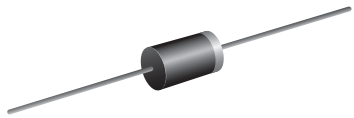
# EM513 - EM518

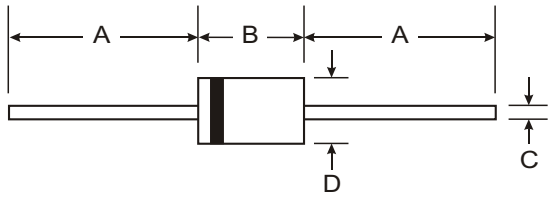
## AXIAL LEADED SILICON RECTIFIER DIODES

**VOLTAGE RANGE: 1600 - 2000V**
**CURRENT: 1.0 A**



## Features

- Molded case feature for auto insertion
- High current capability
- Low leakage current
- High surge capability
- High temperature soldering guaranteed: 250 ℃/10sec/0.375" (9.5mm) lead length at 5 lbs tension




| DO-41 | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| **A** | 25.40 | — |
| **B** | 4.06 | 5.21 |
| **C** | 0.71 | 0.864 |
| **D** | 2.00 | 2.72 |
| **All Dimensions in mm** | | |

## Mechanical Data

- Case:JEDEC DO -41,molded plastic
- Terminals: Axial lead ,solderable per MIL- STD-202,Method 208
- Polarity: Color band denotes cathode
- Weight: 0.012ounces,0.34 grams
- Mounting position: Any

RoHS COMPLIANT

## Maximum Ratings and Electrical Characteristics

@ $T_A$ = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic | Symbol | EM513 | EM516 | EM518 | Unit |
|---|---|---|---|---|---|
| Maximum recurrent peak reverse voltage | $V_{RRM}$ | 1600 | 1800 | 2000 | V |
| Maximum RMS voltage | $V_{RMS}$ | 1120 | 1260 | 1400 | V |
| Maximum DC blocking voltage | $V_{DC}$ | 1600 | 1800 | 2000 | V |
| Maximum average forward rectified current 9.5mm lead length, @$T_A$=75℃ | $I_{F(AV)}$ | 1.0 | | | A |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @$T_J$=125℃ | $I_{FSM}$ | 30.0 | | | A |
| Maximum instantaneous forward voltage @ 1.0 A | $V_F$ | 1.1 | | | V |
| Maximum reverse current @$T_A$=25℃ at rated DC blocking voltage @$T_A$=100℃ | $I_R$ | 5.0<br>50.0 | | | μA |
| Typical junction capacitance (Note1) | $C_J$ | 10 | | | pF |
| Typical thermal resistance (Note2) | $R_{\theta JA}$ | 50 | | | ℃/W |
| Operating junction temperature range | $T_J$ | - 55 ---- + 150 | | | ℃ |
| Storage temperature range | $T_{STG}$ | - 55 ---- + 150 | | | ℃ |

NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length, P.C.board mounted

**FIG.1 – TYPICAL FORWARD CURRENT DERATING CURVE**

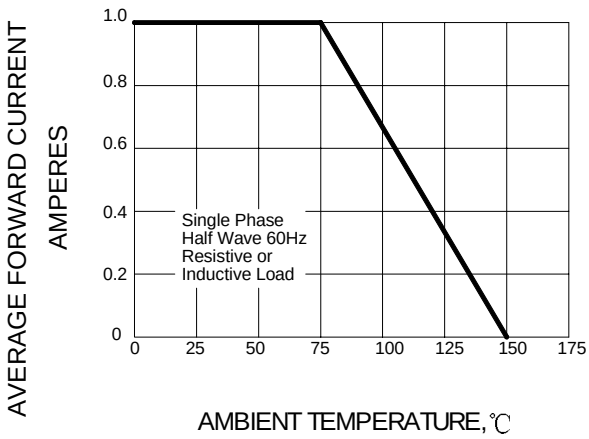



**FIG.2 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

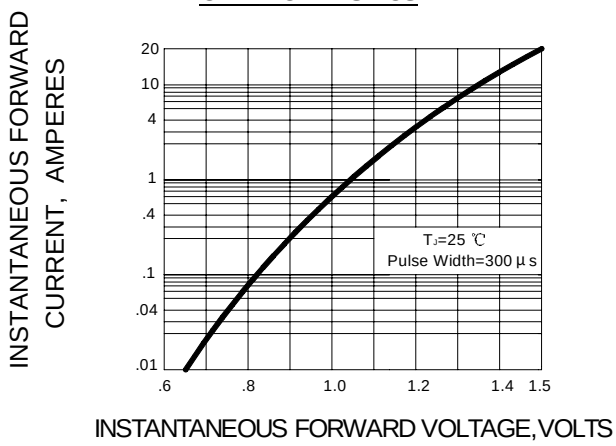



**FIG.3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

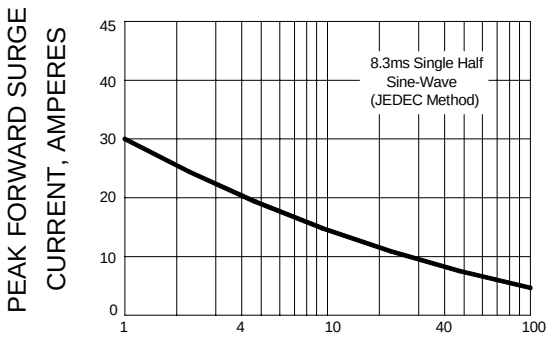



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**

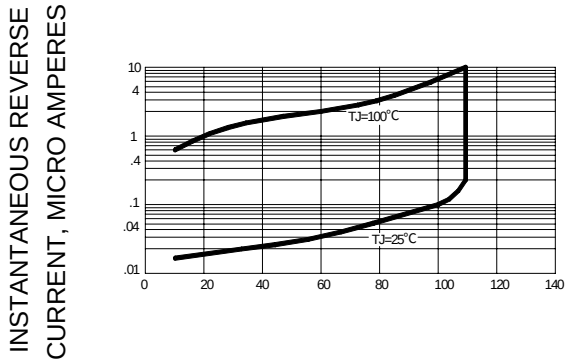



**FIG.5 – TYPICAL JUNCTION CAPACITANCE**

