grams, 0.0046 ounce

Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temp. unless otherwise specified.

Single phase, half sine wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20 %.

| Characteristic | Symbol | SM 5401 | SM 5402 | SM 5403 | SM 5404 | SM 5405 | SM 5406 | SM 5407 | Units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum recurrent peak reverse voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC blocking voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward rectified current .375" lead length at Ta=75° C | $I_O$ | 3.0 | | | | | | | Amps |
| Peak forward surge current ,8.3ms single half sine-wave superimposed on rated load(JEDEC Method) | $I_{FSM}$ | 100 | | | | | | | Amps |
| Maximum instantaneous forward voltage drop at 3.0 A | $V_F$ | 1.1 | | | | | | | Volts |
| Maximum DC reverse current Ta=25° C<br>at rated DC blocking voltage Ta=150° C | $I_R$ | 5.0<br>100.0 | | | | | | | $\mu$ A |
| Typical thermal resistance (Note 2) | $R_{th-JA}$ | 30 | | | | | | | ° C/W |
| Typical junction capacitance (Note 1) | $C_j$ | 40 | | | | | | | pF |
| Operating junction and storage temperature range | $T_j, T_{stg}$ | -65 to +150 | | | | | | | ° C |

NOTES:1. Measured at 1MHz and Applied reverse voltage of 4.0V DC

2. Thermal Resistance from junction to ambient .375"(9.5mm) lead length.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

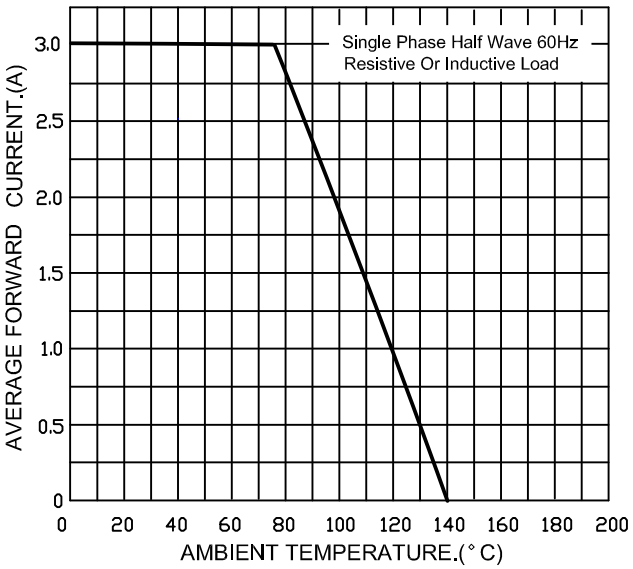



FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

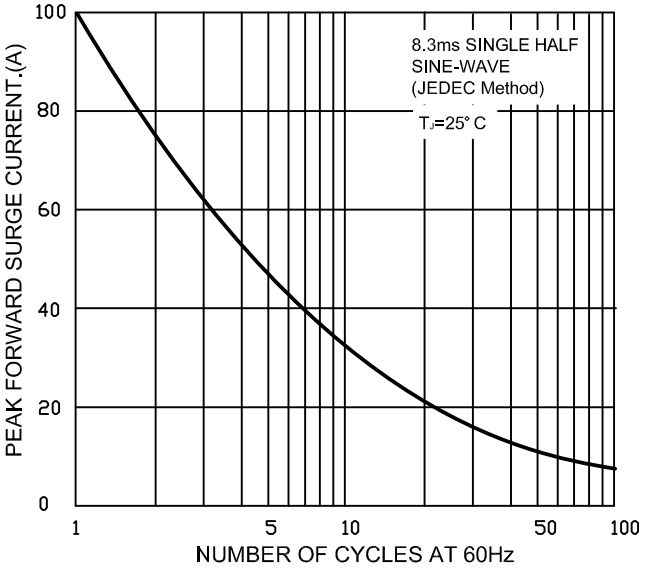



FIG.3-TYPICAL FORWARD CHARACTERISTICS

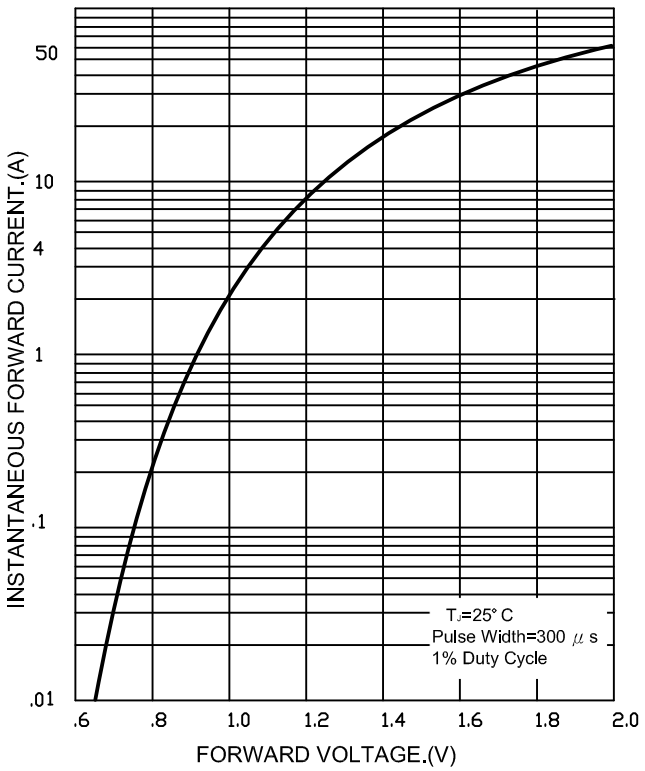



FIG.4-TYPICAL REVERSE CHARACTERISTICS