



GENERAL PURPOSE SILICON RECTIFIER

EM513 THRU EM518

VOLTAGE RANGE
CURRENT

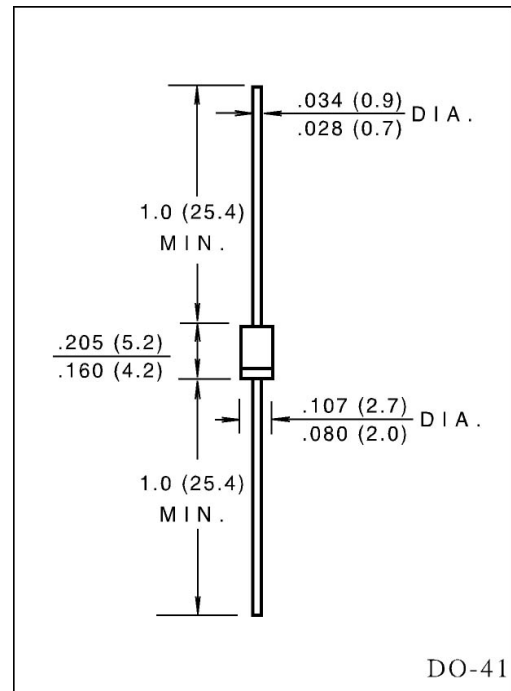
1600 to 2000 Volts
1.0 Ampere

FEATURES

- High reverse voltage
- Low forward voltage drop
- Low reverse leakage
- High forward surge current capability.
- High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length
at 5 lbs (2.3kg) tension.

MECHANICAL DATA

- Case: transfer molded plastic
- Epoxy: UL94V - 0 rate flame retardant.
- Polarity: Color band denotes cathode end.
- Lead: Plated axial lead, solderable per MIL - STD - 202E
method 208C
- Mounting position: Any
- Weight: 0.012 ounce, 0.33grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single phase, half wave, 60Hz, resistive or inductive load.
- For capacitive load derate current by 20%

	SYMBOLS	EM513	EM516	EM518	UNIT
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	1600	1800	2000	Volts
Maximum RMS Voltage	V _{RMS}	1120	1260	1400	Volts
Maximum DC Blocking Voltage	V _{DC}	1600	1800	2000	Volts
Maximum Average Forward Rectified Current, 0.375" (9.5mm) lead length at T _A = 75°C	I _(AV)	1.0			Amp
Peak Forward Surge Current 8.3ms single half sine - wave superimposed on rated load (JEDEC method)	I _{FSM}	30			Amps
Maximum Instantaneous Forward Voltage at 1.0A	V _F	1.1		1.2	Volts
Maximum DC Reverse Current at rated DC blocking voltage	T_A = 25°C T_A = 100°C	I _R	5.0 50		μ A
Maximum Full Load Reverse Current, full cycle average 0.375" (9.5mm) lead length at T _L = 75°C	I _{R(AV)}	30			μ A
Typical Junction Capacitance (Note 1)	C _J	15			pF
Typical Thermal Resistance (Note2)	R _{θJA}	50			°C/W
Operating and Storage Temperature Range	T _J	(-65 to +175)			°C
Storage Temperature Range	T _{STG}	(-65 to +175)			°C

NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length, P.C. board mounted.

RATINGS AND CHARACTERISTIC CURVES EM513 THRU EM518

FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

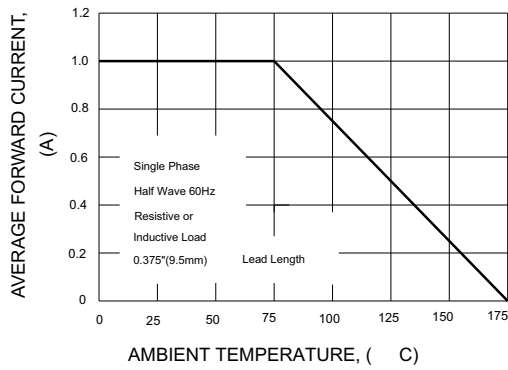


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

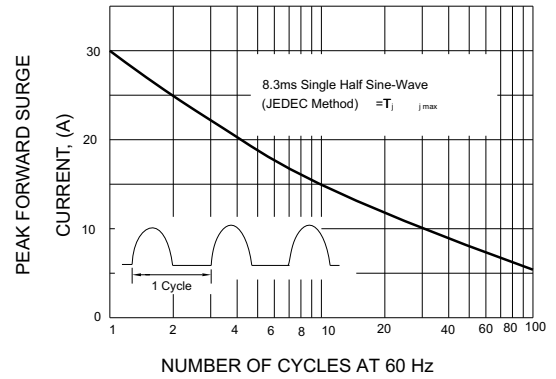


FIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

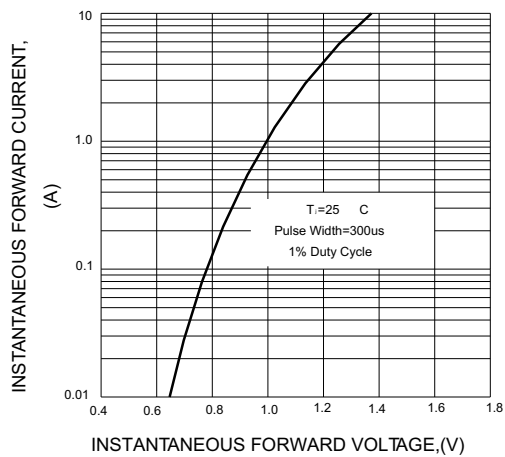


FIG.4-TYPICAL REVERSE
CHARACTERISTICS

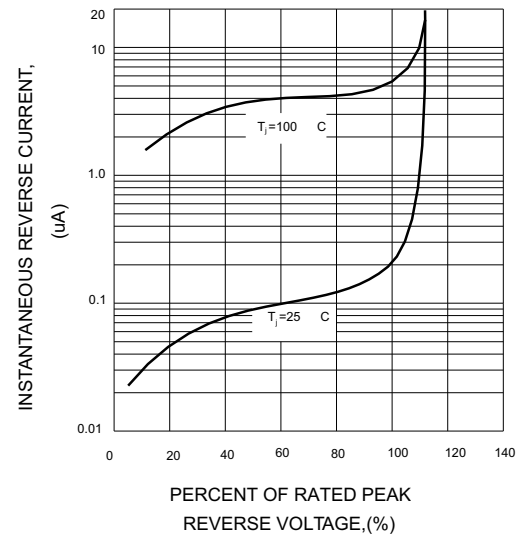


FIG.5-TYPICAL JUNCTION CAPACITANCE

