

# EM513 THRU EM518

Standard Rectifier

## Features

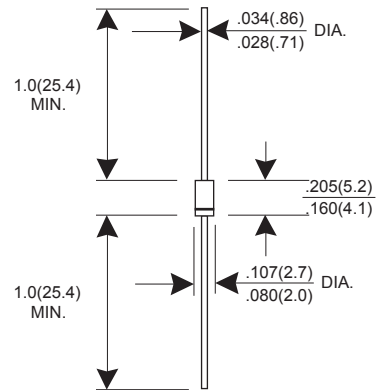
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

## Mechanical Data

- ★ Case: Molded plastic DO-41
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202 method 208 guaranteed
- ★ Polarity: Color band denotes cathode end
- ★ Mounting position: Any
- ★ Weight: 0.34 gram

**Voltage Range 1600 to 2000 V**  
**Current 1.0 Ampere**

### DO-41



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

PARAMTER	SYMBOL	EM513	EM516	EM518	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	1600	1800	2000	V
Maximum RMS Voltage	VRMS	1120	1260	1400	V
Maximum DC Blocking Voltage	VDC	1600	1800	2000	V
Maximum Average Forward Rectified Current $T_L=75^\circ\text{C}$	$I_o$	1.0			A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	IFSM	30			A
Maximum Instantaneous Forward Voltage @ 1.0 A	V <sub>F</sub>	1.1			V
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_J=100^\circ\text{C}$	I <sub>R</sub>	5.0 250.0			uA uA
Typical junction Capacitance (Note 1)	C <sub>J</sub>	10			pF
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	50			°C/W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150			°C

NOTES : (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

(2) Thermal resistance form junction of ambient at 0.375"(9.5mm) lead lengths, P.C. board mounted.

## RATINGS AND CHARACTERISTIC CURVES EM513 THRU EM518

FIG.1 - FORWARD CURRENT DERATING CURVE

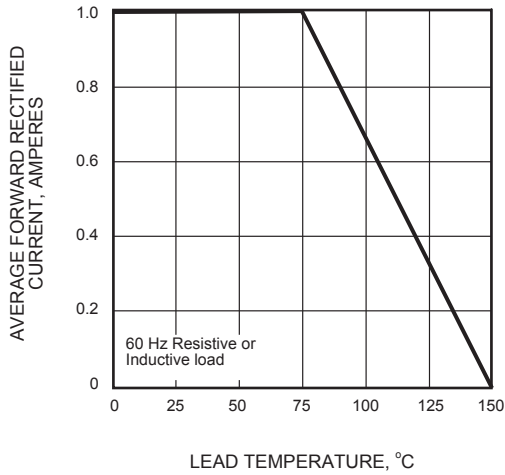


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

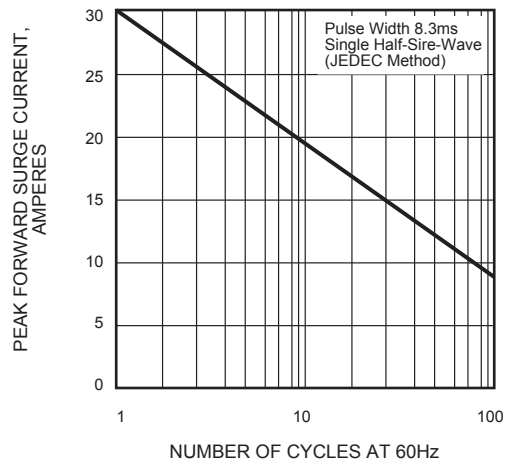


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

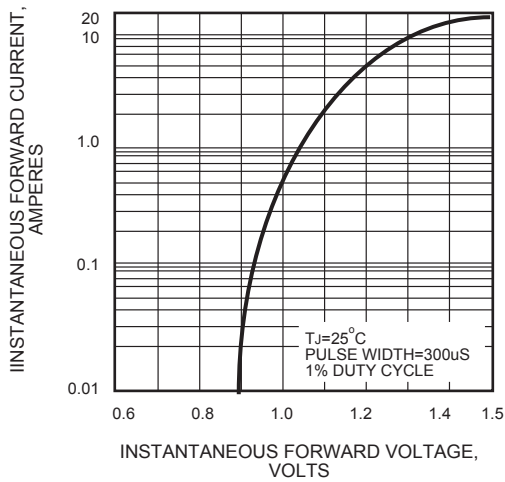


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

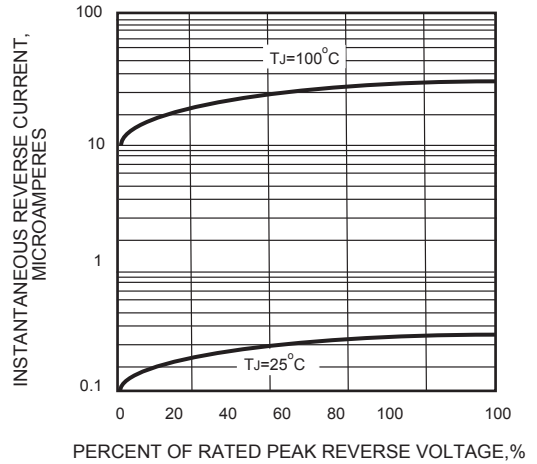


FIG.5 - TYPICAL JUNCTION CAPACITANCE

