

Pb Free Plating Product

## EM513 thru EM518



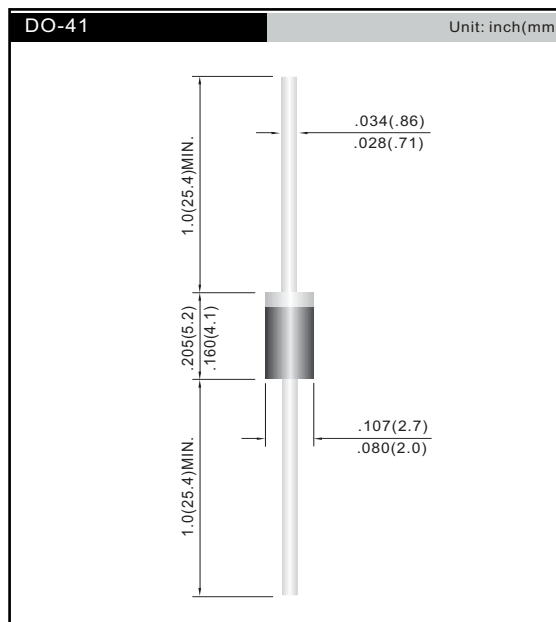
1.0 Ampere DO-41 Package High Voltage Silicon Diode

### Features

- Low cost
- Low leakage
- Low forward voltage drop
- High current capability

### Mechanical Data

- **Case:** Molded plastic, DO-41
- **Mounting Position:** Any
- **Terminals:** Axial leads, solderable per MIL-STD-202



### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

|   | Symbols    | EM 513      | EM 516 | EM 518 | Units                          |
|---|------------|-------------|--------|--------|--------------------------------|
| Maximum repetitive 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, .375"(9.5mm) lead length $T_A = 75^\circ\text{C}$                  | $I_{FAV}$  | 1           |        |        | A                              |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)             | $I_{FSM}$  | 30          |        |        | A                              |
| Maximum forward voltage at $I_F = 1.0\text{A DC}$ $T_J = 25^\circ\text{C}$                                    | $V_F$      | 1.1         |        |        | V                              |
| Maximum leakage current at $T_A = 25^\circ\text{C}$ at rated DC blocking voltage at $T_A = 100^\circ\text{C}$ | $I_R$      | 5<br>500    |        |        | $\mu\text{A}$<br>$\mu\text{A}$ |
| Typical junction capacitance (Note 1)   | $C_J$      | 15          |        |        | pF                             |
| Typical thermal resistance (Note 2)   | $R_{thA}$  | 50          |        |        | $^\circ\text{C/W}$             |
| Operating and storage temperature range   | $T_J, T_S$ | -55 to +150 |        |        | $^\circ\text{C}$               |

Note : 1. Measured at 1MHz and applied reverse voltage of 4.0VDC.

2. Thermal resistance junction to ambient 0.375"(9.5mm) lead length P.C.B. mounted.

FIG. 1 – FORWARD CURRENT DERATING CURVE

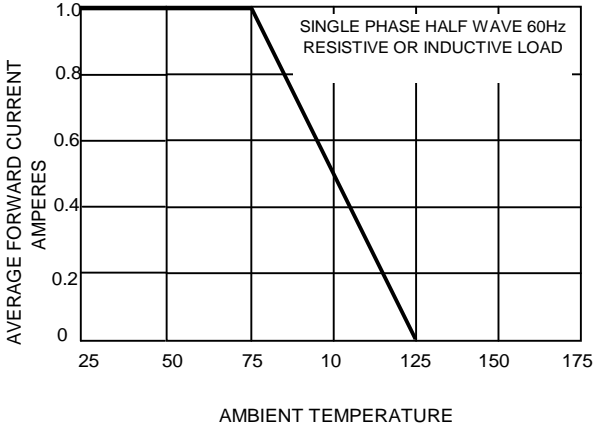


FIG.2-TYPICAL FORWARD CHARACTERISTICS

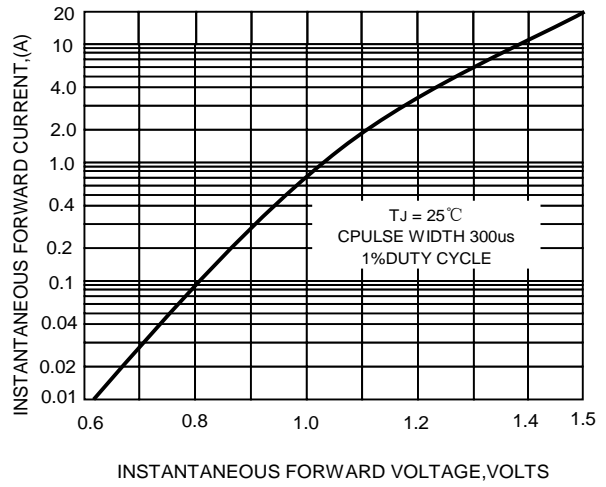


FIG. 3 – MAXIMUM NON-REPETITIVE SURGE CURRENT

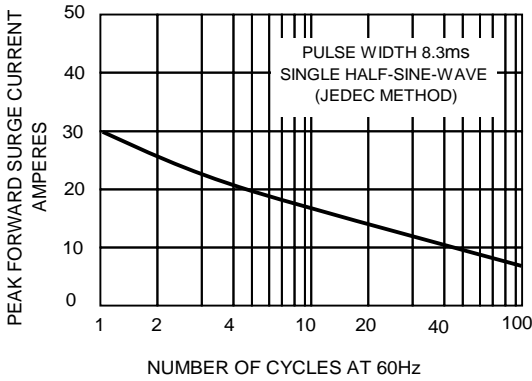


FIG.6-TYPICAL REVERSE CHARACTERISTICS

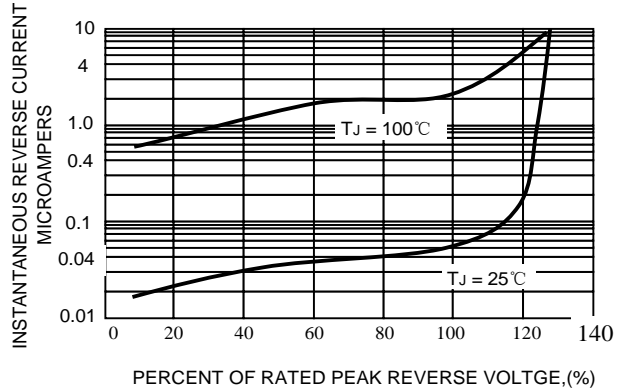


FIG.5 – TYPICAL JUNCTION CAPACITANCE

