

EM513-EM518

Plastic Silicon Rectifiers

VOLTAGE RANGE: 1600 --- 2000 V

CURRENT: 1.0 A

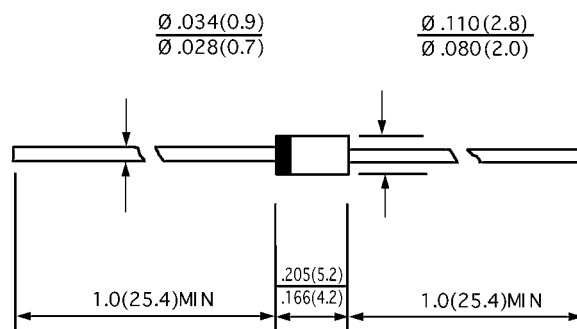
DO - 41

Features

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

Mechanical Data

- ◇ Case: JEDEC DO -41, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting position: Any



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

		EM513	EM516	EM518	UNITS
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, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0			A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	30.0			A
Maximum instantaneous forward voltage @ 1.0 A	V_F	1.1			V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	5.0 50.0			μA
Typical junction capacitance (Note1)	C_J	10			pF
Typical thermal resistance (Note2)	$R_{\theta JA}$	50			$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 ---- + 150			$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150			$^\circ\text{C}$

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

Ratings AND Characteristic Curves

FIG.1 – TYPICAL FORWARD CURRENT DERATING CURVE

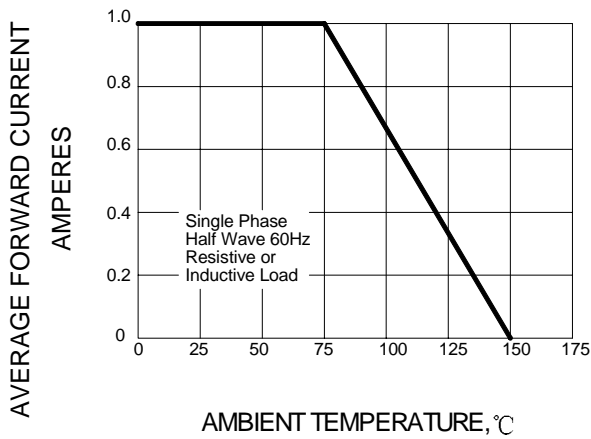


FIG.2 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

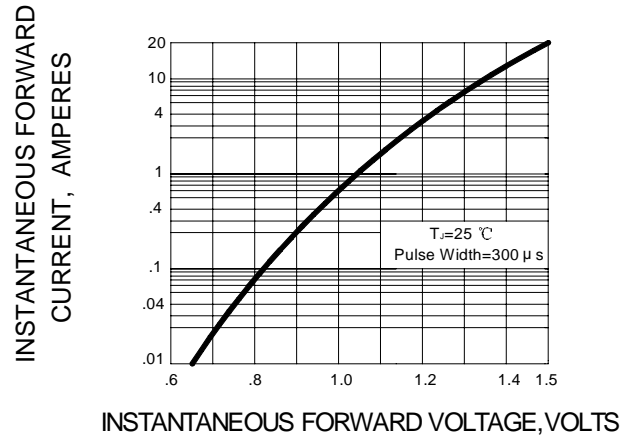


FIG.3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

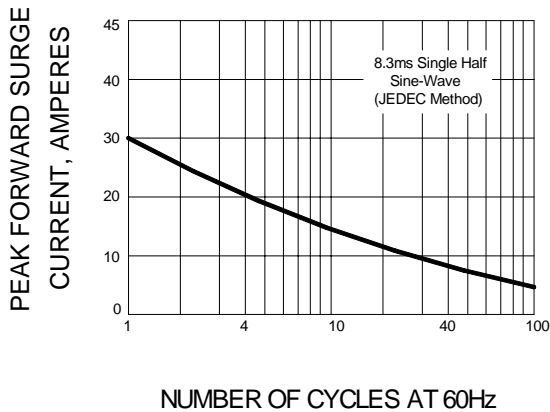


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

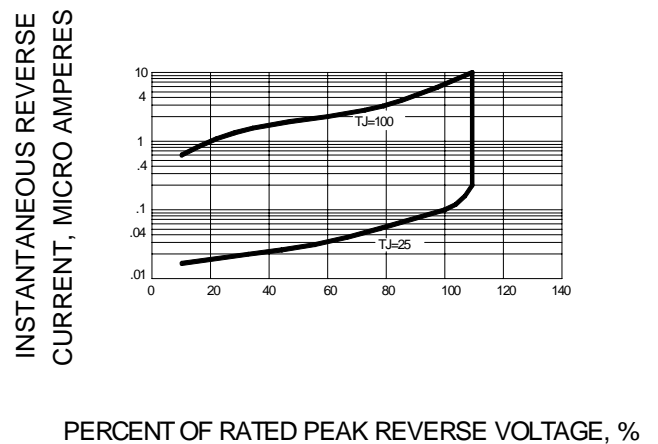


FIG.5 – TYPICAL JUNCTION CAPACITANCE

