

EM513 THRU EM518

Standard Rectifier

Features

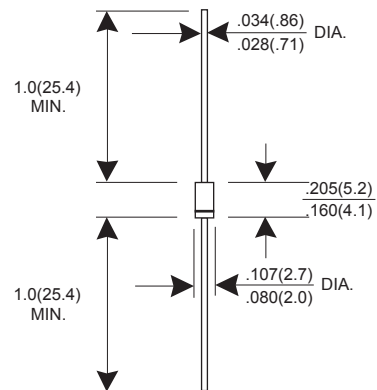
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

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_F	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_R	5.0 250.0			μA μA
Typical junction Capacitance (Note 1)	C_J	10			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50			$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150			$^\circ\text{C}$

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

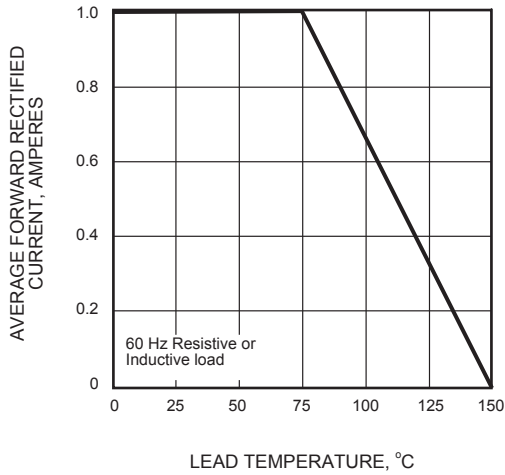


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

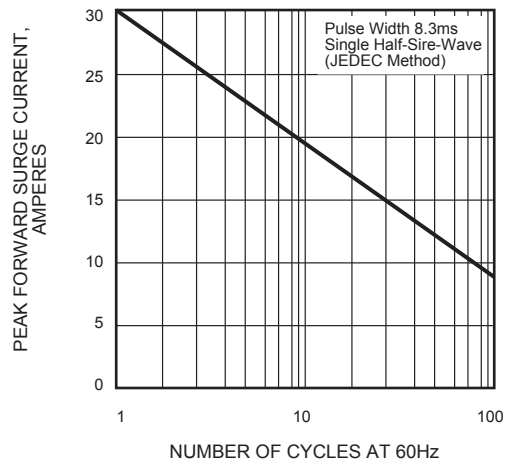


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

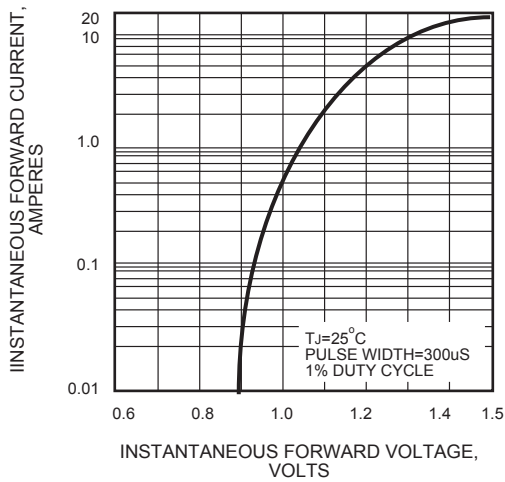


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

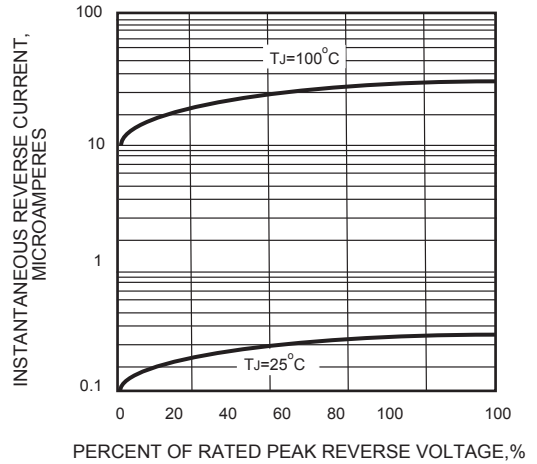


FIG.5 - TYPICAL JUNCTION CAPACITANCE

