



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**BY133
THRU
EM520**

TECHNICAL SPECIFICATIONS OF SILICON RECTIFIER
VOLTAGE RANGE - 1300 to 2000 Volts CURRENT - 1.0 Ampere

FEATURES

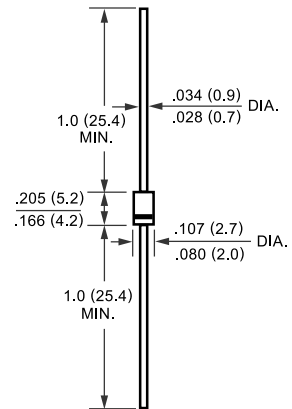
- * Low cost
- * Low leakage
- * Low forward voltage drop
- * High current capability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.33 gram



DO-41



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 current by 20%.

	SYMBOL	BY133	EM513	EM516	EM520	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	1300	1600	1800	2000	Volts
Maximum RMS Voltage	V _{RMS}	910	1100	1560	1400	Volts
Maximum DC Blocking Voltage	V _{DC}	1300	1600	1800	2000	Volts
Maximum Average Forward Rectified Current at T _A = 75°C	I _O	1.0				Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30				Amps
Maximum Instantaneous Forward Voltage at 1.0A DC	V _F	1.1				Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	@T _A = 25°C	5.0			uAmps
		@T _A = 100°C	500			
Maximum Full Load Reverse Current Average, Full Cycle .375*(9.5mm) lead length at T _L = 75°C		30				uAmps
Typical Junction Capacitance (Note)	C _J	15				pF
Typical Thermal Resistance	R _{θJA}	50				°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to + 175				°C

NOTES : Measured at 1 MHz and applied reverse voltage of 4.0 volts

RATING AND CHARACTERISTIC CURVES (BY133 THRU EM520)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

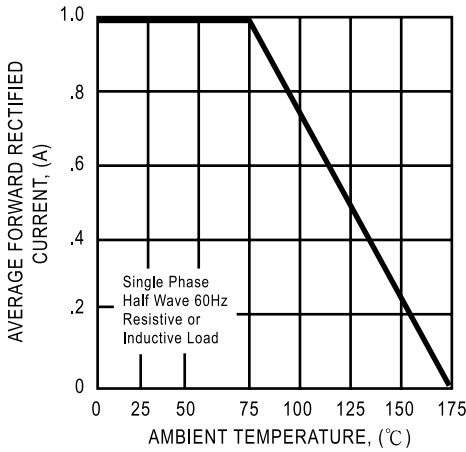


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

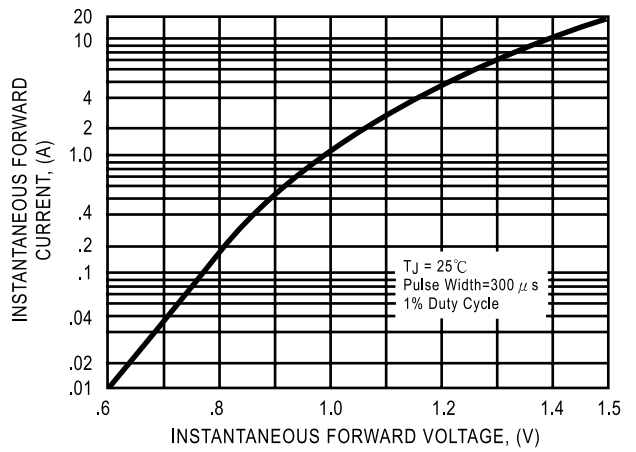


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

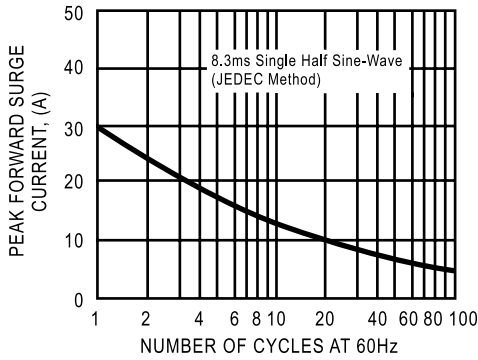


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

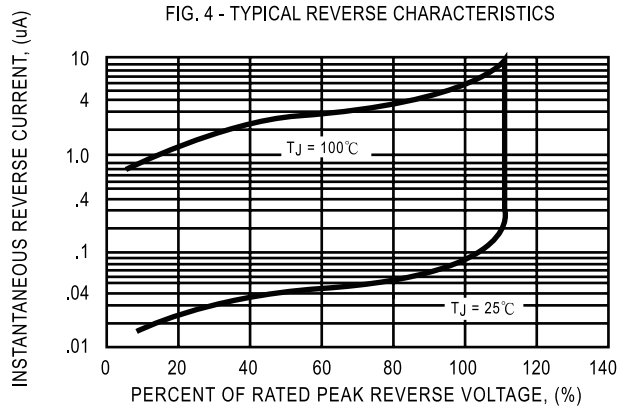
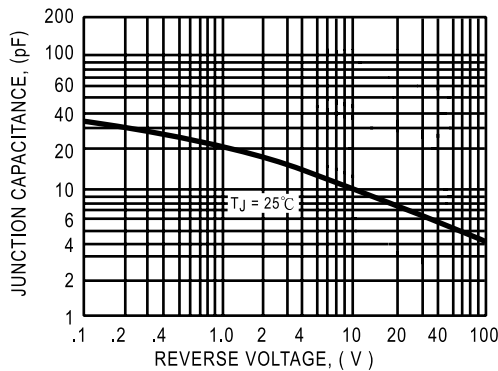


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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