

Pb Free Plating Product

## EM513 thru EM518



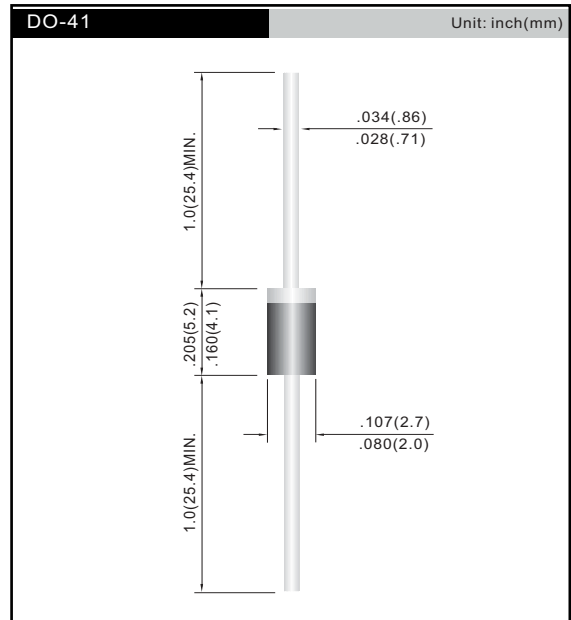
1.0 Ampere DO-41 Package High Voltage Silicon Diode

### 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 $T_A = 100^\circ\text{C}$	$I_R$	5 500			$\mu\text{A}$ $\mu\text{A}$
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

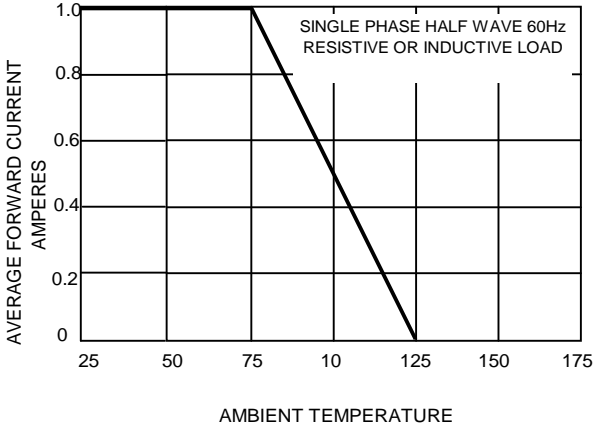


FIG.2-TYPICAL FORWARD CHARACTERISTICS

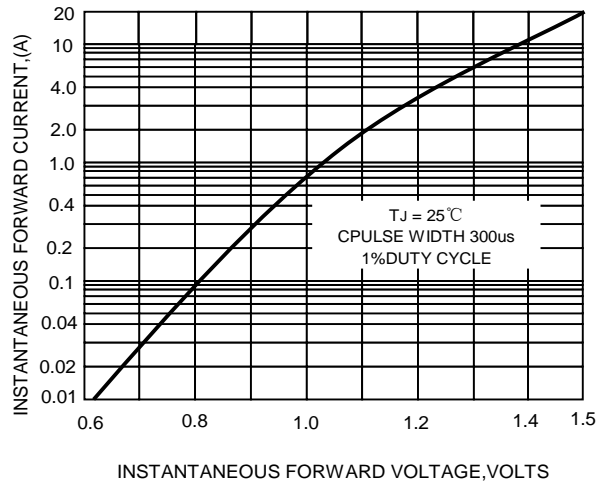


FIG. 3 – MAXIMUM NON-REPETITIVE SURGE CURRENT

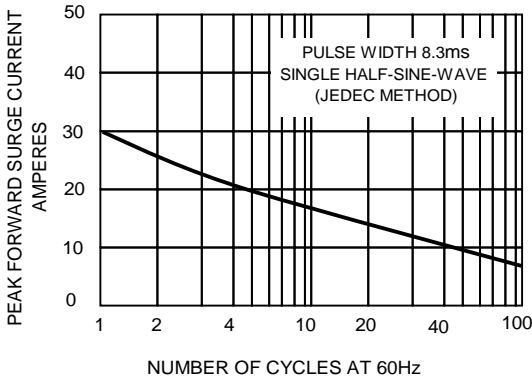


FIG.6-TYPICAL REVERSE CHARACTERISTICS

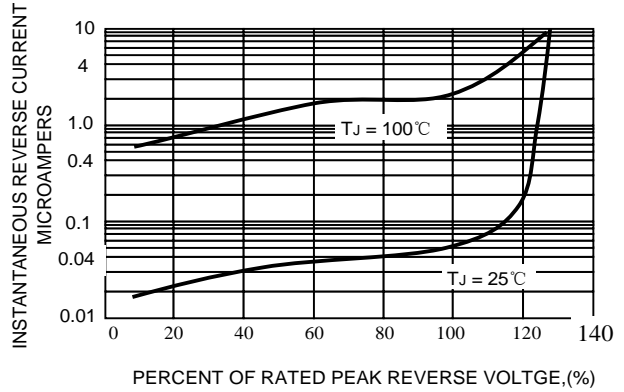


FIG.5 – TYPICAL JUNCTION CAPACITANCE

